

APPENDIX 14 2024 STACK TESTING REPORT

A grayscale background image showing a man in a white shirt and tie running towards a modern, curved glass building. He is carrying a briefcase in his right hand.

PROFESSIONAL SERVICES

ATMOSPHERIC EMISSION CHARACTERIZATION REPORT

DOMESTIC WASTE INCINERATORS 1 AND 2 – MELIADINE DIVISION



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AGNICO EAGLE MINES LTD

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Repentigny, December 2024

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GLOSSARY

Deviation

A deviation refers to the failure to comply with a sampling method for various reasons.

A sampling method may have to be modified because of the particular nature of an emission point (for example, if it is impossible to properly install the sampling equipment, the temperature of the gas streams is too high, or their speed is too low).

A deviation can also occur during sampling (for example, collection of a volume of gas smaller than that required by the methodology). In such cases, the deviation must be recorded and clearly explained on the field data sheets and included in the report.

Emission point

Stack, vent, fan or any other opening that may release emissions into the air.

A sampling campaign may involve a number of emission points.

Environmental compliance verification

Process to verify compliance with a regulatory requirement or a requirement included in an authorization under applicable guidelines.

Isokinetic sampling

Sampling is isokinetic when the linear velocity of the gas entering the sampling nozzle is equal to that of the undisturbed gas stream at the sampling point.

Qualified personnel

Personnel with the training and experience described in *Lignes directrices concernant les prélèvements des émissions atmosphériques en provenance de sources fixes (Guidelines for Sampling of Atmospheric Emissions from Stationary Sources)*, DR-12-AIR-01, available on the CEAEQ website.

Source operator

Operator of the emission source being sampled.

Sampling site

Location of the emission points where samples are collected. Sampling methods include instructions for choosing the sampling site.

Sampler

The team that collects the samples during a sampling campaign; the team may be from a regulatory body or an external sampling firm or be employed by the operator of the emission source targeted by the sampling campaign.

Campaign site

Location where the sampling campaign is carried out (plant and the municipality in which it is located).

Stationary emission source

Activity, equipment, or process, other than a mobile vehicle, aircraft, ship, or locomotive, that generates emissions; a stationary source may have one or more emission points.

Test

Collection of a sample, with its duration depending on the sampling method.

ABBREVIATIONS, ACRONYMS AND SYMBOLS

INC 1: Eco Waste (the main incinerator)

INC 2: Ketek (the optional smaller incinerator)

ACFM: Actual Cubic Feet per Minute

CCME: Canadian Council of Ministers of the Environment

CEMS: Continuous Emission Monitoring System (the client's fixed and permanent system)

CEMIS: Continuous Emission Monitoring Instrumental System (portable and temporary system of a sampling firm)

CO: Carbon Monoxide

CO₂: Carbon Dioxide

ECCC: Environment and Climate Change Canada (since 2016)

HCl: Hydrogen chloride or Hydrochloric acid

H₂SO₄: Sulfuric acid

ISO/CEI 17025: General prescriptions concerning the jurisdiction of calibration and testing laboratories distributed jointly by the International Organization for Standardization and the International Electrochemical Commission

Me: Metals

NO_x: Nitrogen oxides

O₂: Oxygen

PM: Particulate matter

PCDD/F: Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans

PTFE: PolyTetraFluoroEthylene

QA: Quality Assurance

QA/QC: Quality Assurance and Quality Control

QC: Quality Control

RCFM: Reference cubic feet per minute

RDL: Reported detection limit

SO₂: Sulfur dioxide

SVOC: Semi-Volatile Organic Compounds

USEPA or US EPA: United States Environmental Protection Agency

ΔP: Differential pressure of stack gases

ΔH: Drop in pressure at orifice meter

%vs: Volumetric percentage on a dry basis

SUMMARY

Consulair was mandated by Agnico Eagle Mines Limited to perform an atmospheric emission characterization program at the incinerators 1 (model no ECO 1.75TN 1PVC100L 16-1MS, or “Eco Waste”) and 2 (model KETEK CY-100-CA-D, or “Ketek”) at the Meliadine Mine as part of an environmental compliance program. The campaign was carried out from August 12th to August 22nd, 2024.

Prior to the campaign, the characterization program was outlined in a sampling plan that was approved by the company subject to source testing.

The objectives of this atmospheric emission characterization were as follows:

- Obtain an overview of the atmospheric emissions in current conditions;
- Evaluate the concentration and the emission rate of the main parameters of interest emitted by the two incinerators (Eco Waste and Ketek);
- Compare the emission results to the applicable standards;
- Ensure that the sampling work respects the recognized quality control criteria.

The standards come from the “Environmental Guideline for the Burning and Incineration of Solid Waste” emitted by the Department of Environment of the Government of Nunavut based on the Canadian Council of Ministers of the Environment (CCME) Canada - Wide Standards for Dioxins and Furans and Mercury Emissions. The parameters of interest during the present characterization campaign were the filterable particles (P), metals (Me), gaseous hydrochloric acid (HCl), semi-volatile organic compounds (SVOC), oxygen (O₂), carbon dioxide (CO₂), carbon monoxide (CO), sulfur dioxide (SO₂) and nitrogen oxides (NO_x). A summary of the results obtained during this campaign is presented in the following tables.

SUMMARY OF RESULTS – INCINERATOR 1 (ECO WASTE)

PARTICULATE MATTER	
CONCENTRATION (mg/m ³ R)	22.3
CONCENTRATION (mg/m ³ R at 11% O ₂)	22.1
EMISSION (kg/h)	0.0952
TOTAL METALS	
CONCENTRATION (µg/m ³ R)	18684
CONCENTRATION (µg/m ³ R at 11% O ₂)	19285
EMISSION (g/h)	80.9
MERCURY	
CONCENTRATION (µg/m ³ R)	< 0.370
CONCENTRATION (µg/m³R at 11% O₂)	< 0.371
STANDARD (µg/m³R at 11% O₂)	20
EMISSION (g/h)	<0.00159
HYDROGEN CHLORIDE	
CONCENTRATION (mg/m ³ R)	96.1
EMISSION (kg/h)	0.410
SVOC (PCDD/F)	
CONCENTRATION (ng TEQ/m ³ R)	0.113
CONCENTRATION (ng TEQ/m³R at 11% O₂)	0.104
STANDARD (ng TEQ/m³R at 11% O₂)	0.08
EMISSION (µg/h) TEQ	0.467

SUMMARY OF RESULTS – INCINERATOR 2 (KETEK)

PARTICULATE MATTER	
CONCENTRATION (mg/m ³ R)	36.2
CONCENTRATION (mg/m ³ R at 11% O ₂)	33.6
EMISSION (kg/h)	0.049
TOTAL METALS	
CONCENTRATION (µg/m ³ R)	25017
CONCENTRATION (µg/m ³ R at 11% O ₂)	23728
EMISSION (g/h)	34.0
MERCURY	
CONCENTRATION (µg/m ³ R)	< 0.416
CONCENTRATION (µg/m³R at 11% O₂)	< 0.384
STANDARD (µg/m³R at 11% O₂)	20
EMISSION (g/h)	<0.000563
HYDROGEN CHLORIDE	
CONCENTRATION (mg/m ³ R)	65.7
EMISSION (kg/h)	0.089
SVOC (PCDD/F)	
CONCENTRATION (ng TEQ/m ³ R)	0.0359
CONCENTRATION (ng TEQ/m³R at 11% O₂)	0.0293
STANDARD (ng TEQ/m³R at 11% O₂)	0.08
EMISSION (µg/h) TEQ	0.0463

For this program, the applicable standards for mercury (Hg) are respected but not for dioxins and furans (PCDD/F) at the incinerator 1. An average value of 0.104 ng TEQ/m³R at 11% O₂ was recorded, compared to the applicable limit from the GN Guideline of 0.08 ng TEQ/m³R at 11% O₂.

The sample collection was performed in accordance with the requirements of the Report No. EPS 3/UP/2, including methods recommended by Environment and Climate Change Canada (ECCC) inside “Environment Canada, the National Incinerator Testing and Evaluation program: Air Pollution Control Technology”. Report No. EPS 3/UP/2, Ottawa, 1986.

1 INTRODUCTION

Consulair was mandated by Agnico Eagle Mines Limited to perform an atmospheric emission characterization program at the incinerators 1 (model no ECO 1.75TN 1PVC100L 16-1MS, or “Eco Waste”) and 2 (model KETEK CY-100-CA-D, or “Ketek”) at the Meliadine Mine as part of an environmental compliance program. The campaign was carried out from August 12th to August 22nd, 2024.

Prior to the campaign, the characterization program was outlined in a sampling plan that was approved the company subject to source testing.

1.1 PROGRAM OBJECTIVES

The objectives of the atmospheric emission characterization were as follows:

- Obtain an overview of the atmospheric emissions in current conditions;
- Evaluate the concentration and the emission rate of the main parameters of interest emitted by the two incinerators (Eco Waste and Ketek);
- Compare the emission results to the applicable standards;
- Ensure that the sampling work respects the recognized quality control criteria.

1.2 PROGRAM SCOPE

The program included the sources (processes) and the parameters outlined in table 1-1.

TABLE 1-1 – TARGETED SOURCES AND PARAMETERS

SOURCE / PARAMETERS	P	Me*	HCl	SVOC**	O ₂	CO ₂	CO	SO ₂	NO _x
Incinerator 1 (Main)	3	3	3	3	3	3	3	3	3
Incinerator 2	3	3	3	3	3	3	3	3	3

*: Al, Sb, Ag, As, Ba, Be, Bi, B, Ca, Cr, Co, Cu, Sn, Fe, Li, Mg, Mb, Mo, Ni, Pb, K, Se, Na, Ti, V, Zn, Sr, Tl, Si (Silicium soluble) and Hg

**: PCDD/F

Gas characteristics (velocity, temperature and humidity) were also measured during isokinetic sampling.

2 KEY PERSONNEL

Table 2-1 presents the contact information for the company subject to validation testing. The Consulair team involved in the project is presented in table 2-2. The laboratories used as subcontractors are listed in table 2-3.

TABLE 2-1 – CLIENT CONTACT INFORMATION

COMPANY & ADRESS	CONTACT	ROLE
Agnico Eagle Mines Limited Meliadine Division Suite 879 Rankin Inlet, Nunavut, Canada, X0C 0G0	Randy Schwandt Environmental coordinator Tel: 819-759-3555, ext. 4603996 randy.schwandt@agnicoeagle.com	Environment Coordinator

TABLE 2-2 – CONSULAIR'S TEAM INVOLVED IN THE PROJECT

PERSONNEL	TITLE	EXPERIENCE	ROLE
Nicolas Groulx	Customer services manager & Business development	11 years	Project manager
Abderrazak El kamouni	Project Manager	9 years	On-site sampling. Data compilation. Writing of report
Rachid Jamal	Technician	8 years	On-site sampling
Julie Vaillancourt, P.Eng.	Project Manager	24 years	Validation of report

TABLE 2-3 – LABORATORIES

LABORATORY	ANALYSIS	ACCREDITATION DOMAIN DR-12-LLA
Consulair	P	400
	Hydrogen chloride (HCl)	Not applicable
Bureau Veritas	Me	404/406
Agat	PCDD/F	510

3 **ENVIRONMENTAL NORMS AND REQUIREMENTS TO BE RESPECTED**

In October 2010, the Government of Nunavut introduced a Guideline document for the burning and incineration of solid waste, which was subsequently revised in January 2012. This document outlines two criteria for air emissions relevant to the current project. Air emission standards set limits on the concentration of contaminants released into the atmosphere. These standards are achievable using commonly available incineration technology and waste diversion practices and are measured as concentrations in the exhaust gases emitted from the stack. The following emission standards apply to both existing and new or expanding solid waste incinerators in Nunavut and are based on the Canadian Council of Ministers of the Environment (CCME) Canada-Wide Standards for Dioxins and Furans and Mercury Emissions. However, no similar standards have been established for the open burning of solid waste.

TABLE 3-1 – AIR EMISSION STANDARDS FOR SOLIDS WASTE INCINERATORS

PARAMETER	NUMERIC STANDARD*
Dioxins and Furans	80 pg I-TEQ/m ³
Mercury	20 µg/Rm ³

*Stack concentrations are corrected to 11% oxygen content for reporting purposes

4 **SAMPLING**

4.1 **PROCESS OPERATING CONDITIONS**

An Agnico Eagle representative was in charge of monitoring the operating conditions to ensure accurate sampling conditions. To perform this sampling program accurately, strict communication was maintained between Consulair and Agnico Eagle personnel involved. The sampling tests began once the primary chamber temperatures approximately reached the operating temperatures specified in the design report or the set-point temperature. Agnico Eagle representative took this decision to ensure appropriate sampling conditions. Process operating conditions were stable throughout the sampling program.

4.2 **EMISSION POINT CHARACTERISTICS**

The emission and sampling point characteristics are presented in table 4-1. Figure 4-1 shows the two selection criteria for the sampling site; length of the duct or stack upstream (A) and downstream (B) from flow disturbances. The number of sampling points was chosen using these two lengths according to the EPS 1/RM/8 Method A by ECCC titled “Determination of Sampling Site and Traverse Points”.

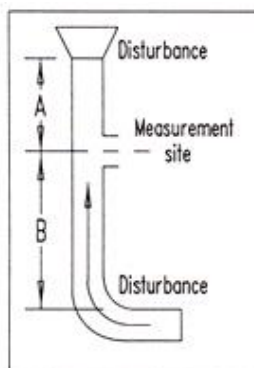
TABLE 4-1 – CHARACTERISTICS OF THE SAMPLING LOCATION OF THE EMISSION POINTS

SOURCE / EMISSION POINT	DIAMETER AT THE SAMPLING POINT (m)	NUMBER OF DIAMETERS		NUMBER OF SAMPLING PORTS USED	NUMBER OF SAMPLING POINTS	
		B _D	A _D		PER TRAVERSE	TOTAL
Incinerator 1 (Main)	0.85	5.0	2.0	2	20	40
Incinerator 2	0.46	6.7	1.4	2	18	36

A_D - multiples of stack diameter upstream from a flow disturbance

B_D - multiples of stack diameter downstream from a flow disturbance

FIGURE 4-1 – SAMPLING SITE PLACEMENT CRITERIA



4.3 SAMPLING METHODS

Samples were collected using standards methods from ECCC and/or the United States Environmental Protection Agency (USEPA).

The different sampling methods used during this campaign are presented in table 4-2.

TABLE 4-2 – SAMPLING METHODS

PARAMETERS	METHOD
Sampling location and points	ECCC EPS 1/RM/8 Method A
Temperature	Thermocouple
Gas velocity	ECCC EPS 1/RM/8 Method B
Humidity	ECCC EPS 1/RM/8 Method D
Filterable particles	ECCC EPS 1/RM/8 Method E
Metals	USEPA 40CFR60 Method 29
Gaseous hydrochloric acid	ECCC EPS 1/RM/1
Semi-volatile organic compounds	ECCC EPS 1/RM/2
Oxygen (O ₂)	USEPA 40CFR60 Method 3A
Carbon dioxide (CO ₂)	USEPA 40CFR60 Method 3A
Carbon monoxide (CO)	USEPA 40CFR60 Method 10
Sulfur dioxide (SO ₂)	USEPA 40CFR60 Method 6C
Nitrogen oxides (NO _x)	USEPA 40CFR60 Method 7E

The limits and values obtained for the quality assurance and quality control criteria (QA/QC) of the methods used are presented in Appendix 6 of this report. This appendix also presents the calibration constants of the equipment used during this sampling program.

4.3.1 Particles, metals and hydrogen chloride

The reference sampling method used to determine particle emission is the method published by ECCC under number EPS 1/RM/8 titled “Reference Method for Measuring Releases of Particulate from

Stationary Sources”. This method is divided into six testing methods (A to F) that can be used either individually or in diverse combinations to establish gas flow characteristics. These testing methods are:

- Method A – Determination of Sampling Site and Traverse Points;
- Method B – Determination of Stack Gas Velocity and Volumetric Flow Rate;
- Method C – Determination of Molecular Weight by Gas Analysis;
- Method D – Determination of Moisture Content;
- Method E – Determination of Particulate Releases;
- Method F – Calibration Procedure for S-Type Pitot Tube, Dry Gas Meter and Orifice Meter.

A description of the sampling train equipment necessary for the analysis of particles is presented in table 4-3. This method was combined with USEPA method 29 entitled “Metal emissions from stationary sources” for metal sampling. HCl was also analyzed in the first impinger.

TABLE 4-3 – SAMPLING TRAIN – PARTICLES – METHOD EPS 1/RM/8 & USEPA 29

SAMPLING TRAIN ENVIRONMENT CANADA METHOD EPS 1/RM/8 & USEPA 29	
NOZZLE	Glass
PROBE	Glass, heated at $120 \pm 14^{\circ}\text{C}$
FILTER	Glass fiber 125 mm, heated at $120 \pm 14^{\circ}\text{C}$
FILTER HOLDER	Glass, heated at $120 \pm 14^{\circ}\text{C}$
FILTER SUPPORT	PTFE, heated at $120 \pm 14^{\circ}\text{C}$
1 st IMPINGER	Modified Greenburg-Smith; H_2O 100 mL, in an ice bath
2 nd IMPINGER	Modified Greenburg-Smith; 5% HNO_3 / 10% H_2O_2 100 mL, in an ice bath
3 rd IMPINGER	Greenburg-Smith; 5% HNO_3 / 10% H_2O_2 100 mL, in an ice bath
4 th IMPINGER	Modified Greenburg-Smith; empty, in an ice bath
5 th IMPINGER	Modified Greenburg-Smith; 4 % KMnO_4 / 10% H_2SO_4 100 mL, in an ice bath
6 th IMPINGER	Modified Greenburg-Smith; 4 % KMnO_4 / 10% H_2SO_4 100 mL, in an ice bath
SILICA GEL	Container with saturation indicator

4.3.2 Gaseous Hydrogen Chloride

The emission rate of gaseous hydrogen chloride (HCl) was determined using a sample collected in the first impinger of the metals and particles sampling train.

4.3.3 Semi-volatile Organic Compounds

The emission rate of semi-volatile organic compounds (SVOC) was determined using samples obtained in isokinetic conditions in a predetermined number of points within the stack. The method used is the EPS 1/RM/2 published by ECCC and titled “Reference Method for Source Testing: Measurement of Releases of Selected Semi-volatile Organic Compounds from Stationary Sources”. SVOCs are defined as organic compounds with a boiling point above 100°C . They include the polychlorinated dibenzo-para-dioxins

(PCDDs), the polychlorinated dibenzofurans (PCDFs), the polychlorinated biphenyls (PCBs), polycyclic aromatic hydrocarbons (PAHs), chlorobenzenes (CB) and phenolic compounds (PC).

Before any experiments, an SVOC analysis is performed on the rinsing solvents recovered during decontamination of the sampling train glassware to ensure the cleanliness of the equipment.

Each run has a minimum duration of 180 minutes, with a sampled gas volume of at least 3.0 m³R. Table 4-4 presents the various equipment of an SVOC sampling train.

TABLE 4-4 – SAMPLING TRAIN – SVOC – EPS 1/RM/2

SAMPLING TRAIN ECCC EPS 1/RM/2	
NOZZLE	Stainless steel 316L
PROBE	Glass, heated at 120 ± 14°C
FILTER	Glass fiber 125 mm, heated at 120 ± 14°C
FILTER HOLDER	Glass, heated at 120 ± 14°C
FILTER SUPPORT	PTFE, heated at 120 ± 14°C
CONDENSER	Glass
SORBENT TRAP	XAD-2 resin
CONDENSATE TRAP	Empty
1 st IMPINGER	Greenburg-Smith; Ethylene glycol 100 mL, in an ice bath
2 nd IMPINGER	Modified Greenburg-Smith; empty, in an ice bath
SILICA GEL	Container with saturation indicator

4.3.4 Gaseous Parameters (O₂, CO₂, CO, NO_x, SO₂)

The gaseous parameters, such as oxygen (O₂), carbon monoxide (CO), carbon dioxide (CO₂), nitrogen oxides (NO_x) and sulfur dioxide (SO₂) were measured using continuous instrumental analyzers. Data points were recorded every minute for the duration of the test run.

The effluent gas is continuously sampled from a fixed point in the stack and conveyed to the analyzers through a stainless-steel sampling probe tube and is filtered to remove particles. The gas is then passed through a sample line made of Teflon followed by a condenser and is then directed to the individual analyzers. The Teflon sampling line is heated to at least 120°C or at least 5°C above the dew point, whichever is highest, in order to prevent condensation. The required sampling equipment for these parameters is as follows:

- Stainless steel probe heated at 120°C or more;
- Glass fiber or ceramic filter placed inside a heated housing at 120°C or higher;
- Heated sample line, made of Teflon tubes, that maintains the gases at a temperature of 120°C or higher;

- A condenser whose temperature is maintained at approximately 4°C to ensure proper gas humidity condensation;
- Peristaltic pump following the condenser to evacuate the gas condensate;
- Calibration gas manifold to allow the introduction of calibration gases directly to the gas analyzer in direct calibration mode or into the measurement system, at the probe, in system calibration mode, or both.
- Sample gas manifold to divert a portion of the sample to the analyzers, delivering the remainder to the by-pass discharge vent.

The analyzers characteristics are presented in table 4-5.

TABLE 4-5 – CHARACTERISTICS OF THE ANALYZERS

APPARATUS	O ₂	CO ₂	CO	SO ₂	NO _x
Method	USEPA 3A	USEPA 3A	USEPA 10	USEPA 6C	USEPA 7E
Brand	Horiba	Horiba	Horiba	Horiba	Horiba
Model	PG-350	PG-350	PG-350	PG-350	PG-350
Detection	Galvanic cell	Infrared (NDIR)	Infrared (NDIR)	Infrared (NDIR)	CHIMOLUMINESCENCE
Physical scale	0 – 25 % v/v	0 – 30 % v/v	0 – 1000 ppm	0 – 1000 ppm	0 – 1000 ppm

4.4 SCHEDULE

The following table shows the sampling schedule at the two characterized sources.

TABLE 4-6 – TEST SCHEDULE – MELIADINE INCINERATORS

Emission points	Parameters	RUN NUMBER	Date	RUN START	RUN END
Incinerator 1	SVOC	INC1-COSV-E1	2024-08-16	8:50	12:10
		INC1-COSV-E2	2024-08-17	15:40	19:00
		INC1-COSV-E3	2024-08-18	14:00	17:20
	Me/ P/ HCl	INC1-Me-E1	2024-08-16	8:50	12:10
		INC1-Me-E2	2024-08-17	15:40	19:00
		INC1-Me-E3	2024-08-18	14:00	17:20
	GAS (O ₂ , CO ₂ , CO, NO _x , SO ₂)	INC1-GAZ-E1	2024-08-16	8:50	12:10
		INC1-GAZ-E2	2024-08-17	15:40	19:00
		INC1-GAZ-E3	2024-08-18	14:00	17:20
Incinerator 2	SVOC	INC2-COSV-E1	2024-08-19	12:42	16:26
		INC2-COSV-E2	2024-08-20	8:02	11:02
		INC2-COSV-E3	2024-08-20	12:21	15:21
	Me/ P/ HCl	INC2-Me-E1	2024-08-19	12:41	15:25
		INC2-Me-E2	2024-08-20	8:03	11:03
		INC2-Me-E3	2024-08-20	12:22	15:29
	GAS (O ₂ , CO ₂ , CO, NO _x , SO ₂)	INC2-GAZ-E1	2024-08-19	12:41	16:26
		INC2-GAZ-E2	2024-08-20	8:02	11:02
		INC2-GAZ-E3	2024-08-20	12:21	15:21

5 QA/QC PROGRAM

The quality assurance and quality control program (QA/QC) in place at Consulair is comprised of many elements aimed at validating the methodologies used during the characterization program. Throughout the campaign, Consulair ensured that each step of the atmospheric emissions characterization program, including the QA/QC program, allowed proper fulfillment of the defined objectives, while also respecting the fixed deadline. The main elements of this program are detailed in this section.

5.1 QA/QC DURING PLANNING PHASE

5.1.1 Sampling Team

The sampling team was composed of two qualified individuals. Their titles and tasks performed during the characterization program are presented in table 2-2.

The personnel had the necessary training in order to respect the applicable health and safety requirements present at the site.

5.1.2 Sampling Methods

The sampling methods used were determined according to the process type and/or the emission point characteristics, the mandate objectives and the parameters considered. The methods are presented in table 4-2.

5.1.3 Equipment, Instruments and Reagents Used

The sampling train glassware as well as the sample containers were cleaned and verified according to the applicable reference methods.

The instruments that were used are regularly maintained and were calibrated less than a year ago. The equipment's calibration certificates are presented in Appendix 2 of this report.

The grade of the solvents and reagents used in this mandate was verified.

The calibration gases used to calibrate the direct reading gas analyzers were valid during their use on the field by taking into account the retention period imposed by the manufacturer. The calibration gases were of either "certified $\pm 2\%$ " or "USEPA Protocol" quality. The gas analysis certificates are presented in Appendix 2 of this report.

5.1.4 Field Forms

The forms required for field sampling of the required parameters are presented in appendix 4 along with the field notes.

5.2 QA/QC DURING SAMPLING

5.2.1 Sampling Train Assembly and Sample Recuperation

One of Consulair's mobile laboratories was used to assemble the sampling trains as well as for the various steps of sample recovery. Sample recovery was performed according to the recommended method procedures. At the end of the runs, the ends of the sampling train were sealed for transport of the components to the mobile laboratory to prevent contamination of the sample.

The samples were recovered in appropriate containers as specified by the methods used. All samples were preserved according to the applicable methodology criteria for the entirety of the project until their delivery to the analysis laboratories. Consulair used a sample identification system allowing to easily trace a sample's origin by a descriptive code coupled with a corresponding table. Each sample code includes

the date, sample number, precise sampling location, its nature and destination (i.e. analysis, archiving). This information is enclosed in the chain of custody form that is included with the laboratory analysis report presented in Appendix 3.

5.2.2 Leak Tests

Sample train leak tests were performed before and after each traverse, when applicable.

5.2.3 Specific Criteria

The manual sampling methods used had specific criteria such as the positioning of the sampling points, number of sampling points, stack diameter, leak tests, gas velocity, temperatures, presence of cyclonic or inverse flow, isokinetic, sampling rate, the test duration, and gas sample volume, which were followed to ensure method compliance.

5.2.4 Analyzer Calibration

Before analysis, Consulair personnel ensured that all components of the continuous instrumental analyzers were functional, that there was no leak in the setup, that the apparatus's analogue outputs were connected to the data acquisition system and that the recorded data corresponded to the values indicated by the analyzers. To ensure valid measurements, the analyzers were heated for at least 2 hours prior to their calibration.

Instrumental linearity (the calibration error of the analyzers) was verified on the field by passing three calibration gases – zero, middle concentration and high concentration – directly at the inlet of the instruments. The calibration forms are filled out on site and systematic error evaluation as well as the analyzers' calibration drift was verified immediately before and after each measurement period using two calibration gases (zero and middle or high span).

5.3 POST-SAMPLING QA/QC

5.3.1 Analysis Laboratories

The laboratories chosen for sample analysis are accredited by the *Centre d'expertise en analyse environnementale du Québec* (CEAEQ) and they conform to the ISO/CEI 17025 norm. The analysis reports were signed by a chemist and are presented in Appendix 3. The quality assurance and quality programs specific to the analyzed parameters were included in the analysis reports.

5.3.2 QA/QC – Report Drafting

The computational tools used to analyze the data were verified to ensure calculation precision. This report was written by a project manager with 9 years of relevant experience. The report was also reviewed by a senior project manager.

5.4 METHOD CRITERIA AND TEST VALIDITY

Appendix 6 presents the results of the quality assurance and quality control program for each sampling method used at all emission points during the atmospheric emission characterization program for the present mandate. The limits and values obtained for the QA/QC program for these methods are also presented in Appendix 6. The following deviation from the sampling method's QA/QC was observed:

- For the first run of particles and metals sampling at the incinerator 2, the test was stopped after 95 minutes, below the minimum time of 120 minutes required by the USEPA method 29. The reason was because of the repeated clogging of the filters. That situation did not repeat for the two other runs. The results of the first run are presented (highlighted in yellow) but they are not taken into account in the average because that run was not representative of the normal conditions.

6 RESULTS

The reference values are reported at a temperature of 25°C and at an atmospheric pressure of 101.3 kPa, on a dry basis.

In the results tables, a value starting with the sign “<” signifies that the laboratory result is below the reported detection limit (RDL) and represents a maximum result. Unless otherwise indicated, when an analysis result is given by the laboratory as being below the RDL, this detection limit is used in the calculations directly.

The averages in the following tables correspond to the average of all the runs performed at a given source for a given operating condition.

The computer-compiled data is presented in Appendix 1 and the continuous measurement graphs are presented in Appendix 5.

TABLE 6-1 – RESULTS – INCINERATOR 1 – GASES

SAMPLING SCHEDULE				
RUN NUMBER	INC1 - GAZ - E1	INC1 - GAZ - E2	INC1 - GAZ - E3	AVERAGE
DATE	2024-08-16	2024-08-17	2024-08-18	
RUN START	8:50	15:40	14:00	
RUN END	12:10	19:00	17:20	
RUN LENGTH (min)	200	200	200	
GAS CHARACTERISTICS				
NORMALISED GAS FLOW (m ³ R/h)	4232	4105	4510	4282
GAS HUMIDITY (%v/v)	9.4	9.7	8.6	9.2
SULFUR DIOXIDE (SO ₂)				
SO ₂ (mg/m ³ R)	16.8	32.4	6.94	18.7
SO ₂ (ppm dry) - average	6.4	12.4	2.7	7.2
SO ₂ (ppm dry) - minimum	0.0	0.7	0.0	n/a
SO ₂ (ppm dry) - maximum	9.6	46.9	8.8	n/a
SO ₂ (kg/h)	0.0711	0.133	0.0313	0.0785
SO ₂ (g/s)	0.0197	0.0370	0.00869	0.0218
NITROGEN OXIDES (NO _x)				
NO _x (mg/m ³ R)	192	205	160	185
NO _x (ppm dry) - average	102.0	108.8	85.1	98.7
NO _x (ppm dry) - minimum	94.9	82.5	70.8	n/a
NO _x (ppm dry) - maximum	110.5	138.7	99.1	n/a
NO _x (kg/h)	0.812	0.840	0.722	0.791
NO _x (g/s)	0.225	0.233	0.200	0.220
CARBON MONOXIDE (CO)				
CO (mg/m ³ R)	6.81	4.71	3.88	5.13
CO (ppm dry) - average	6.0	4.1	3.4	4.5
CO (ppm dry) - minimum	4.1	3.6	2.8	n/a
CO (ppm dry) - maximum	10.0	4.5	3.9	n/a
CO (kg/h)	0.0288	0.0193	0.0175	0.0219
CO (g/s)	0.00801	0.00537	0.00486	0.00608
OXYGEN (O ₂)				
O ₂ (mg/m ³ R)	139000	129000	161000	143000
O ₂ (% dry) - average	10.6	9.8	12.3	10.9
O ₂ (% dry) - minimum	10.3	7.2	11.3	n/a
O ₂ (% dry) - maximum	10.9	12.0	13.5	n/a
O ₂ (kg/h)	588	528	727	614
O ₂ (g/s)	163	147	202	171
CARBON DIOXIDE (CO ₂)				
CO ₂ (mg/m ³ R)	141000	155000	118000	138000
CO ₂ (% dry) - average	7.8	8.6	6.6	7.7
CO ₂ (% dry) - minimum	7.6	6.9	5.7	n/a
CO ₂ (% dry) - maximum	8.0	10.7	7.4	n/a
CO ₂ (kg/h)	595	636	532	588
CO ₂ (g/s)	165	177	148	163
R: Reference conditions at 101.3 kPa and 25°C, on a dry basis				

TABLE 6-2 – RESULTS – INCINERATOR 2 – GASES

SAMPLING SCHEDULE				
RUN NUMBER	INC2 - GAZ - E1	INC2 - GAZ - E2	INC2 - GAZ - E3	AVERAGE
DATE	2024-08-19	2024-08-20	2024-08-20	
RUN START	12:41	8:02	12:21	
RUN END	16:26	11:02	15:21	
RUN LENGTH (min)	225	180	180	
GAS CHARACTERISTICS				
NORMALISED GAS FLOW (m ³ R/h)	1306	1335	1371	1337
GAS HUMIDITY (%v/v)	12.3	8.3	8.2	9.6
SULFUR DIOXIDE (SO ₂)				
SO ₂ (mg/m ³ R)	4.29	0	0.948	1.75
SO ₂ (ppm dry) - average	1.6	0.0	0.4	0.7
SO ₂ (ppm dry) - minimum	0.0	0.0	0.0	n/a
SO ₂ (ppm dry) - maximum	42.6	0.0	7.2	n/a
SO ₂ (kg/h)	0.00560	0	0.00130	0.00230
SO ₂ (g/s)	0.00156	0	0.000361	0.000639
NITROGEN OXIDES (NO _x)				
NO _x (mg/m ³ R)	173	145	137	152
NO _x (ppm dry) - average	92.2	77.2	73.1	80.9
NO _x (ppm dry) - minimum	58.1	62.7	47.7	n/a
NO _x (ppm dry) - maximum	132.6	84.7	102.2	n/a
NO _x (kg/h)	0.226	0.194	0.188	0.203
NO _x (g/s)	0.0629	0.0539	0.0524	0.0564
CARBON MONOXIDE (CO)				
CO (mg/m ³ R)	4.54	4.51	5.22	4.75
CO (ppm dry) - average	4.0	3.9	4.6	4.2
CO (ppm dry) - minimum	3.0	3.0	3.6	n/a
CO (ppm dry) - maximum	42.4	7.2	8.8	n/a
CO (kg/h)	0.00592	0.00602	0.00716	0.00637
CO (g/s)	0.00165	0.00167	0.00199	0.00177
OXYGEN (O ₂)				
O ₂ (mg/m ³ R)	98400	117000	145000	120000
O ₂ (% dry) - average	7.5	8.9	11.1	9.2
O ₂ (% dry) - minimum	0.4	4.2	7.5	n/a
O ₂ (% dry) - maximum	13.2	13.1	14.1	n/a
O ₂ (kg/h)	128	156	198	161
O ₂ (g/s)	35.7	43.2	55.1	44.7
CARBON DIOXIDE (CO ₂)				
CO ₂ (mg/m ³ R)	186000	162000	140000	163000
CO ₂ (% dry) - average	10.3	9.0	7.8	9.0
CO ₂ (% dry) - minimum	6.0	5.9	5.3	n/a
CO ₂ (% dry) - maximum	15.7	12.4	10.6	n/a
CO ₂ (kg/h)	243	216	191	217
CO ₂ (g/s)	67.5	60.1	53.1	60.3
R: Reference conditions at 101.3 kPa and 25°C, on a dry basis				

TABLE 6-3 – RESULTS – INCINERATOR 1 – METALS, PARTICULATE MATTER AND HCl

SAMPLING SCHEDULE				
RUN NUMBER	INC1-Me-E1	INC1-Me-E2	INC1-Me-E3	AVERAGE
DATE	2024-08-16	2024-08-17	2024-08-18	
RUN START	8:50	15:40	14:00	
RUN END	12:10	19:00	17:20	
RUN LENGTH (min)	200	200	200	
SAMPLED GAS PROPERTIES				
STATIC PRESSURE (kPa)	-0.03	-0.02	-0.02	-0.03
GAS HUMIDITY (%v)	9.4	9.7	8.6	9.2
GAS TEMPERATURE (°C)	903	965	774	881
GAS VELOCITY (ft/s)	29.4	30.1	27.7	29.1
GAS VELOCITY (m/s)	9.0	9.2	8.4	8.9
ACTUAL GAS FLOW RATE (m³/h)	18380	18830	17280	18160
REFERENCE GAS FLOW RATE (m³R/h)	4232	4105	4510	4282
ACTUAL GAS FLOW RATE (ACFM)	10820	11090	10170	10690
REFERENCE GAS FLOW RATE (RCFM)	2491	2416	2655	2520
CO ₂ (%vs)	7.8	8.6	6.6	7.7
O ₂ (%vs)	10.6	9.8	12.3	10.9
CO (ppmvs)	6	4	3	5
SAMPLED GAS				
SAMPLED GAS VOLUME (m³R)	3.20	3.06	3.35	n/a
PARTICLES				
MASS PARTICLES FILTER (mg)	58.4	83.0	56.3	n/a
MASS PARTICLES NOZZLE & PROBE (mg)	< 1.0	1.8	12.9	n/a
MASS CONDENSABLE PARTICULES (mg)	0.0	0.0	0.0	n/a
CONCENTRATION (mg/m³R)	18.6	27.7	20.7	22.3
CONCENTRATION (mg/m³R at 11 % O ₂)	17.9	24.7	23.8	22.1
EMISSION (kg/h)	0.0786	0.114	0.0932	0.0952
HCl				
HCl CONCENTRATION (mg/m³R)	84.4	115	88.6	96.1
HCl CONCENTRATION (mg/m³R at 11% O ₂)	81.1	103	102	95.3
HCl EMISSION (kg/h)	0.357	0.473	0.400	0.410

TABLE 6-3 – RESULTS – INCINERATOR 1 – METALS, PARTICULATE MATTER AND HCL (CONTINUED)

METALS				
PARTICULATE METALS (µg/m³R)				
Aluminum (Al)	8.76	7.85	244	86.9
Antimony (Sb)	34.7	199	157	130
Silver (Ag)	0.501	0.654	0.896	0.683
Arsenic (As)	36.6	78.5	175	96.6
Barium (Ba)	0.879	0.693	4.06	1.88
Beryllium (Be)	< 0.0219	< 0.0229	0.0597	0.0348
Bismuth (Bi)	0.835	2.53	1.80	1.72
Cadmium (Cd)	1.56	3.13	6.54	3.74
Calcium (Ca)	135	60.1	1867	687
Chrome (Cr)	4.63	18.9	17.3	13.6
Cobalt (Co)	<0.0313	0.0327	0.0896	0.0512
Copper (Cu)	49.4	53.9	94.7	66.0
Tin (Sn)	8.51	14.1	18.3	13.6
Iron (Fe)	8.13	17.7	157	61.1
Lithium (Li)	1.25	6.21	10.2	5.87
Magnesium (Mg)	13.1	6.86	105	41.7
Manganese (Mn)	0.626	0.817	4.39	1.94
Molybdenum (Mo)	2.06	13.0	12.9	9.34
Nickel (Ni)	< 0.156	0.915	0.956	0.676
Lead (Pb)	91.7	127	166	129
Potassium (K)	5070	6210	11000	7410
Selenium (Se)	0.156	< 0.163	0.149	0.156
Silicon (Si)	56.0	83.0	618	252
Sodium (Na) ⁽¹⁾	3720	4810	7560	5360
Strontium (Sr)	0.375	0.196	3.29	1.29
Thallium (Tl)	< 0.0313	0.0654	0.0896	0.0621
Titanium (Ti)	1.56	0.654	25.4	9.20
Vanadium (V)	0.188	0.490	1.05	0.574
Zinc (Zn)	226	330	618	392
Mercury (Hg)	< 0.0313	< 0.0327	< 0.0299	< 0.0313
DETECTED METALS	9473.0	12043	22830	14782
TOTAL METALS	9473.2	12043	22830	14782

(1): Sodium results are abnormally high and since the blank is also high, the samples were probably contaminated.

TABLE 6-3 – RESULTS – INCINERATOR 1 – METALS, PARTICULATE MATTER AND HCL (CONTINUED)

SAMPLING SCHEDULE				
RUN NUMBER	INC 1-Me-E1	INC 1-Me-E2	INC 1-Me-E3	AVERAGE
GASEOUS METALS (µg/m³R)				
Aluminum (Al)	9.07	12.4	7.17	9.55
Antimony (Sb)	< 0.219	< 0.229	< 0.209	< 0.219
Silver (Ag)	< 1.25	< 1.31	< 1.19	< 1.25
Arsenic (As)	0.813	0.262	0.329	0.468
Barium (Ba)	0.282	0.229	0.209	0.240
Beryllium (Be)	< 0.125	< 0.131	< 0.119	< 0.125
Bismuth (Bi)	0.156	< 0.131	0.149	0.146
Boron (B)	13.7	34.6	17.7	22.0
Cadmium (Cd)	< 0.125	< 0.131	< 0.119	< 0.125
Calcium (Ca)	33.8	77.8	30.5	47.4
Chrome (Cr)	0.250	0.294	< 0.209	0.251
Cobalt (Co)	< 0.219	< 0.229	< 0.209	< 0.219
Copper (Cu)	0.688	0.686	0.388	0.588
Tin (Sn)	5.63	6.21	5.08	5.64
Iron (Fe)	14.1	< 13.1	16.7	14.6
Lithium (Li)	< 2.19	< 2.29	< 2.09	< 2.19
Magnesium (Mg)	< 4.38	22.9	5.68	11.0
Manganese (Mn)	2.28	0.360	0.329	0.991
Molybdenum (Mo)	< 1.25	< 1.31	< 1.19	< 1.25
Nickel (Ni)	0.250	0.392	0.209	0.284
Lead (Pb)	< 1.25	< 1.31	< 1.19	< 1.25
Potassium (K)	< 21.9	< 22.9	< 20.9	< 21.9
Selenium (Se)	1.06	1.18	0.657	0.966
Silicon (Si)	94.2	46.1	72.3	70.8
Sodium (Na) ⁽¹⁾	3630	3660	3730	3670
Strontium (Sr)	< 0.219	< 0.229	< 0.209	< 0.219
Thallium (Tl)	< 0.219	< 0.229	< 0.209	< 0.219
Titanium (Ti)	< 2.19	< 2.29	< 2.09	< 2.19
Vanadium (V)	< 0.438	< 0.458	< 0.448	< 0.448
Zinc (Zn)	19.2	7.06	5.35	10.5
Mercury (Hg)	< 0.338	< 0.360	< 0.323	< 0.340
DETECTED METALS	3821	3875	3893	3863
TOTAL METALS	3857	3922	3924	3901

(1): Sodium results are abnormally high and since the blank is also high, the samples were probably contaminated.

TABLE 6-3 – RESULTS – INCINERATOR 1 – METALS, PARTICULATE MATTER AND HCL (CONTINUED)

SAMPLING SCHEDULE				
RUN NUMBER	INC 1-Me-E1	INC 1-Me-E2	INC 1-Me-E3	AVERAGE
TOTAL METALS (µg/m³R)				
Aluminum (Al)	17.8	20.3	251	96.4
Antimony (Sb)	34.9	199	158	131
Silver (Ag)	1.75	1.96	2.09	1.93
Arsenic (As)	37.4	78.7	175	97.1
Barium (Ba)	1.16	0.922	4.27	2.12
Beryllium (Be)	< 0.147	< 0.154	0.179	0.160
Bismuth (Bi)	0.992	2.66	1.94	1.87
Boron (B)	13.7	34.6	17.7	22.0
Cadmium (Cd)	1.68	3.26	6.66	3.87
Calcium (Ca)	168	138	1900	735
Chrome (Cr)	4.88	19.2	17.5	13.9
Cobalt (Co)	< 0.250	0.262	0.299	0.270
Copper (Cu)	50.1	54.6	95.1	66.6
Tin (Sn)	14.1	20.3	23.4	19.3
Iron (Fe)	22.2	30.7	174	75.7
Lithium (Li)	3.44	8.50	12.2	8.06
Magnesium (Mg)	17.5	29.7	111	52.7
Manganese (Mn)	2.91	1.18	4.72	2.94
Molybdenum (Mo)	3.32	14.3	14.1	10.6
Nickel (Ni)	0.407	1.31	1.16	0.960
Lead (Pb)	92.9	129	168	130
Potassium (K)	5090	6230	11000	7440
Selenium (Se)	1.22	1.34	0.806	1.12
Silicon (Si)	150	129	691	323
Sodium (Na)	7350	8470	11300	9040
Strontium (Sr)	0.594	0.425	3.49	1.50
Thallium (Tl)	< 0.250	0.294	0.299	0.281
Titanium (Ti)	3.75	2.94	27.5	11.4
Vanadium (V)	0.626	0.948	1.49	1.02
Zinc (Zn)	246	337	624	402
Mercury (Hg)	< 0.369	< 0.392	< 0.352	< 0.371
DETECTED METALS	13330	15964	26754	18683
TOTAL METALS	13331	15965	26755	18683

TABLE 6-3 – RESULTS – INCINERATOR 1 – METALS, PARTICULATE MATTER AND HCL (CONTINUED)

SAMPLING SCHEDULE				
RUN NUMBER	INC 1-Me-E1	INC 1-Me-E2	INC 1-Me-E3	AVERAGE
TOTAL METALS (µg/m³R at 11% O₂)				
Aluminum (Al)	17.1	18.1	289	108
Antimony (Sb)	33.6	177	181	131
Silver (Ag)	1.68	1.75	2.41	1.95
Arsenic (As)	36.0	70.2	202	103
Barium (Ba)	1.12	0.822	4.92	2.28
Beryllium (Be)	< 0.141	< 0.137	0.206	0.162
Bismuth (Bi)	0.953	2.37	2.24	1.85
Boron (B)	13.1	30.8	20.3	21.4
Cadmium (Cd)	1.62	2.90	7.67	4.06
Calcium (Ca)	162	123	2180	823
Chrome (Cr)	4.69	17.1	20.2	14.0
Cobalt (Co)	< 0.241	0.233	0.344	0.273
Copper (Cu)	48.2	48.7	109	68.8
Tin (Sn)	13.6	18.1	27.0	19.5
Iron (Fe)	21.3	27.4	200	83.1
Lithium (Li)	3.31	7.58	14.1	8.33
Magnesium (Mg)	16.8	26.5	128	57.0
Manganese (Mn)	2.80	1.05	5.43	3.09
Molybdenum (Mo)	3.19	12.8	16.3	10.7
Nickel (Ni)	0.391	1.17	1.34	0.966
Lead (Pb)	89.3	115	193	132
Potassium (K)	4890	5560	12600	7700
Selenium (Se)	1.17	1.20	0.928	1.10
Silicon (Si)	144	115	795	351
Sodium (Na)	7060	7550	13000	9200
Strontium (Sr)	0.571	0.379	4.02	1.66
Thallium (Tl)	< 0.241	0.262	0.344	0.282
Titanium (Ti)	3.61	2.62	31.6	12.6
Vanadium (V)	0.601	0.846	1.72	1.06
Zinc (Zn)	236	301	718	418
Mercury (Hg)	< 0.355	< 0.350	< 0.406	< 0.370
DETECTED METALS	12812	14238	30798	19283
TOTAL METALS	12813	14239	30799	19283
Air Emission Standard for Mercury (µg/m³R at 11% O₂)		20		

TABLE 6-3 – RESULTS – INCINERATOR 1 – METALS, PARTICULATE MATTER AND HCL (CONTINUED)

SAMPLING SCHEDULE				
RUN NUMBER	INC 1-Me-E1	INC 1-Me-E2	INC 1-Me-E3	AVERAGE
TOTAL METALS (g/h)				
Aluminum (Al)	0.0755	0.0832	1.13	0.431
Antimony (Sb)	0.148	0.817	0.711	0.559
Silver (Ag)	0.00741	0.00805	0.00943	0.00830
Arsenic (As)	0.158	0.323	0.790	0.424
Barium (Ba)	0.00491	0.00378	0.0193	0.00932
Beryllium (Be)	< 0.000622	< 0.000631	0.000808	0.000687
Bismuth (Bi)	0.00420	0.0109	0.00877	0.00796
Boron (B)	0.0578	0.142	0.0796	0.0931
Cadmium (Cd)	0.00712	0.0134	0.0300	0.0168
Calcium (Ca)	0.712	0.566	8.56	3.28
Chrome (Cr)	0.0207	0.0786	0.0791	0.0595
Cobalt (Co)	< 0.00106	0.00107	0.00135	0.00116
Copper (Cu)	0.212	0.224	0.429	0.288
Tin (Sn)	0.0598	0.0832	0.106	0.0829
Iron (Fe)	0.0940	0.126	0.785	0.335
Lithium (Li)	0.0146	0.0349	0.0552	0.0349
Magnesium (Mg)	0.0741	0.122	0.500	0.232
Manganese (Mn)	0.0123	0.00483	0.0213	0.0128
Molybdenum (Mo)	0.0140	0.0588	0.0637	0.0455
Nickel (Ni)	0.00172	0.00537	0.00525	0.00411
Lead (Pb)	0.393	0.529	0.756	0.559
Potassium (K)	21.5	25.6	49.5	32.2
Selenium (Se)	0.00516	0.00550	0.00364	0.00477
Silicon (Si)	0.635	0.530	3.11	1.43
Sodium (Na)	31.1	34.8	50.9	38.9
Strontium (Sr)	0.00252	0.00174	0.0158	0.00667
Thallium (Tl)	< 0.00106	0.00121	0.00135	0.00120
Titanium (Ti)	0.0159	0.0121	0.124	0.0506
Vanadium (V)	0.00265	0.00389	0.00674	0.00442
Zinc (Zn)	1.04	1.38	2.81	1.75
Mercury (Hg)	< 0.00156	< 0.00161	< 0.00159	< 0.00159
DETECTED METALS	56.4	65.5	121	80.9
TOTAL METALS	56.4	65.5	121	80.9
R: Reference conditions at 101.3 kPa and 25°C, on a dry basis				

TABLE 6-4 – RESULTS – INCINERATOR 2 – METALS, PARTICULATE MATTER AND HCl*

SAMPLING SCHEDULE				
RUN NUMBER	INC2-Me-E1	INC2-Me-E2	INC2-Me-E3	AVERAGE
DATE	2024-08-19	2024-08-20	2024-08-20	
RUN START	12:41	8:03	12:22	
RUN END	15:25	11:03	15:29	
RUN LENGTH (min)	95	180	180	
SAMPLED GAS PROPERTIES				
STATIC PRESSURE (kPa)	-0.02	-0.02	-0.02	-0.02
GAS HUMIDITY (%v)	12.3	8.3	8.2	9.6
GAS TEMPERATURE (°C)	953	978	925	952
GAS VELOCITY (ft/s)	33.9	33.8	33.2	33.7
GAS VELOCITY (m/s)	10.3	10.3	10.1	10.3
ACTUAL GAS FLOW RATE (m³/h)	6108	6097	5990	6065
REFERENCE GAS FLOW RATE (m³R/h)	1306	1335	1371	1338
ACTUAL GAS FLOW RATE (ACFM)	3595	3589	3525	3570
REFERENCE GAS FLOW RATE (RCFM)	768.8	785.8	807.1	787.3
CO ₂ (%vs)	10.3	9.0	7.8	9.0
O ₂ (%vs)	7.5	8.9	11.1	9.2
CO (ppmvs)	4	4	5	4
SAMPLED GAS				
SAMPLED GAS VOLUME (m³R)	1.62	3.08	2.86	n/a
PARTICLES				
MASS PARTICLES FILTER (mg)	488.6	91.3	98.2	n/a
MASS PARTICLES NOZZLE & PROBE (mg)	37.4	6.1	18.0	n/a
MASS CONDENSABLE PARTICULES (mg)	0.0	0.0	0.0	n/a
CONCENTRATION (mg/m³R)	325	31.6	40.7	36.2
CONCENTRATION (mg/m³R at 11 % O ₂)	240	26.1	41.1	33.6
EMISSION (kg/h)	0.425	0.0422	0.0558	0.049
HCl				
HCl CONCENTRATION (mg/m³R)	270	56.7	74.6	65.7
HCl CONCENTRATION (mg/m³R at 11% O ₂)	199	46.8	75.4	61.1
HCl EMISSION (kg/h)	0.352	0.0757	0.102	0.089

TABLE 6-4 – RESULTS – INCINERATOR 2 – METALS, PARTICULATE MATTER AND HCL (CONTINUED)

METALS				
RUN NUMBER	INC 2-Me-E1	INC 2-Me-E2	INC 2-Me-E3	AVERAGE
PARTICULATE METALS (µg/m³R)				
Aluminum (Al)	74.2	15.6	68.3	41.9
Antimony (Sb)	167	7.41	46.2	26.8
Silver (Ag)	2.97	0.617	1.02	0.816
Arsenic (As)	132	11.8	28.0	19.9
Barium (Ba)	13.3	0.299	4.56	2.43
Beryllium (Be)	< 0.0989	< 0.0227	< 0.0280	< 0.0254
Bismuth (Bi)	3.46	0.172	1.16	0.667
Cadmium (Cd)	2.16	0.406	0.539	0.473
Calcium (Ca)	881	54.6	355	205
Chrome (Cr)	33.5	16.0	10.7	13.3
Cobalt (Co)	0.896	< 0.0325	0.224	0.128
Copper (Cu)	223	15.6	63.4	39.5
Tin (Sn)	26.9	< 0.227	5.46	2.84
Iron (Fe)	142	13.0	44.5	28.7
Lithium (Li)	8.96	0.974	2.80	1.89
Magnesium (Mg)	85.3	6.17	34.0	20.1
Manganese (Mn)	5.87	0.325	2.07	1.20
Molybdenum (Mo)	4.70	6.85	5.74	6.30
Nickel (Ni)	1.48	< 0.162	0.455	0.309
Lead (Pb)	93.9	22.5	26.8	24.7
Potassium (K)	29300	3570	6970	5270
Selenium (Se)	< 0.927	< 0.162	< 0.350	< 0.256
Silicon (Si)	707	34.1	273	154
Sodium (Na) ⁽¹⁾	80300	9520	20500	15000
Strontium (Sr)	2.42	0.0974	0.812	0.455
Thallium (Tl)	0.244	< 0.0325	0.0483	0.0404
Titanium (Ti)	17.2	0.974	6.06	3.52
Vanadium (V)	< 0.494	< 0.0974	< 0.140	< 0.119
Zinc (Zn)	1420	85.4	291	188
Mercury (Hg)	< 0.185	< 0.0325	< 0.0700	< 0.0512
DETECTED METALS	113630	13383	28753	21068
TOTAL METALS	113630	13384	28754	21069

(1): Sodium results are abnormally high and since the blank is also high, the samples were probably contaminated.

TABLE 6-4 – RESULTS – INCINERATOR 2 – METALS, PARTICULATE MATTER AND HCL (CONTINUED)

SAMPLING SCHEDULE				
RUN NUMBER	INC 2-Me-E1	INC 2-Me-E2	INC 2-Me-E3	AVERAGE
GASEOUS METALS (µg/m³R)				
Aluminum (Al)	36.5	8.45	22.1	15.3
Antimony (Sb)	1.55	< 0.195	0.210	0.202
Silver (Ag)	< 2.47	< 1.30	< 1.40	< 1.35
Arsenic (As)	2.60	0.260	0.630	0.445
Barium (Ba)	0.803	< 0.130	1.68	0.905
Beryllium (Be)	< 0.247	< 0.130	< 0.140	< 0.135
Bismuth (Bi)	< 0.247	< 0.130	< 0.140	< 0.135
Boron (B)	35.5	11.5	11.9	11.7
Cadmium (Cd)	< 0.247	< 0.130	< 0.140	< 0.135
Calcium (Ca)	179	36.7	106	71.4
Chrome (Cr)	< 0.494	< 0.195	0.245	0.220
Cobalt (Co)	< 0.494	< 0.195	< 0.210	< 0.202
Copper (Cu)	4.39	0.357	3.29	1.82
Tin (Sn)	11.1	5.52	14.0	9.76
Iron (Fe)	51.3	14.3	41.7	28.0
Lithium (Li)	< 4.94	< 1.95	< 2.10	< 2.02
Magnesium (Mg)	51.3	8.12	21.0	14.6
Manganese (Mn)	2.60	0.422	0.700	0.561
Molybdenum (Mo)	< 2.47	< 1.30	< 1.40	< 1.35
Nickel (Ni)	0.494	< 0.195	0.245	0.220
Lead (Pb)	< 2.47	< 1.30	< 1.40	< 1.35
Potassium (K)	391	< 19.5	26.3	22.9
Selenium (Se)	1.48	0.227	0.595	0.411
Silicon (Si)	71.7	14.6	130	72.4
Sodium (Na) ⁽¹⁾	9900	3150	4200	3680
Strontium (Sr)	< 0.494	< 0.195	0.280	0.237
Thallium (Tl)	< 0.494	< 0.195	< 0.210	< 0.202
Titanium (Ti)	< 4.94	< 1.95	2.10	2.02
Vanadium (V)	< 0.865	< 0.390	< 0.420	< 0.405
Zinc (Zn)	125	7.41	12.8	10.1
Mercury (Hg)	< 0.674	< 0.351	< 0.378	< 0.364
DETECTED METALS	10860	3262	4597	3929
TOTAL METALS	10880	3292	4605	3948
(1): Sodium results are abnormally high and since the blank is also high, the samples were probably contaminated.				

TABLE 6-4 – RESULTS – INCINERATOR 2 – METALS, PARTICULATE MATTER AND HCL (CONTINUED)

SAMPLING SCHEDULE				
RUN NUMBER	INC 2-Me-E1	INC 2-Me-E2	INC 2-Me-E3	AVERAGE
TOTAL METALS (µg/m³R)				
Aluminum (Al)	111	24.0	90.3	57.2
Antimony (Sb)	168	7.60	46.4	27.0
Silver (Ag)	5.44	1.92	2.42	2.17
Arsenic (As)	134	12.1	28.6	20.4
Barium (Ba)	14.1	0.429	6.24	3.33
Beryllium (Be)	< 0.346	< 0.153	< 0.168	< 0.160
Bismuth (Bi)	3.71	0.302	1.30	0.802
Boron (B)	35.5	11.5	11.9	11.7
Cadmium (Cd)	2.41	0.536	0.679	0.608
Calcium (Ca)	1060	91.3	461	276
Chrome (Cr)	34.0	16.2	10.9	13.5
Cobalt (Co)	1.39	< 0.227	0.434	0.331
Copper (Cu)	227	16.0	66.7	41.3
Tin (Sn)	38.1	5.75	19.5	12.6
Iron (Fe)	193	27.3	86.1	56.7
Lithium (Li)	13.9	2.92	4.90	3.91
Magnesium (Mg)	137	14.3	55.0	34.6
Manganese (Mn)	8.47	0.747	2.77	1.76
Molybdenum (Mo)	7.17	8.15	7.14	7.65
Nickel (Ni)	1.98	< 0.357	0.700	0.529
Lead (Pb)	96.4	23.8	28.2	26.0
Potassium (K)	29700	3590	6990	5290
Selenium (Se)	2.41	0.390	0.945	0.668
Silicon (Si)	779	48.7	404	226
Sodium (Na)	90200	12700	24700	18700
Strontium (Sr)	2.91	0.292	1.09	0.692
Thallium (Tl)	0.739	< 0.227	0.258	0.243
Titanium (Ti)	22.2	2.92	8.16	5.54
Vanadium (V)	< 1.36	< 0.487	< 0.560	< 0.524
Zinc (Zn)	1540	92.8	304	198
Mercury (Hg)	< 0.859	< 0.383	< 0.448	< 0.416
DETECTED METALS	124510	16673	33358	25016
TOTAL METALS	124510	16675	33359	25017

TABLE 6-4 – RESULTS – INCINERATOR 2 – METALS, PARTICULATE MATTER AND HCL (CONTINUED)

SAMPLING SCHEDULE				
RUN NUMBER	INC 2-Me-E1	INC 2-Me-E2	INC 2-Me-E3	AVERAGE
TOTAL METALS (µg/m³R at 11% O₂)				
Aluminum (Al)	81.7	19.8	91.2	55.5
Antimony (Sb)	124	6.27	46.9	26.6
Silver (Ag)	4.02	1.58	2.44	2.01
Arsenic (As)	99.1	9.97	28.9	19.4
Barium (Ba)	10.4	0.354	6.30	3.33
Beryllium (Be)	< 0.256	< 0.126	< 0.170	< 0.148
Bismuth (Bi)	2.74	0.249	1.32	0.782
Boron (B)	26.2	9.49	12.0	10.8
Cadmium (Cd)	1.78	0.442	0.686	0.564
Calcium (Ca)	784	75.3	466	271
Chrome (Cr)	25.1	13.3	11.0	12.2
Cobalt (Co)	1.03	< 0.188	0.439	0.313
Copper (Cu)	168	13.2	67.3	40.3
Tin (Sn)	28.1	4.74	19.7	12.2
Iron (Fe)	142	22.5	87.0	54.8
Lithium (Li)	10.3	2.41	4.95	3.68
Magnesium (Mg)	101	11.8	55.5	33.7
Manganese (Mn)	6.26	0.616	2.79	1.71
Molybdenum (Mo)	5.30	6.73	7.21	6.97
Nickel (Ni)	1.46	< 0.295	0.707	0.501
Lead (Pb)	71.2	19.6	28.5	24.1
Potassium (K)	21900	2960	7060	5010
Selenium (Se)	1.78	0.322	0.955	0.638
Silicon (Si)	575	40.2	408	224
Sodium (Na)	66600	10500	25000	17700
Strontium (Sr)	2.15	0.241	1.10	0.672
Thallium (Tl)	0.546	< 0.188	0.261	0.224
Titanium (Ti)	16.4	2.41	8.24	5.33
Vanadium (V)	< 1.00	< 0.402	< 0.566	< 0.484
Zinc (Zn)	1140	76.6	307	192
Mercury (Hg)	< 0.635	< 0.316	< 0.453	< 0.384
DETECTED METALS	91990	13756	33698	23727
TOTAL METALS	91992	13757	33699	23728
Air Emission Standard for Mercury (µg/m³R at 11% O₂)			20	

TABLE 6-4 – RESULTS – INCINERATOR 2 – METALS, PARTICULATE MATTER AND HCL (CONTINUED)

SAMPLING SCHEDULE				
RUN NUMBER	INC 2-Me-E1	INC 2-Me-E2	INC 2-Me-E3	AVERAGE
TOTAL METALS (g/h)				
Aluminum (Al)	0.145	0.0321	0.124	0.0780
Antimony (Sb)	0.220	0.0101	0.0636	0.0369
Silver (Ag)	0.00710	0.00256	0.00331	0.00294
Arsenic (As)	0.175	0.0161	0.0393	0.0277
Barium (Ba)	0.0184	0.000572	0.00855	0.00456
Beryllium (Be)	< 0.000452	< 0.000204	< 0.000230	< 0.000217
Bismuth (Bi)	0.00484	0.000403	0.00179	0.00109
Boron (B)	0.0463	0.0154	0.0163	0.0158
Cadmium (Cd)	0.00315	0.000716	0.000931	0.000823
Calcium (Ca)	1.39	0.122	0.632	0.377
Chrome (Cr)	0.0444	0.0216	0.0150	0.0183
Cobalt (Co)	0.00182	< 0.000304	0.000596	0.000450
Copper (Cu)	0.296	0.0213	0.0914	0.0564
Tin (Sn)	0.0497	0.00768	0.0267	0.0172
Iron (Fe)	0.252	0.0364	0.118	0.0773
Lithium (Li)	0.0182	0.00390	0.00672	0.00531
Magnesium (Mg)	0.178	0.0191	0.0754	0.0472
Manganese (Mn)	0.0111	0.000997	0.00379	0.00239
Molybdenum (Mo)	0.00936	0.0109	0.00979	0.0103
Nickel (Ni)	0.00258	< 0.000477	0.000960	0.000719
Lead (Pb)	0.126	0.0318	0.0387	0.0352
Potassium (K)	38.8	4.80	9.59	7.19
Selenium (Se)	0.00315	0.000520	0.00130	0.000908
Silicon (Si)	1.02	0.0651	0.554	0.309
Sodium (Na)	118	16.9	33.9	25.4
Strontium (Sr)	0.00380	0.000390	0.00150	0.000944
Thallium (Tl)	0.000965	< 0.000304	0.000354	0.000329
Titanium (Ti)	0.0290	0.00390	0.0112	0.00754
Vanadium (V)	< 0.00178	< 0.000651	< 0.000768	< 0.000709
Zinc (Zn)	2.01	0.124	0.416	0.270
Mercury (Hg)	< 0.00112	< 0.000512	< 0.000614	< 0.000563
DETECTED METALS	163	22.3	45.7	34.0
TOTAL METALS	163	22.3	45.7	34.0

R: Reference conditions at 101.3 kPa and 25°C, on a dry basis
 *: Results that are highlighted are not taken into account in the average since the first run was not representative of normal conditions

TABLE 6-5 – RESULTS – INCINERATOR 1 – SVOC

SAMPLING SCHEDULE				
RUN NUMBER	INC1-COSV-E1	INC1-COSV-E2	INC1-COSV-E3	AVERAGE
DATE	2024-08-16	2024-08-17	2024-08-18	
RUN START	8:50	15:40	14:00	
RUN END	12:10	19:00	17:20	
RUN LENGTH (min)	200	200	200	
SAMPLED GAS PROPERTIES				
STATIC PRESSURE (kPa)	-0.03	-0.03	-0.03	-0.03
GAS HUMIDITY (%v)	9.2	10.0	8.8	9.3
GAS TEMPERATURE (°C)	885	984	766	878
GAS VELOCITY (ft/s)	29.2	30.3	27.4	29.0
GAS VELOCITY (m/s)	8.9	9.2	8.3	8.8
ACTUAL GAS FLOW RATE (m³/h)	18250	18950	17110	18100
REFERENCE GAS FLOW RATE (m³R/h)	4275	4054	4493	4274
ACTUAL GAS FLOW RATE (ACFM)	10740	11150	10070	10650
REFERENCE GAS FLOW RATE (RCFM)	2516	2386	2644	2516
CO ₂ (%vs)	7.8	8.6	6.6	7.7
O ₂ (%vs)	10.6	9.8	12.3	10.9
CO (ppmvs)	6	4	3	5
SAMPLED GAS				
SAMPLED GAS VOLUME (m³R)	3.27	3.11	3.42	n/a
DIOXINS AND FURANS (ng/m³R) – Calculated according to the TEF				
2,3,7,8-TCDD	0.00107	0.0104	0.000263	0.00391
1,2,3,7,8 PeCDD	0.0191	0.0956	0.00377	0.0395
1,2,3,4,7,8 HxCDD	0.00182	0.00412	0.000380	0.00211
1,2,3,6,7,8 HxCDD	0.00452	0.00647	0.000742	0.00391
1,2,3,7,8,9 HxCDD	0.00318	0.00557	0.000511	0.00309
1,2,3,4,6,7,8 HpCDD	0.00312	0.00243	0.000640	0.00206
OCDD	0.0000483	0.0000344	0.0000166	0.0000331
2,3,7,8 TCDF	0.000813	0.00544	0.000280	0.00218
1,2,3,7,8 PeCDF	0.000730	0.00288	0.000209	0.00127
2,3,4,7,8-PeCDF	0.0199	0.0650	0.00581	0.0302
1,2,3,4,7,8 HxCDF	0.00379	0.0114	0.00123	0.00546
1,2,3,6,7,8 HxCDF	0.00425	0.0107	0.00122	0.00539
2,3,4,6,7,8-HxCDF	0.00846	0.0179	0.00211	0.00949
1,2,3,7,8,9 HxCDF	0.00161	0.00288	0.000172	0.00155
1,2,3,4,6,7,8 HpCDF	0.00233	0.00489	0.00103	0.00275
1,2,3,4,7,8,9 HpCDF	0.000255	0.000272	0.0000210	0.000183
OCDF	0.0000166	0.0000105	0.00000117	0.00000941
TOTAL TOXIC EQUIVALENCE	0.0749	0.246	0.0184	0.113

TABLE 6-5 – RESULTS – INCINERATOR 1 – SVOC (CONTINUED)

DIOXINS AND FURANS (ng/m³R at 11% O₂) – Calculated according to the TEF				
2,3,7,8-TCDD	0.00103	0.00927	0.000303	0.00353
1,2,3,7,8 PeCDD	0.0183	0.0852	0.00434	0.0360
1,2,3,4,7,8 HxCDD	0.00175	0.00367	0.000437	0.00195
1,2,3,6,7,8 HxCDD	0.00435	0.00577	0.000854	0.00366
1,2,3,7,8,9 HxCDD	0.00305	0.00497	0.000588	0.00287
1,2,3,4,6,7,8 HpCDD	0.00300	0.00217	0.000736	0.00197
OCDD	0.0000464	0.0000307	0.0000192	0.0000321
2,3,7,8 TCDF	0.000781	0.00485	0.000323	0.00198
1,2,3,7,8 PeCDF	0.000702	0.00257	0.000240	0.00117
2,3,4,7,8-PeCDF	0.0191	0.0580	0.00669	0.0279
1,2,3,4,7,8 HxCDF	0.00364	0.0101	0.00142	0.00506
1,2,3,6,7,8 HxCDF	0.00408	0.00956	0.00140	0.00501
2,3,4,6,7,8-HxCDF	0.00813	0.0160	0.00243	0.00884
1,2,3,7,8,9 HxCDF	0.00154	0.00257	0.000198	0.00144
1,2,3,4,6,7,8 HpCDF	0.00224	0.00436	0.00118	0.00259
1,2,3,4,7,8,9 HpCDF	0.000245	0.000243	0.0000242	0.000171
OCDF	0.0000159	0.00000936	0.00000134	0.00000887
TOTAL TOXIC EQUIVALENCE	0.0720	0.219	0.0212	0.104
Air Emission Standard for Dioxins and Furans (ng/m³R at 11% O₂)			0.08	
DIOXINS AND FURANS (µg/h) – Calculated according to the TEF				
2,3,7,8-TCDD	0.00457	0.0421	0.00118	0.0160
1,2,3,7,8 PeCDD	0.0815	0.388	0.0169	0.162
1,2,3,4,7,8 HxCDD	0.00778	0.0167	0.00171	0.00873
1,2,3,6,7,8 HxCDD	0.0193	0.0262	0.00333	0.0163
1,2,3,7,8,9 HxCDD	0.0136	0.0226	0.00230	0.0128
1,2,3,4,6,7,8 HpCDD	0.0133	0.00986	0.00287	0.00869
OCDD	0.000206	0.000140	0.0000748	0.000140
2,3,7,8 TCDF	0.00347	0.0221	0.00126	0.00893
1,2,3,7,8 PeCDF	0.00312	0.0117	0.000938	0.00525
2,3,4,7,8-PeCDF	0.0849	0.264	0.0261	0.125
1,2,3,4,7,8 HxCDF	0.0162	0.0461	0.00552	0.0226
1,2,3,6,7,8 HxCDF	0.0182	0.0434	0.00546	0.0224
2,3,4,6,7,8-HxCDF	0.0362	0.0725	0.00950	0.0394
1,2,3,7,8,9 HxCDF	0.00687	0.0117	0.000774	0.00645
1,2,3,4,6,7,8 HpCDF	0.00997	0.0198	0.00461	0.0115
1,2,3,4,7,8,9 HpCDF	0.00109	0.00110	0.0000945	0.000763
OCDF	0.0000708	0.0000425	0.00000525	0.0000395
TOTAL TOXIC EQUIVALENCE	0.320	0.997	0.0827	0.467
R: Reference conditions at 101.3 kPa and 25°C, on a dry basis				

TABLE 6-6 – RESULTS – INCINERATOR 2 – SVOC

SAMPLING SCHEDULE				
RUN NUMBER	INC2-COSV-E1	INC2-COSV-E2	INC2-COSV-E3	AVERAGE
DATE	2024-08-19	2024-08-20	2024-08-20	
RUN START	12:42	8:02	12:21	
RUN END	16:26	11:02	15:21	
RUN LENGTH (min)	180	180	180	
SAMPLED GAS PROPERTIES				
STATIC PRESSURE (kPa)	-0.02	-0.02	-0.02	-0.02
GAS HUMIDITY (%v)	11.8	8.0	7.6	9.1
GAS TEMPERATURE (°C)	955	958	916	943
GAS VELOCITY (ft/s)	32.5	32.3	31.8	32.2
GAS VELOCITY (m/s)	9.9	9.8	9.7	9.8
ACTUAL GAS FLOW RATE (m³/h)	5851	5820	5728	5800
REFERENCE GAS FLOW RATE (m³R/h)	1256	1301	1331	1296
ACTUAL GAS FLOW RATE (ACFM)	3444	3425	3371	3414
REFERENCE GAS FLOW RATE (RCFM)	739.0	765.6	783.1	762.6
CO ₂ (%vs)	10.3	9.0	7.8	9.0
O ₂ (%vs)	7.5	8.9	11.1	9.2
CO (ppmvs)	4	4	5	4
SAMPLED GAS				
SAMPLED GAS VOLUME (m³R)	3.00	3.06	3.12	n/a
DIOXINS AND FURANS (ng/m³R) – Calculated according to the TEF				
2,3,7,8-TCDD	0.000500	0.00134	0.000257	0.000699
1,2,3,7,8 PeCDD	0.00653	0.0164	0.00231	0.00840
1,2,3,4,7,8 HxCDD	0.000590	0.00100	0.000131	0.000575
1,2,3,6,7,8 HxCDD	0.00116	0.00215	0.000208	0.00117
1,2,3,7,8,9 HxCDD	0.000890	0.00182	0.000183	0.000966
1,2,3,4,6,7,8 HpCDD	0.000767	0.00103	0.000142	0.000647
OCDD	0.0000132	0.0000108	0.00000201	0.00000865
2,3,7,8 TCDF	0.000480	0.00113	0.000160	0.000591
1,2,3,7,8 PeCDF	0.000412	0.000961	0.000143	0.000505
2,3,4,7,8-PeCDF	0.00888	0.0245	0.00342	0.0123
1,2,3,4,7,8 HxCDF	0.00189	0.00376	0.000532	0.00206
1,2,3,6,7,8 HxCDF	0.00217	0.00461	0.000693	0.00249
2,3,4,6,7,8-HxCDF	0.00377	0.00749	0.00110	0.00412
1,2,3,7,8,9 HxCDF	0.000620	0.000471	0.000106	0.000399
1,2,3,4,6,7,8 HpCDF	0.00110	0.00143	0.000243	0.000924
1,2,3,4,7,8,9 HpCDF	0.0000753	0.0000399	0.0000103	0.0000418
OCDF	0.00000157	0.000000687	0.000000180	0.000000813
TOTAL TOXIC EQUIVALENCE	0.0299	0.0681	0.00963	0.0359

TABLE 6-6 – RESULTS – INCINERATOR 2 – SVOC (CONTINUED)

DIOXINS AND FURANS (ng/m³R at 11% O₂) – Calculated according to the TEF				
2,3,7,8-TCDD	0.000369	0.00111	0.000259	0.000578
1,2,3,7,8 PeCDD	0.00483	0.0135	0.00233	0.00688
1,2,3,4,7,8 HxCDD	0.000436	0.000828	0.000133	0.000466
1,2,3,6,7,8 HxCDD	0.000859	0.00177	0.000211	0.000947
1,2,3,7,8,9 HxCDD	0.000657	0.00151	0.000185	0.000783
1,2,3,4,6,7,8 HpCDD	0.000566	0.000853	0.000143	0.000521
OCDD	0.00000973	0.00000888	0.00000203	0.00000688
2,3,7,8 TCDF	0.000355	0.000934	0.000162	0.000483
1,2,3,7,8 PeCDF	0.000304	0.000793	0.000144	0.000414
2,3,4,7,8-PeCDF	0.00656	0.0202	0.00345	0.0101
1,2,3,4,7,8 HxCDF	0.00140	0.00310	0.000538	0.00168
1,2,3,6,7,8 HxCDF	0.00161	0.00380	0.000700	0.00204
2,3,4,6,7,8-HxCDF	0.00278	0.00618	0.00111	0.00336
1,2,3,7,8,9 HxCDF	0.000458	0.000389	0.000107	0.000318
1,2,3,4,6,7,8 HpCDF	0.000813	0.00118	0.000246	0.000746
1,2,3,4,7,8,9 HpCDF	0.0000556	0.0000329	0.0000104	0.0000330
OCDF	0.00000116	0.000000567	0.000000181	0.000000637
TOTAL TOXIC EQUIVALENCE	0.0221	0.0562	0.00973	0.0293
Air Emission Standard for Dioxins and Furans (ng/m³R at 11% O₂)			0.08	
DIOXINS AND FURANS (µg/h) – Calculated according to the TEF				
2,3,7,8-TCDD	0.000628	0.00174	0.000341	0.000904
1,2,3,7,8 PeCDD	0.00820	0.0213	0.00307	0.0108
1,2,3,4,7,8 HxCDD	0.000741	0.00131	0.000175	0.000741
1,2,3,6,7,8 HxCDD	0.00146	0.00279	0.000277	0.00151
1,2,3,7,8,9 HxCDD	0.00112	0.00237	0.000243	0.00124
1,2,3,4,6,7,8 HpCDD	0.000963	0.00134	0.000189	0.000832
OCDD	0.0000165	0.0000140	0.00000268	0.0000111
2,3,7,8 TCDF	0.000603	0.00147	0.000213	0.000763
1,2,3,7,8 PeCDF	0.000517	0.00125	0.000190	0.000652
2,3,4,7,8-PeCDF	0.0112	0.0319	0.00454	0.0159
1,2,3,4,7,8 HxCDF	0.00238	0.00489	0.000708	0.00266
1,2,3,6,7,8 HxCDF	0.00273	0.00600	0.000922	0.00322
2,3,4,6,7,8-HxCDF	0.00473	0.00974	0.00146	0.00531
1,2,3,7,8,9 HxCDF	0.000778	0.000613	0.000141	0.000511
1,2,3,4,6,7,8 HpCDF	0.00138	0.00186	0.000324	0.00119
1,2,3,4,7,8,9 HpCDF	0.0000946	0.0000519	0.0000137	0.0000534
OCDF	0.00000198	0.000000893	0.000000239	0.00000104
TOTAL TOXIC EQUIVALENCE	0.0375	0.0886	0.0128	0.0463
R: Reference conditions at 101.3 kPa and 25°C, on a dry basis				

7 RESULT ANALYSIS

In accordance with the sampling methods, procedures, and rigorous quality control, the concentration and/or emission rate results presented in this report are valid and representative of the normal operating conditions of the process, unless otherwise specified. At the client's request, the tests commenced once the incinerator had reached operating temperatures per the equipment design. While the domestic waste incinerators 1 and 2 comply with mercury standards, the incinerator 1 (Eco Waste) results for PCDD/Fs (dioxins and furans) exceeded the applicable limit.

The first test of metals at the Incinerator 2 could not be completed due to an issue with the filter clogging. This clogging was caused by substances present in the waste, which affected the sampling process at the first run, after that, the second and third run were completed successfully.

8 CONCLUSION

Consulair was mandated by Agnico Eagle Mines Limited to perform an atmospheric emission characterization program at the incinerators 1 (model no ECO 1.75TN 1PVC100L 16-1MS, or “Eco Waste”) and 2 (model KETEK CY-100-CA-D, or “Ketek”) at the Meliadine Mine as part of an environmental compliance program. The campaign was carried out from August 12th to August 22nd, 2024.

For this program, the applicable standards are respected for mercury (Hg) for both incinerators but not for dioxins and furans (PCDD/F) at incinerator 1 (Eco Waste). An average value of 0.104 ng TEQ/m³R at 11% O₂ was recorded in the incinerator 1, compared to the applicable limit from the GN Guideline of 0.08 ng TEQ/m³R at 11% O₂.

The sample collection was performed in accordance with the requirements of the Report No. EPS 3/UP/2, including methods recommended by ECCC inside “Environment Canada, the National Incinerator Testing and Evaluation program: Air Pollution Control Technology”. Report No. EPS 3/UP/2, Ottawa, 1986.

9 REFERENCES

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APPENDIX 1

COMPUTER COMPILED DATA



AGNICO EAGLE

Agnico Eagle Mines, Meliadine 24-8263 INC1 Particles and metals				
EXPERIMENTAL SCHEDULE				
RUN NUMBER	INC1-Me-E1	INC1-Me-E2	INC1-Me-E3	AVERAGE
RUN DATE	2024-08-16	2024-08-17	2024-08-18	(1 to 3)
START OF RUN	08h50	15h40	14h00	
END OF RUN	12h10	19h00	17h20	
RUN DURATION (minutes)	200	200	200	
NUMBER OF MEASUREMENTS	40	40	40	
SAMPLING EQUIPMENT DATA				
BAROMETRIC PRESSURE ("Hg)	30.00	30.00	30.00	30.00
STATIC PRESSURE ("H ₂ O)	-0.12	-0.10	-0.10	-0.11
PRESSION STATIQUE (kPa)	-0.030	-0.025	-0.025	-0.027
DRY GAS METER COEFFICIENT	0.990	0.990	0.990	n/a
PITOT TUBE COEFFICIENT	0.779	0.779	0.779	n/a
NOZZLE DIAMETER (in)	0.502	0.502	0.502	n/a
DRY GAS METER TEMPERATURE (°F)	60.1	61.5	64.9	n/a
DRY GAS METER TEMPERATURE (°C)	15.6	16.4	18.3	n/a
GAS HUMIDITY & SAMPLED VOLUME				
MASS OF WATER (g)	243.6	243.2	232.0	n/a
VOLUME OF WATER (ft ³ R)	11.69	11.67	11.13	n/a
GAS HUMIDITY (BWO)	0.094	0.097	0.086	0.092
GAS HUMIDITY (% v/v)	9.4	9.7	8.6	9.2
REFERENCE GAS VOLUME (ft ³ R)	112.89	108.03	118.23	113.05
REFERENCE GAS VOLUME (m³R)	3.20	3.06	3.35	3.20
STACK CHARACTERISTICS				
NUMBER OF DIAMETERS BEFORE SAMPLING PORTS	5.0	5.0	5.0	n/a
NUMBER OF DIAMETERS AFTER SAMPLING PORTS	2.0	2.0	2.0	n/a
STACK DIAMETER (ft)	2.8	2.8	2.8	n/a
STACK DIAMETER (m)	0.85	0.85	0.85	n/a
LENGTH OF SAMPLING PORTS (in)	7.8	7.8	7.8	n/a
STACK PRESSURE ("Hg)	29.99	29.99	29.99	29.99
STACK PRESSURE (kPa)	101.56	101.57	101.57	101.57
DRY GAS METER PRESSURE ("Hg)	30.04	30.04	30.04	30.04
STACK SURFACE (pi ²)	6.1	6.1	6.1	n/a
STACK SURFACE (m ²)	0.57	0.57	0.57	n/a
GAZ CHARACTERISTICS				
CHIMNEY TEMPERATURE (°F)	1657.9	1768.7	1424.7	1617.1
CHIMNEY TEMPERATURE (°C)	903.3	964.8	773.7	880.6
CO ₂ (%v, dry)	7.8	8.6	6.6	7.7
O ₂ (%v, dry)	10.6	9.8	12.3	10.9
O ₂ (%v, dry)	9.6	8.8	11.2	9.9
CO (ppmv, dry)	6.0	4.1	3.4	4.5
N ₂ (%v, dry)	81.6	81.6	81.1	81.4
DRY MOLECULAR WEIGHT	29.7	29.8	29.6	29.7
WET MOLECULAR WEIGHT	28.6	28.6	28.6	28.6
GAS VELOCITY (ft/s)	29.4	30.1	27.7	29.1
GAS VELOCITY (m/s)	9.0	9.2	8.4	8.9
ACTUAL GAS FLOW RATE (pi ³ /h)	649 007	665 104	610 317	641 476
ACTUAL GAS FLOW RATE (m ³ /h)	18 378	18 834	17 282	18 165
ACTUAL GAS FLOW RATE (ft ³ /min) (ACFM)	10 817	11 085	10 172	10 691
REFERENCE GAS FLOW RATE (ft ³ R/h)	149 435	144 951	159 286	151 224
REFERENCE GAS FLOW RATE (m³R/h)	4 232	4 105	4 510	4 282
REFERENCE GAS FLOW RATE (ft ³ R/min) (RCFM)	2 491	2 416	2 655	2 520

Agnico Eagle Mines, Meliadine 24-8263 INC1 Particles and metals				
EXPERIMENTAL SCHEDULE				
RUN NUMBER	INC1-Me-E1	INC1-Me-E2	INC1-Me-E3	AVERAGE
RUN DATE	2024-08-16	2024-08-17	2024-08-18	(1 to 3)
START OF RUN	08h50	15h40	14h00	
END OF RUN	12h10	19h00	17h20	
RUN DURATION (minutes)	200	200	200	
NUMBER OF MEASUREMENTS	40	40	40	
SAMPLING INFORMATION				
DRY GAS METER ORIFICE COEFFICIENT	0.989	0.989	0.989	n/a
MAXIMUM VELOCITY (m/s)	11.0	11.7	10.4	n/a
MINIMUM VELOCITY (m/s)	7.2	7.0	6.8	n/a
10%Vmax (m/s)	1.10	1.17	1.04	n/a
PERCENTAGE >10%Vmax	1.00	1.00	1.00	1.00
AVERAGE ISOKINETISM (%)	100.9	99.9	99.1	100.0
% POINTS RESPECTING ISOKINETIC CRITERIA	100%	100%	100%	100%
MAXIMUM PUMPING FLOW RATE (ft ³ /min)	0.67	0.63	0.73	n/a
MAXIMUM VACCUUM PRESSURE DURING RUN ("Hg)	-4.0	-7.0	-4.0	n/a
MAXIMUM PROBE TEMPERATURE (°F)	250	250	250	n/a
MINIMUM PROBE TEMPERATURE (°F)	250	250	250	n/a
MAXIMUM FILTER TEMPERATURE (°F)	257	259	259	n/a
MINIMUM FILTER TEMPERATURE (°F)	247	241	244	n/a
MAXIMUM TEMPERATURE AT EXIT (°F)	53	52	54	n/a
MINIMUM TEMPERATURE AT EXIT (°F)	50	48	50	n/a
AVERAGE PUMPING FLOW RATE (ft ³ /min)	0.54	0.52	0.58	0.55
4% OF AVERAGE PUMPING FLOW RATE (ft ³ /min)	0.022	0.021	0.023	0.022
LEAK TEST BEFORE RUN AT 15 "Hg (ft ³ /min)	< 0.02	< 0.02	< 0.02	< 0.02
LEAK TEST AFTER RUN (ft ³ /min)	< 0.02	< 0.02	< 0.02	< 0.02
CYCLONIC FLOW				
AVERAGE FLOW ANGLE	0	0	0	0
VERTICAL GAS VELOCITY (m/s)	8.97	9.19	8.43	8.86
FILTRABLE PARTICLES – SPE 1/RM/8				
MASS FILTER (mg)	58.4	83.0	56.3	n/a
MASS NOZZLE & PROBE (mg)	<LDR	1.8	12.9	n/a
MASS ACETONE BLANK (mg)		<LDR		n/a
VOLUME ACETONE BLANK (mL)		96.0		n/a
ACETONE RESIDUAL (%)		0.0		n/a
DETECTION LIMIT NOZZLE & PROBE (mg)	1.0	1.0	1.0	n/a
DETECTION LIMIT FILTER (mg)	0.1	0.1	0.1	n/a
MASS NOZZLE & PROBE (mg)	< 1.0	1.8	12.9	n/a
MASS FILTER (mg)	58.4	83.0	56.3	n/a
TOTAL MASS (mg)	59.4	84.8	69.2	n/a
CONCENTRATION (mg/m³R)	18.6	27.7	20.7	22.3
METHOD DETECTION LIMIT (mg/m ³ R)	0.3	0.4	0.3	0.3
CONCENTRATION (mg/m³R) at 11% O2	17.9	24.7	23.8	22.1
EMISSION RATE (kg/h)	0.1	0.1	0.1	0.1
PARTICULATE SULFUR				
PARTICULATE SULFUR (µg)	262.24	358.5	275.52	298.7533333
DETECTION LIMIT PARTICULATE SULFUR (µg)	6.56	6.56	6.4	6.506666667
SULFUR BLANK (µg)		<LDR		0
DETECTION LIMIT SULFUR BLANK (µg)		0		#DIV/0!
SULFUR CONCENTRATION (µg/m ³ R)	84.37252609	115.3430087	88.64520435	96.12024638
SULFUR EMISSION (g/h)	81.09592313	102.8734943	102.0450608	95.3381594
METALS – USEPA Method 29				

Agnico Eagle Mines, Meliadine 24-8263 INC1 Particles and metals				
EXPERIMENTAL SCHEDULE				
RUN NUMBER	INC1-Me-E1	INC1-Me-E2	INC1-Me-E3	AVERAGE
RUN DATE	2024-08-16	2024-08-17	2024-08-18	(1 to 3)
START OF RUN	08h50	15h40	14h00	
END OF RUN	12h10	19h00	17h20	
RUN DURATION (minutes)	200	200	200	
NUMBER OF MEASUREMENTS	40	40	40	
PARTICULATE METALS (µg)				
Aluminum (Al)	28.0	24.0	817.0	289.7
Antimony (Sb)	111.0	608.0	527.0	415.3
Silver (Ag)	1.6	2.0	3.0	2.2
Arsenic (As)	117.0	240.0	585.0	314.0
Barium (Ba)	2.8	2.1	13.6	6.2
Beryllium (Be)	< 0.1	< 0.1	0.2	0.1
Bismuth (Bi)	2.7	7.7	6.0	5.5
Cadmium (Cd)	5.0	9.6	21.9	12.1
Calcium (Ca)	430.0	184.0	6250.0	2288.0
Chrome (Cr)	14.8	57.7	58.0	43.5
Cobalt (Co)	< 0.1	0.1	0.3	0.2
Copper (Cu)	158.0	165.0	317.0	213.3
Tin (Sn)	27.2	43.0	61.4	43.9
Iron (Fe)	26.0	54.0	527.0	202.3
Lithium (Li)	4.0	19.0	34.0	19.0
Magnesium (Mg)	42.0	21.0	352.0	138.3
Manganese (Mn)	2.0	2.5	14.7	6.4
Molybdenum (Mo)	6.6	39.8	43.3	29.9
Nickel (Ni)	< 0.5	2.8	3.2	2.2
Lead (Pb)	293.0	390.0	557.0	413.3
Potassium (K)	16200.0	19000.0	36700.0	23966.7
Selenium (Se)	0.5	< 0.5	0.5	0.5
Silicon (Si)	179.0	254.0	2070.0	834.3
Sodium (Na)	11900.0	14700.0	25300.0	17300.0
Strontium (Sr)	1.2	0.6	11.0	4.3
Thallium (Tl)	< 0.1	0.2	0.3	0.2
Titanium (Ti)	5.0	2.0	85.0	30.7
Vanadium (V)	0.6	1.5	3.5	1.9
Zinc (Zn)	724.0	1010.0	2070.0	1268.0
Mercury (Hg)	< 0.1	< 0.1	< 0.1	< 0.1
DETECTED METALS	30282.0	36840.6	76431.9	47851.5
TOTAL METALS	30282.8	36841.3	76432.0	47852.0
Proportion metals vs particles (%)	51.0	43.4	110.5	68.3

Agnico Eagle Mines, Meliadine				
24-8263				
INC1				
Particles and metals				
EXPERIMENTAL SCHEDULE				
RUN NUMBER	INC1-Me-E1	INC1-Me-E2	INC1-Me-E3	AVERAGE
RUN DATE	2024-08-16	2024-08-17	2024-08-18	(1 to 3)
START OF RUN	08h50	15h40	14h00	
END OF RUN	12h10	19h00	17h20	
RUN DURATION (minutes)	200	200	200	
NUMBER OF MEASUREMENTS	40	40	40	
GASEOUS METALS (µg)				
Aluminum (Al)	29.0	38.0	24.0	30.3
Antimony (Sb)	< 0.7	< 0.7	< 0.7	< 0.7
Silver (Ag)	< 4.0	< 4.0	< 4.0	< 4.0
Arsenic (As)	2.6	0.8	1.1	1.5
Barium (Ba)	0.9	0.7	0.7	0.8
Beryllium (Be)	< 0.4	< 0.4	< 0.4	< 0.4
Bismuth (Bi)	0.5	< 0.4	0.5	0.5
Boron (B)	43.7	105.8	59.1	69.5
Cadmium (Cd)	< 0.4	< 0.4	< 0.4	< 0.4
Calcium (Ca)	108.0	238.0	102.0	149.3
Chrome (Cr)	0.8	0.9	< 0.7	0.8
Cobalt (Co)	< 0.7	< 0.7	< 0.7	< 0.7
Copper (Cu)	2.2	2.1	1.3	1.9
Tin (Sn)	18.0	19.0	17.0	18.0
Iron (Fe)	45.0	< 40.0	56.0	47.0
Lithium (Li)	< 7.0	< 7.0	< 7.0	< 7.0
Magnesium (Mg)	< 14.0	70.0	19.0	34.3
Manganese (Mn)	7.3	1.1	1.1	3.2
Molybdenum (Mo)	< 4.0	< 4.0	< 4.0	< 4.0
Nickel (Ni)	0.8	1.2	0.7	0.9
Lead (Pb)	< 4.0	< 4.0	< 4.0	< 4.0
Potassium (K)	< 70.0	< 70.0	< 70.0	< 70.0
Selenium (Se)	3.4	3.6	2.2	3.1
Silicon (Si)	301.0	141.0	242.0	228.0
Sodium (Na)	11590.0	11210.0	12490.0	11763.3
Strontium (Sr)	< 0.7	< 0.7	< 0.7	< 0.7
Thallium (Tl)	< 0.7	< 0.7	< 0.7	< 0.7
Titanium (Ti)	< 7.0	< 7.0	< 7.0	< 7.0
Vanadium (V)	< 1.4	< 1.4	< 1.5	< 1.4
Zinc (Zn)	61.3	21.6	17.9	33.6
Mercury (Hg)	< 1.1	< 1.1	< 1.1	< 1.1
DETECTED METALS	12214.5	11853.8	13034.6	12367.6
TOTAL METALS	12330.6	11996.3	13137.5	12488.1

Agnico Eagle Mines, Meliadine 24-8263 INC1 Particles and metals				
EXPERIMENTAL SCHEDULE				
RUN NUMBER	INC1-Me-E1	INC1-Me-E2	INC1-Me-E3	AVERAGE
RUN DATE	2024-08-16	2024-08-17	2024-08-18	(1 to 3)
START OF RUN	08h50	15h40	14h00	
END OF RUN	12h10	19h00	17h20	
RUN DURATION (minutes)	200	200	200	
NUMBER OF MEASUREMENTS	40	40	40	
TOTAL METALS (µg)				
Aluminum (Al)	57.0	62.0	841.0	320.0
Antimony (Sb)	111.7	608.7	527.7	416.0
Silver (Ag)	5.6	6.0	7.0	6.2
Arsenic (As)	119.6	240.8	586.1	315.5
Barium (Ba)	3.7	2.8	14.3	6.9
Beryllium (Be)	< 0.5	< 0.5	0.6	0.5
Bismuth (Bi)	3.2	8.1	6.5	5.9
Boron (B)	43.7	105.8	59.1	69.5
Cadmium (Cd)	5.4	10.0	22.3	12.5
Calcium (Ca)	538.0	422.0	6352.0	2437.3
Chrome (Cr)	15.6	58.6	58.7	44.3
Cobalt (Co)	< 0.8	0.8	1.0	0.9
Copper (Cu)	160.2	167.1	318.3	215.2
Tin (Sn)	45.2	62.0	78.4	61.9
Iron (Fe)	71.0	94.0	583.0	249.3
Lithium (Li)	11.0	26.0	41.0	26.0
Magnesium (Mg)	56.0	91.0	371.0	172.7
Manganese (Mn)	9.3	3.6	15.8	9.6
Molybdenum (Mo)	10.6	43.8	47.3	33.9
Nickel (Ni)	1.3	4.0	3.9	3.1
Lead (Pb)	297.0	394.0	561.0	417.3
Potassium (K)	16270.0	19070.0	36770.0	24036.7
Selenium (Se)	3.9	4.1	2.7	3.6
Silicon (Si)	480.0	395.0	2312.0	1062.3
Sodium (Na)	23490.0	25910.0	37790.0	29063.3
Strontium (Sr)	1.9	1.3	11.7	5.0
Thallium (Tl)	< 0.8	0.9	1.0	0.9
Titanium (Ti)	12.0	9.0	92.0	37.7
Vanadium (V)	2.0	2.9	5.0	3.3
Zinc (Zn)	785.3	1031.6	2087.9	1301.6
Mercury (Hg)	< 1.2	< 1.2	< 1.2	< 1.2
DETECTED METALS	42610.2	48835.9	89568.3	60338.1
TOTAL METALS	42613.4	48837.6	89569.5	60340.2

Agnico Eagle Mines, Meliadine				
24-8263				
INC1				
Particles and metals				
EXPERIMENTAL SCHEDULE				
RUN NUMBER	INC1-Me-E1	INC1-Me-E2	INC1-Me-E3	AVERAGE
RUN DATE	2024-08-16	2024-08-17	2024-08-18	(1 to 3)
START OF RUN	08h50	15h40	14h00	
END OF RUN	12h10	19h00	17h20	
RUN DURATION (minutes)	200	200	200	
NUMBER OF MEASUREMENTS	40	40	40	
PARTICULATE METALS (µg/m³R)				
Aluminum (Al)	8.759	7.845	244.0	86.88
Antimony (Sb)	34.72	198.8	157.4	130.3
Silver (Ag)	0.5005	0.6538	0.8961	0.6835
Arsenic (As)	36.60	78.45	174.7	96.60
Barium (Ba)	0.8790	0.6930	4.062	1.878
Beryllium (Be)	< 0.02190	< 0.02288	0.05974	0.03484
Bismuth (Bi)	0.8352	2.530	1.795	1.720
Cadmium (Cd)	1.558	3.125	6.542	3.742
Calcium (Ca)	134.5	60.15	1867	687.2
Chrome (Cr)	4.630	18.86	17.32	13.61
Cobalt (Co)	< 0.03128	0.03269	0.08961	0.05119
Copper (Cu)	49.43	53.94	94.69	66.02
Tin (Sn)	8.509	14.06	18.34	13.64
Iron (Fe)	8.133	17.65	157.4	61.07
Lithium (Li)	1.251	6.211	10.16	5.873
Magnesium (Mg)	13.14	6.865	105.1	41.72
Manganese (Mn)	0.6257	0.8172	4.391	1.945
Molybdenum (Mo)	2.065	13.01	12.93	9.336
Nickel (Ni)	< 0.1564	0.9153	0.9558	0.6759
Lead (Pb)	91.66	127.5	166.4	128.5
Potassium (K)	5068	6211	10960	7414
Selenium (Se)	0.1564	< 0.1634	0.1494	0.1564
Silicon (Si)	56.00	83.03	618.3	252.4
Sodium (Na)	3723	4805	7557	5362
Strontium (Sr)	0.3754	0.1961	3.286	1.286
Thallium (Tl)	< 0.03128	0.06538	0.08961	0.06209
Titanium (Ti)	1.564	0.6538	25.39	9.203
Vanadium (V)	0.1877	0.4903	1.045	0.5745
Zinc (Zn)	226.5	330.2	618.3	391.7
Mercury (Hg)	< 0.03128	< 0.03269	< 0.02987	< 0.03128
DETECTED METALS	9473	12040	22830	14780
TOTAL METALS	9473	12040	22830	14780

Agnico Eagle Mines, Meliadine				
24-8263				
INC1				
Particles and metals				
EXPERIMENTAL SCHEDULE				
RUN NUMBER	INC1-Me-E1	INC1-Me-E2	INC1-Me-E3	AVERAGE
RUN DATE	2024-08-16	2024-08-17	2024-08-18	(1 to 3)
START OF RUN	08h50	15h40	14h00	
END OF RUN	12h10	19h00	17h20	
RUN DURATION (minutes)	200	200	200	
NUMBER OF MEASUREMENTS	40	40	40	
GASEOUS METALS (µg/m³R)				
Aluminum (Al)	9.072	12.42	7.169	9.554
Antimony (Sb)	< 0.2190	< 0.2288	< 0.2091	< 0.2190
Silver (Ag)	< 1.251	< 1.308	< 1.195	< 1.251
Arsenic (As)	0.8133	0.2615	0.3286	0.4678
Barium (Ba)	0.2815	0.2288	0.2091	0.2398
Beryllium (Be)	< 0.1251	< 0.1308	< 0.1195	< 0.1251
Bismuth (Bi)	0.1564	< 0.1308	0.1494	0.1455
Boron (B)	13.67	34.59	17.65	21.97
Cadmium (Cd)	< 0.1251	< 0.1308	< 0.1195	< 0.1251
Calcium (Ca)	33.79	77.80	30.47	47.35
Chrome (Cr)	0.2503	0.2942	< 0.2091	0.2512
Cobalt (Co)	< 0.2190	< 0.2288	< 0.2091	< 0.2190
Copper (Cu)	0.6882	0.6865	0.3883	0.5877
Tin (Sn)	5.631	6.211	5.078	5.640
Iron (Fe)	14.08	< 13.08	16.73	14.63
Lithium (Li)	< 2.190	< 2.288	< 2.091	< 2.190
Magnesium (Mg)	< 4.380	22.88	5.675	10.98
Manganese (Mn)	2.284	0.3596	0.3286	0.9906
Molybdenum (Mo)	< 1.251	< 1.308	< 1.195	< 1.251
Nickel (Ni)	0.2503	0.3923	0.2091	0.2839
Lead (Pb)	< 1.251	< 1.308	< 1.195	< 1.251
Potassium (K)	< 21.90	< 22.88	< 20.91	< 21.90
Selenium (Se)	1.064	1.177	0.6571	0.9659
Silicon (Si)	94.16	46.09	72.29	70.85
Sodium (Na)	3626	3664	3731	3674
Strontium (Sr)	< 0.2190	< 0.2288	< 0.2091	< 0.2190
Thallium (Tl)	< 0.2190	< 0.2288	< 0.2091	< 0.2190
Titanium (Ti)	< 2.190	< 2.288	< 2.091	< 2.190
Vanadium (V)	< 0.4380	< 0.4577	< 0.4481	< 0.4479
Zinc (Zn)	19.18	7.061	5.347	10.53
Mercury (Hg)	< 0.3379	< 0.3596	< 0.3226	< 0.3400
DETECTED METALS	3821	3875	3893	3863
TOTAL METALS	3857	3922	3924	3901

Agnico Eagle Mines, Meliadine 24-8263 INC1 Particles and metals				
EXPERIMENTAL SCHEDULE				
RUN NUMBER	INC1-Me-E1	INC1-Me-E2	INC1-Me-E3	AVERAGE
RUN DATE	2024-08-16	2024-08-17	2024-08-18	(1 to 3)
START OF RUN	08h50	15h40	14h00	
END OF RUN	12h10	19h00	17h20	
RUN DURATION (minutes)	200	200	200	
NUMBER OF MEASUREMENTS	40	40	40	
TOTAL METALS (µg/m³R)				
Aluminum (Al)	17.83	20.27	251.2	96.44
Antimony (Sb)	34.94	199.0	157.6	130.5
Silver (Ag)	1.752	1.961	2.091	1.935
Arsenic (As)	37.41	78.72	175.1	97.07
Barium (Ba)	1.161	0.9218	4.271	2.118
Beryllium (Be)	< 0.1470	< 0.1536	0.1792	0.1600
Bismuth (Bi)	0.9917	2.661	1.945	1.866
Boron (B)	13.67	34.59	17.65	21.97
Cadmium (Cd)	1.683	3.256	6.661	3.867
Calcium (Ca)	168.3	137.9	1897	734.5
Chrome (Cr)	4.880	19.16	17.53	13.86
Cobalt (Co)	< 0.2503	0.2615	0.2987	0.2702
Copper (Cu)	50.11	54.62	95.08	66.60
Tin (Sn)	14.14	20.27	23.42	19.28
Iron (Fe)	22.21	30.73	174.1	75.69
Lithium (Li)	3.441	8.499	12.25	8.062
Magnesium (Mg)	17.52	29.75	110.8	52.69
Manganese (Mn)	2.909	1.177	4.719	2.935
Molybdenum (Mo)	3.316	14.32	14.13	10.59
Nickel (Ni)	0.4067	1.308	1.165	0.9597
Lead (Pb)	92.91	128.8	167.6	129.8
Potassium (K)	5090	6234	10980	7436
Selenium (Se)	1.220	1.340	0.8065	1.122
Silicon (Si)	150.2	129.1	690.6	323.3
Sodium (Na)	7348	8470	11290	9035
Strontium (Sr)	0.5944	0.4250	3.495	1.505
Thallium (Tl)	< 0.2503	0.2942	0.2987	0.2811
Titanium (Ti)	3.754	2.942	27.48	11.39
Vanadium (V)	0.6257	0.9480	1.494	1.022
Zinc (Zn)	245.7	337.2	623.7	402.2
Mercury (Hg)	< 0.3691	< 0.3923	< 0.3525	< 0.3713
DETECTED METALS	13330	15960	26750	18680
TOTAL METALS	13330	15960	26750	18680

Agnico Eagle Mines, Meliadine				
24-8263				
INC1				
Particles and metals				
EXPERIMENTAL SCHEDULE				
RUN NUMBER	INC1-Me-E1	INC1-Me-E2	INC1-Me-E3	AVERAGE
RUN DATE	2024-08-16	2024-08-17	2024-08-18	(1 to 3)
START OF RUN	08h50	15h40	14h00	
END OF RUN	12h10	19h00	17h20	
RUN DURATION (minutes)	200	200	200	
NUMBER OF MEASUREMENTS	40	40	40	
TOTAL METALS (µg/m3R) at 11% O2				
Aluminum (Al)	17.14	18.08	289.2	108.1
Antimony (Sb)	33.59	177.5	181.5	130.8
Silver (Ag)	1.684	1.749	2.407	1.947
Arsenic (As)	35.96	70.21	201.5	102.6
Barium (Ba)	1.116	0.8222	4.917	2.285
Beryllium (Be)	< 0.1413	< 0.1370	0.2063	0.1616
Bismuth (Bi)	0.9531	2.373	2.238	1.855
Boron (B)	13.14	30.85	20.32	21.44
Cadmium (Cd)	1.618	2.904	7.668	4.063
Calcium (Ca)	161.8	123.0	2184	823.0
Chrome (Cr)	4.691	17.09	20.18	13.99
Cobalt (Co)	< 0.2405	0.2332	0.3439	0.2725
Copper (Cu)	48.17	48.72	109.4	68.78
Tin (Sn)	13.59	18.08	26.96	19.54
Iron (Fe)	21.35	27.41	200.5	83.07
Lithium (Li)	3.307	7.580	14.10	8.329
Magnesium (Mg)	16.84	26.53	127.6	56.98
Manganese (Mn)	2.796	1.050	5.433	3.093
Molybdenum (Mo)	3.187	12.77	16.26	10.74
Nickel (Ni)	0.3909	1.166	1.341	0.9660
Lead (Pb)	89.30	114.9	192.9	132.4
Potassium (K)	4892	5560	12640	7698
Selenium (Se)	1.173	1.195	0.9284	1.099
Silicon (Si)	144.3	115.2	795.0	351.5
Sodium (Na)	7063	7554	12990	9204
Strontium (Sr)	0.5713	0.3790	4.023	1.658
Thallium (Tl)	< 0.2405	0.2624	0.3439	0.2823
Titanium (Ti)	3.608	2.624	31.63	12.62
Vanadium (V)	0.6014	0.8455	1.719	1.055
Zinc (Zn)	236.1	300.8	717.9	418.3
Mercury (Hg)	< 0.3548	< 0.3499	< 0.4057	< 0.3701
DETECTED METALS	12810	14240	30800	19280
TOTAL METALS	12810	14240	30800	19280

Agnico Eagle Mines, Meliadine				
24-8263				
INC1				
Particles and metals				
EXPERIMENTAL SCHEDULE				
RUN NUMBER	INC1-Me-E1	INC1-Me-E2	INC1-Me-E3	AVERAGE
RUN DATE	2024-08-16	2024-08-17	2024-08-18	(1 to 3)
START OF RUN	08h50	15h40	14h00	
END OF RUN	12h10	19h00	17h20	
RUN DURATION (minutes)	200	200	200	
NUMBER OF MEASUREMENTS	40	40	40	
PARTICULATE METALS (g/h)				
Aluminum (Al)	0.03706	0.03220	1.101	0.3900
Antimony (Sb)	0.1469	0.8158	0.7100	0.5576
Silver (Ag)	0.002118	0.002684	0.004042	0.002948
Arsenic (As)	0.1549	0.3220	0.7882	0.4217
Barium (Ba)	0.003720	0.002845	0.01832	0.008296
Beryllium (Be)	< 0.00009266	< 0.00009392	0.0002695	0.0001520
Bismuth (Bi)	0.003534	0.01039	0.008097	0.007339
Cadmium (Cd)	0.006592	0.01283	0.02951	0.01631
Calcium (Ca)	0.5692	0.2469	8.421	3.079
Chrome (Cr)	0.01959	0.07742	0.07814	0.05838
Cobalt (Co)	< 0.0001324	0.0001342	0.0004042	0.0002236
Copper (Cu)	0.2091	0.2214	0.4271	0.2859
Tin (Sn)	0.03601	0.05770	0.08272	0.05881
Iron (Fe)	0.03442	0.07245	0.7100	0.2723
Lithium (Li)	0.005295	0.02549	0.04581	0.02553
Magnesium (Mg)	0.05560	0.02818	0.4742	0.1860
Manganese (Mn)	0.002647	0.003354	0.01981	0.008602
Molybdenum (Mo)	0.008737	0.05340	0.05834	0.04016
Nickel (Ni)	< 0.0006619	0.003757	0.004311	0.002910
Lead (Pb)	0.3879	0.5233	0.7504	0.5539
Potassium (K)	21.44	25.49	49.45	32.13
Selenium (Se)	0.0006619	< 0.0006709	0.0006736	0.0006688
Silicon (Si)	0.2369	0.3408	2.789	1.122
Sodium (Na)	15.75	19.72	34.09	23.19
Strontium (Sr)	0.001588	0.0008051	0.01482	0.005738
Thallium (Tl)	< 0.0001324	0.0002684	0.0004042	0.0002683
Titanium (Ti)	0.006619	0.002684	0.1145	0.04127
Vanadium (V)	0.0007942	0.002013	0.004715	0.002507
Zinc (Zn)	0.9584	1.355	2.789	1.701
Mercury (Hg)	< 0.0001324	< 0.0001342	< 0.0001347	< 0.0001338
DETECTED METALS	40.09	49.43	103.0	64.16
TOTAL METALS	40.09	49.43	103.0	64.16

Agnico Eagle Mines, Meliadine 24-8263 INC1 Particles and metals				
EXPERIMENTAL SCHEDULE				
RUN NUMBER	INC1-Me-E1	INC1-Me-E2	INC1-Me-E3	AVERAGE
RUN DATE	2024-08-16	2024-08-17	2024-08-18	(1 to 3)
START OF RUN	08h50	15h40	14h00	
END OF RUN	12h10	19h00	17h20	
RUN DURATION (minutes)	200	200	200	
NUMBER OF MEASUREMENTS	40	40	40	
GASEOUS METALS (g/h)				
Aluminum (Al)	0.03839	0.05099	0.03233	0.04057
Antimony (Sb)	< 0.0009266	< 0.0009392	< 0.0009431	< 0.0009363
Silver (Ag)	< 0.005295	< 0.005367	< 0.005389	< 0.005350
Arsenic (As)	0.003442	0.001073	0.001482	0.001999
Barium (Ba)	0.001191	0.0009392	0.0009431	0.001025
Beryllium (Be)	< 0.0005295	< 0.0005367	< 0.0005389	< 0.0005350
Bismuth (Bi)	0.0006619	< 0.0005367	0.0006736	0.0006241
Boron (B)	0.05785	0.1420	0.07962	0.09314
Cadmium (Cd)	< 0.0005295	< 0.0005367	< 0.0005389	< 0.0005350
Calcium (Ca)	0.1430	0.3193	0.1374	0.1999
Chrome (Cr)	0.001059	0.001208	< 0.0009431	0.001070
Cobalt (Co)	< 0.0009266	< 0.0009392	< 0.0009431	< 0.0009363
Copper (Cu)	0.002912	0.002818	0.001751	0.002494
Tin (Sn)	0.02383	0.02549	0.02290	0.02407
Iron (Fe)	0.05957	< 0.05367	0.07545	0.06290
Lithium (Li)	< 0.009266	< 0.009392	< 0.009431	< 0.009363
Magnesium (Mg)	< 0.01853	0.09392	0.02560	0.04602
Manganese (Mn)	0.009663	0.001476	0.001482	0.004207
Molybdenum (Mo)	< 0.005295	< 0.005367	< 0.005389	< 0.005350
Nickel (Ni)	0.001059	0.001610	0.0009431	0.001204
Lead (Pb)	< 0.005295	< 0.005367	< 0.005389	< 0.005350
Potassium (K)	< 0.09266	< 0.09392	< 0.09431	< 0.09363
Selenium (Se)	0.004501	0.004830	0.002964	0.004098
Silicon (Si)	0.3984	0.1892	0.3260	0.3046
Sodium (Na)	15.34	15.04	16.83	15.74
Strontium (Sr)	< 0.0009266	< 0.0009392	< 0.0009431	< 0.0009363
Thallium (Tl)	< 0.0009266	< 0.0009392	< 0.0009431	< 0.0009363
Titanium (Ti)	< 0.009266	< 0.009392	< 0.009431	< 0.009363
Vanadium (V)	< 0.001853	< 0.001878	< 0.002021	< 0.001918
Zinc (Zn)	0.08114	0.02898	0.02412	0.04475
Mercury (Hg)	< 0.001430	< 0.001476	< 0.001455	< 0.001454
DETECTED METALS	16.17	15.90	17.56	16.54
TOTAL METALS	16.32	16.10	17.70	16.71

Agnico Eagle Mines, Meliadine				
24-8263				
INC1				
Particles and metals				
EXPERIMENTAL SCHEDULE				
RUN NUMBER	INC1-Me-E1	INC1-Me-E2	INC1-Me-E3	AVERAGE
RUN DATE	2024-08-16	2024-08-17	2024-08-18	(1 to 3)
START OF RUN	08h50	15h40	14h00	
END OF RUN	12h10	19h00	17h20	
RUN DURATION (minutes)	200	200	200	
NUMBER OF MEASUREMENTS	40	40	40	
TOTAL METALS (g/h)				
Aluminum (Al)	0.07545	0.08319	1.133	0.4306
Antimony (Sb)	0.1479	0.8167	0.7110	0.5585
Silver (Ag)	0.007413	0.008051	0.009431	0.008298
Arsenic (As)	0.1583	0.3231	0.7896	0.4237
Barium (Ba)	0.004911	0.003784	0.01927	0.009320
Beryllium (Be)	< 0.0006222	< 0.0006306	0.0008084	0.0006870
Bismuth (Bi)	0.004196	0.01092	0.008771	0.007963
Boron (B)	0.05785	0.1420	0.07962	0.09314
Cadmium (Cd)	0.007122	0.01336	0.03004	0.01684
Calcium (Ca)	0.7122	0.5662	8.558	3.279
Chrome (Cr)	0.02065	0.07863	0.07909	0.05945
Cobalt (Co)	< 0.001059	0.001073	0.001347	0.001160
Copper (Cu)	0.2121	0.2242	0.4288	0.2884
Tin (Sn)	0.05983	0.08319	0.1056	0.08288
Iron (Fe)	0.09398	0.1261	0.7855	0.3352
Lithium (Li)	0.01456	0.03489	0.05524	0.03490
Magnesium (Mg)	0.07413	0.1221	0.4998	0.2320
Manganese (Mn)	0.01231	0.004830	0.02129	0.01281
Molybdenum (Mo)	0.01403	0.05877	0.06373	0.04551
Nickel (Ni)	0.001721	0.005367	0.005254	0.004114
Lead (Pb)	0.3931	0.5286	0.7558	0.5592
Potassium (K)	21.54	25.59	49.54	32.22
Selenium (Se)	0.005163	0.005501	0.003638	0.004767
Silicon (Si)	0.6354	0.5300	3.115	1.427
Sodium (Na)	31.09	34.76	50.91	38.92
Strontium (Sr)	0.002515	0.001744	0.01576	0.006674
Thallium (Tl)	< 0.001059	0.001208	0.001347	0.001205
Titanium (Ti)	0.01588	0.01208	0.1239	0.05064
Vanadium (V)	0.002647	0.003891	0.006736	0.004425
Zinc (Zn)	1.040	1.384	2.813	1.746
Mercury (Hg)	< 0.001562	< 0.001610	< 0.001590	< 0.001587
DETECTED METALS	56.40	65.53	120.7	80.87
TOTAL METALS	56.41	65.53	120.7	80.87
R: Reference conditions at 101.3 kPa and 25°C, on a dry basis				

Sampling survey : INC1 – Particles and metals – Run 1																					
Time	Trav. #	Point #	Pumping duration (min)	Pressure difference (in H ₂ O)		Temperatures (°F)				Gas volume (ft³)			Velocity (m/s)	Iso. (%)	O ₂ (%v)	CO ₂ (%v)	CO (ppmv)	Vaccum (in. Hg)	Temperatures (°F)		
						Stack	Dry gas meter in	Dry gas meter out	Orifice										Probe	Filter	Exit
				ΔP	ΔH					Start	End	Total									
08h50	1	1	5	0.07	0.43	1691	54	54	54	22.70	25.27	2.57	8.50	102.26	10.3	8.0	11.0	-2	250	248	50
		2	5	0.07	0.43	1690	54	54	54	25.27	27.86	2.59	8.50	103.03	10.3	8.0	11.0	-2	250	249	50
		3	5	0.07	0.43	1685	53	53	53	27.86	30.34	2.48	8.49	98.729	10.3	8.0	11.0	-2	250	247	50
		4	5	0.07	0.43	1700	57	57	57	30.34	32.87	2.53	8.52	100.29	10.3	8.0	11.0	-2	250	254	50
		5	5	0.05	0.31	1680	56	56	56	32.87	35.07	2.20	7.17	102.88	10.3	8.0	11.0	-2	250	252	50
		6	5	0.06	0.37	1677	56	56	56	35.07	37.39	2.32	7.85	98.98	10.3	8.0	11.0	-2	250	250	50
		7	5	0.07	0.44	1676	57	57	57	37.39	39.97	2.58	8.47	101.7	10.3	8.0	11.0	-2	250	254	50
		8	5	0.07	0.44	1675	57	57	57	39.97	42.52	2.55	8.47	100.5	10.3	8.0	11.0	-2	250	249	50
		9	5	0.06	0.37	1672	58	58	58	42.52	44.88	2.36	7.84	100.18	10.3	8.0	11.0	-2	250	252	50
		10	5	0.07	0.44	1668	58	58	58	44.88	47.46	2.58	8.46	101.32	10.3	8.0	11.0	-2	250	257	50
		11	5	0.07	0.44	1666	57	57	57	47.46	50.04	2.58	8.45	101.46	10.3	8.0	11.0	-2	250	253	50
		12	5	0.07	0.44	1665	59	59	59	50.04	52.61	2.57	8.45	100.66	10.5	7.8	7.0	-2	250	251	50
		13	5	0.08	0.50	1663	59	59	59	52.61	55.36	2.75	9.03	100.72	10.5	7.8	7.0	-2	250	256	51
		14	5	0.07	0.44	1664	59	59	59	55.36	57.96	2.60	8.45	101.81	10.5	7.8	7.0	-3	250	255	51
		15	5	0.07	0.44	1663	59	59	59	57.96	60.55	2.59	8.45	101.39	10.5	7.9	7.0	-3	250	249	51
		16	5	0.06	0.38	1664	59	59	59	60.55	62.98	2.43	7.82	102.76	10.5	7.9	7.0	-3	250	251	51
		17	5	0.06	0.38	1666	62	62	62	62.98	65.31	2.33	7.83	98.012	10.5	7.9	7.0	-3	250	248	51
		18	5	0.06	0.38	1657	63	63	63	65.31	67.71	2.40	7.81	100.55	10.5	7.9	7.0	-3	250	249	51
		19	5	0.07	0.45	1657	64	64	64	67.71	70.35	2.64	8.44	102.22	10.7	7.8	6.0	-3	250	250	52
		20	5	0.08	0.51	1660	62	62	62	70.35	73.15	2.80	9.03	101.89	10.7	7.8	6.0	-4	250	249	52
	2	1	5	0.11	0.70	1652	61	61	61	73.15	76.44	3.29	10.56	102.15	10.7	7.8	6.0	-4	250	253	52
		2	5	0.10	0.63	1651	61	61	61	76.44	79.61	3.17	10.07	103.19	10.7	7.8	6.0	-4	250	249	52
		3	5	0.11	0.70	1649	61	61	61	79.61	82.85	3.24	10.56	100.53	10.7	7.8	6.0	-4	250	248	52
		4	5	0.11	0.70	1647	61	61	61	82.85	86.11	3.26	10.55	101.1	10.7	7.8	6.0	-4	250	251	52
		5	5	0.11	0.70	1646	62	62	62	86.11	89.30	3.19	10.55	98.715	10.7	7.8	6.0	-4	250	252	52
		6	5	0.10	0.64	1645	62	62	62	89.30	92.45	3.15	10.06	102.19	10.7	7.8	6.0	-4	250	254	52
		7	5	0.11	0.70	1644	62	62	62	92.45	95.74	3.29	10.54	101.76	10.7	7.8	6.0	-4	250	253	52
		8	5	0.10	0.64	1644	62	62	62	95.74	98.85	3.11	10.05	100.87	10.7	7.8	6.0	-4	250	250	52
		9	5	0.12	0.76	1645	61	61	61	98.85	102.25	3.40	11.02	100.92	10.7	7.8	6.0	-4	250	247	52
		10	5	0.11	0.70	1644	61	61	61	102.25	105.52	3.27	10.54	101.34	10.7	7.8	6.0	-4	250	248	52
		11	5	0.08	0.51	1648	62	62	62	105.52	108.21	2.69	9.00	97.611	10.7	7.8	6.0	-4	250	248	53
		12	5	0.08	0.51	1644	62	62	62	108.21	111.01	2.80	8.99	101.51	10.7	7.8	6.0	-4	250	256	53
		13	5	0.08	0.51	1646	62	62	62	111.01	113.70	2.69	9.00	97.564	10.7	7.8	6.0	-4	250	255	53
		14	5	0.08	0.51	1640	62	62	62	113.70	116.42	2.72	8.98	98.512	10.7	7.8	6.0	-4	250	255	53
		15	5	0.07	0.45	1639	63	63	63	116.42	119.02	2.60	8.40	100.44	10.7	7.8	6.0	-4	250	247	53
		16	5	0.07	0.45	1639	63	63	63	119.02	121.54	2.52	8.40	97.345	10.7	7.8	6.0	-4	250	251	53
		17	5	0.08	0.51	1638	63	63	63	121.54	124.37	2.83	8.98	102.25	10.7	7.8	6.0	-4	250	249	53
		18	5	0.08	0.51	1637	62	62	62	124.37	127.17	2.80	8.98	101.34	10.7	7.8	6.0	-4	250	252	53
		19	5	0.07	0.45	1640	63	63	63	127.17	129.82	2.65	8.40	102.39	10.7	7.8	6.0	-4	250	252	53
12h10		20	5	0.08	0.51	1640	63	63	63	129.82	132.63	2.81	8.98	101.58	10.7	7.8	6.0	-4	250	254	53

Sampling survey : Incinerator 1 – Particles and metals – Run 2																					
Time	Trav. #	Point #	Pumping duration (min)	Pressure difference (in H ₂ O)		Temperatures (°F)				Gas volume (ft³)			Velocity (m/s)	Iso. (%)	O ₂ (%v)	CO ₂ (%v)	CO (ppmv)	Vaccum (in. Hg)	Temperatures (°F)		
				ΔP	ΔH	Stack	Dry gas meter in	Dry gas meter out	Orifice	Start	End	Total							Probe	Filter	Exit
15h40	1	1	5	0.11	0.62	1882	56	56	56	33.21	36.23	3.02	11.12	100.16	7.5	10.5	5.0	-3	250	246	48
		2	5	0.11	0.62	1884	56	56	56	36.23	39.14	2.91	11.12	96.551	7.5	10.5	5.0	-3	250	251	48
		3	5	0.11	0.62	1889	57	57	57	39.14	42.19	3.05	11.13	101.11	7.5	10.5	5.0	-3	250	245	48
		4	5	0.11	0.62	1897	56	56	56	42.19	45.26	3.07	11.15	102.14	7.4	10.5	5.0	-3	250	249	48
		5	5	0.10	0.56	1894	57	57	57	45.26	48.13	2.87	10.63	99.877	7.4	10.5	5.0	-3	250	253	48
		6	5	0.10	0.56	1891	57	57	57	48.13	51.00	2.87	10.62	99.813	7.4	10.5	5.0	-4	250	256	48
		7	5	0.10	0.56	1908	56	56	56	51.00	53.81	2.81	10.66	98.268	7.4	10.4	5.0	-4	250	256	48
		8	5	0.10	0.56	1912	58	58	58	53.81	56.60	2.79	10.67	97.274	7.4	10.4	5.0	-4	250	259	48
		9	5	0.12	0.67	1908	58	58	58	56.60	59.75	3.15	11.67	100.2	7.4	10.4	5.0	-4	250	252	49
		10	5	0.12	0.68	1902	58	58	58	59.75	62.94	3.19	11.66	101.34	8.6	9.6	5.0	-6	250	253	49
		11	5	0.09	0.51	1900	57	57	57	62.94	65.75	2.81	10.09	103.2	8.6	9.6	5.0	-6	250	254	49
		12	5	0.08	0.45	1889	57	57	57	65.75	68.35	2.60	9.49	101.03	8.6	9.6	5.0	-5	250	253	49
		13	5	0.08	0.45	1885	59	59	59	68.35	70.91	2.56	9.49	99.004	8.9	9.2	5.0	-5	250	250	49
		14	5	0.07	0.40	1865	60	60	60	70.91	73.37	2.46	8.83	101.06	8.9	9.2	5.0	-5	250	250	50
		15	5	0.07	0.40	1857	60	60	60	73.37	75.83	2.46	8.82	100.89	8.9	9.2	5.0	-5	250	252	50
		16	5	0.07	0.41	1846	61	61	61	75.83	78.26	2.43	8.80	99.231	8.9	9.2	5.0	-5	250	251	50
		17	5	0.08	0.47	1840	62	62	62	78.26	80.89	2.63	9.39	100.15	8.9	9.2	5.0	-5	250	241	50
		18	5	0.08	0.47	1834	62	62	62	80.89	83.50	2.61	9.38	99.263	8.9	9.2	5.0	-5	250	247	50
		19	5	0.08	0.47	1819	62	62	62	83.50	86.10	2.60	9.35	98.559	8.9	9.2	5.0	-5	250	249	50
		20	5	0.07	0.41	1807	62	62	62	86.10	88.54	2.44	8.72	98.606	8.9	9.2	5.0	-5	250	254	50
	2	1	5	0.07	0.41	1811	64	64	64	88.54	91.11	2.57	8.73	103.55	9.7	8.5	4.0	-5	250	254	50
		2	5	0.07	0.42	1796	64	64	64	91.11	93.62	2.51	8.70	100.8	9.7	8.5	4.0	-5	250	256	49
		3	5	0.07	0.42	1797	64	64	64	93.62	96.07	2.45	8.70	98.415	9.7	8.5	4.0	-5	250	248	49
		4	5	0.07	0.42	1800	64	64	64	96.07	98.57	2.50	8.71	100.49	9.7	8.5	4.0	-5	250	248	49
		5	5	0.07	0.42	1798	64	64	64	98.57	101.03	2.46	8.71	98.838	9.8	8.6	4.0	-5	250	249	49
		6	5	0.06	0.36	1788	65	65	65	101.03	103.42	2.39	8.04	103.28	9.8	8.6	4.0	-5	250	253	49
		7	5	0.05	0.30	1789	65	65	65	103.42	105.58	2.16	7.34	102.26	9.8	8.6	4.0	-5	250	253	49
		8	5	0.06	0.38	1657	64	64	64	105.58	107.91	2.33	7.80	97.899	11.8	7.0	5.0	-5	250	252	49
		9	5	0.06	0.39	1627	63	63	63	107.91	110.25	2.34	7.75	97.808	11.8	7.0	5.0	-6	250	250	51
		10	5	0.07	0.45	1613	63	63	63	110.25	112.82	2.57	8.34	99.135	11.8	7.0	5.0	-7	250	250	51
		11	5	0.07	0.46	1605	64	64	64	112.82	115.43	2.61	8.33	100.29	11.8	7.0	5.0	-7	250	258	51
		12	5	0.08	0.52	1596	64	64	64	115.43	118.23	2.80	8.88	100.44	11.8	7.0	5.0	-7	250	257	51
		13	5	0.08	0.53	1586	65	65	65	118.23	121.04	2.81	8.86	100.36	11.8	7.0	5.0	-7	250	249	51
		14	5	0.07	0.46	1579	65	65	65	121.04	123.65	2.61	8.27	99.471	11.8	7.0	5.0	-7	250	243	51
		15	5	0.07	0.46	1577	65	65	65	123.65	126.31	2.66	8.27	101.33	11.8	7.0	5.0	-7	250	247	51
		16	5	0.05	0.33	1572	65	65	65	126.31	128.51	2.20	6.98	99.004	11.8	7.0	5.0	-7	250	252	51
		17	5	0.06	0.40	1567	65	65	65	128.51	130.95	2.44	7.64	100.13	11.8	7.0	5.0	-7	250	251	52
		18	5	0.07	0.47	1564	64	64	64	130.95	133.50	2.55	8.24	97.011	11.8	7.0	5.0	-7	250	251	52
		19	5	0.07	0.47	1560	65	65	65	133.50	136.13	2.63	8.23	99.766	11.8	7.0	5.0	-7	250	252	52
19h00			20	5	0.07	0.47	1555	65	65	65	136.13	138.70	2.57	8.22	97.369	11.8	7.0	5.0	-7	250	256

Sampling survey : Incinerator – Particles and metals – Run 3																					
Time	Trav. #	Point #	Pumping duration (min)	Pressure difference (in H ₂ O)		Temperatures (°F)				Gas volume (ft³)			Velocity (m/s)	Iso. (%)	O ₂ (%v)	CO ₂ (%v)	CO (ppmv)	Vacuum (in. Hg)	Temperatures (°F)		
				ΔP	ΔH	Stack	Dry gas meter in	Dry gas meter out	Orifice	Start	End	Total							Probe	Filter	Exit
14h00	1	1	5	0.07	0.49	1419	55	55	55	39.92	42.58	2.66	7.95	97.857	11.5	7.3	5.0	-2	250	245	50
		2	5	0.07	0.49	1430	56	56	56	42.58	45.21	2.63	7.97	96.848	11.5	7.3	5.0	-2	250	248	50
		3	5	0.08	0.56	1434	56	56	56	45.21	48.12	2.91	8.53	100.36	11.5	7.3	5.0	-2	250	253	50
		4	5	0.06	0.42	1430	57	57	57	48.12	50.65	2.53	7.38	100.42	11.5	7.3	5.0	-2	250	247	50
		5	5	0.07	0.49	1428	57	57	57	50.65	53.31	2.66	7.97	97.712	11.5	7.3	5.0	-2	250	256	50
		6	5	0.07	0.49	1436	57	57	57	53.31	56.00	2.69	7.99	99.022	11.5	7.3	5.0	-2	250	254	50
		7	5	0.05	0.35	1450	58	58	58	56.00	58.36	2.36	6.78	102.94	11.4	7.2	5.0	-2	250	250	50
		8	5	0.06	0.42	1453	58	58	58	58.36	60.92	2.56	7.43	102.03	11.4	7.2	5.0	-2	250	254	50
		9	5	0.07	0.49	1455	58	58	58	60.92	63.62	2.70	8.03	99.693	11.4	7.2	5.0	-2	250	249	50
		10	5	0.07	0.49	1450	59	59	59	63.62	66.41	2.79	8.02	102.68	11.4	7.2	5.0	-2	250	248	50
		11	5	0.07	0.49	1454	59	59	59	66.41	69.18	2.77	8.03	102.05	11.4	7.2	5.0	-2	250	247	51
		12	5	0.09	0.63	1449	62	62	62	69.18	72.25	3.07	9.09	99.083	11.4	7.2	5.0	-2	250	252	51
		13	5	0.08	0.56	1450	62	62	62	72.25	75.18	2.93	8.57	100.31	11.4	7.2	5.0	-2	250	253	51
		14	5	0.07	0.49	1447	63	63	63	75.18	77.94	2.76	8.01	100.72	11.8	6.9	5.0	-3	250	253	51
		15	5	0.06	0.42	1454	64	64	64	77.94	80.47	2.53	7.43	99.703	11.8	6.9	5.0	-3	250	252	51
		16	5	0.05	0.35	1447	65	65	65	80.47	82.71	2.24	6.77	96.323	11.8	6.9	5.0	-2	250	250	52
		17	5	0.06	0.42	1450	65	65	65	82.71	85.18	2.47	7.42	97.052	11.8	6.9	5.0	-2	250	250	52
		18	5	0.08	0.56	1450	65	65	65	85.18	88.00	2.82	8.57	95.992	11.8	6.9	5.0	-2	250	259	52
		19	5	0.07	0.49	1448	66	66	66	88.00	90.70	2.70	8.01	97.999	11.9	6.8	5.0	-3	250	256	52
		20	5	0.06	0.43	1445	67	67	67	90.70	93.21	2.51	7.41	98.121	11.9	6.8	5.0	-3	250	244	52
	2	1	5	0.10	0.71	1446	67	67	67	93.21	96.42	3.21	9.57	97.294	11.9	6.8	5.0	-4	250	245	52
		2	5	0.10	0.71	1450	67	67	67	96.42	99.65	3.23	9.58	98.002	11.9	6.8	5.0	-4	250	249	52
		3	5	0.11	0.78	1451	68	68	68	99.65	103.01	3.36	10.05	97.06	11.9	6.8	5.0	-4	250	256	52
		4	5	0.11	0.78	1455	68	68	68	103.01	106.42	3.41	10.06	98.607	11.9	6.8	5.0	-4	250	254	52
		5	5	0.10	0.72	1427	68	68	68	106.42	109.65	3.23	9.52	97.228	11.9	6.8	5.0	-4	250	248	52
		6	5	0.10	0.72	1426	69	69	69	109.65	112.94	3.29	9.52	98.821	11.9	6.8	5.0	-4	250	258	52
		7	5	0.10	0.72	1425	69	69	69	112.94	116.21	3.27	9.52	98.194	12.1	6.7	5.0	-4	250	257	52
		8	5	0.11	0.79	1422	70	70	70	116.21	119.72	3.51	9.98	100.24	13.3	5.8	5.0	-4	250	254	52
		9	5	0.11	0.80	1420	70	70	70	119.72	123.23	3.51	9.97	100.19	13.3	5.8	5.0	-4	250	250	52
		10	5	0.12	0.87	1415	70	70	70	123.23	126.94	3.71	10.40	101.28	13.3	5.8	5.0	-4	250	250	53
		11	5	0.09	0.66	1403	70	70	70	126.94	130.03	3.09	8.98	97.037	13.3	5.8	5.0	-4	250	254	54
		12	5	0.09	0.66	1391	71	71	71	130.03	133.25	3.22	8.95	100.6	13.3	5.8	5.0	-4	250	253	54
		13	5	0.08	0.59	1384	71	71	71	133.25	136.21	2.96	8.42	97.889	13.3	5.8	5.0	-4	250	249	54
		14	5	0.07	0.52	1380	70	70	70	136.21	139.03	2.82	7.87	99.76	13.3	5.8	5.0	-4	250	244	54
		15	5	0.06	0.44	1374	70	70	70	139.03	141.71	2.68	7.27	102.22	13.3	5.8	5.0	-3	250	244	52
		16	5	0.07	0.52	1373	70	70	70	141.71	144.56	2.85	7.85	100.63	13.3	5.8	5.0	-3	250	246	52
		17	5	0.08	0.59	1369	70	70	70	144.56	147.57	3.01	8.39	99.325	13.3	5.8	5.0	-3	250	245	52
		18	5	0.08	0.59	1370	70	70	70	147.57	150.53	2.96	8.39	97.701	13.3	5.8	5.0	-3	250	249	52
		19	5	0.08	0.60	1365	70	70	70	150.53	153.57	3.04	8.38	100.21	13.3	5.8	5.0	-3	250	252	52
17h20		20	5	0.06	0.45	1363	70	70	70	153.57	156.11	2.54	7.25	96.588	13.3	5.8	5.0	-3	250	251	52

INC1-Me-E1
Impingers – liquid mass

	Before	After	Difference
IMP. 1	825.13	637.66	187.47
IMP. 2	613.34	590.62	22.72
IMP. 3	644.39	633.84	10.55
IMP. 4	641.83	641.14	0.69
IMP. 5	512.09	514.99	-2.9
IMP. 6	742.28	741.13	1.15
IMP. 7	587.64	587.62	0.02
IMP. 8			
IMP. 9			
Silica gel	1838.84	1814.9	23.94
Total	6405.54	6161.9	243.64

Water mass (g)	243.64
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INC1-Me-E2
Impingers – liquid mass

	Before	After	Difference
IMP. 1	863.3	687.89	175.41
IMP. 2	590.59	560.14	30.45
IMP. 3	713.79	697.02	16.77
IMP. 4	706.29	704.58	1.71
IMP. 5	592.81	595.56	-2.75
IMP. 6	698.87	699.65	-0.78
IMP. 7	713.73	714.95	-1.22
IMP. 8			
IMP. 9			
Silica gel	2070.8	2047.16	23.64
Total	6950.18	6706.95	243.23

Water mass (g)	243.23
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INC1-Me-E3
Impingers – liquid mass

	Before	After	Difference
IMP. 1	777.64	634.15	143.49
IMP. 2	631.51	588.59	42.92
IMP. 3	636.13	620.61	15.52
IMP. 4	640.32	639.29	1.03
IMP. 5	512.93	512.55	0.38
IMP. 6	739.47	739.49	-0.02
IMP. 7	589.21	589.69	-0.48
IMP. 8			
IMP. 9			
Silica gel	1933.52	1904.4	29.12
Total	6460.73	6228.77	231.96

Water mass (g)	231.96
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Agnico Eagle Mines, Meliadine 24-8263 Incinerator 1 Semi-Volatile Organic Compounds				
EXPERIMENTAL SCHEDULE				
RUN NUMBER	INC1-COSV-E1	INC1-COSV-E2	INC1-COSV-E3	AVERAGE
RUN DATE	2024-08-16	2024-08-17	2024-08-18	(1 to 3)
START OF RUN	08h50	15h40	14H00	
END OF RUN	12h10	19h00	17H20	
RUN DURATION (minutes)	200	200	200	
NUMBER OF MEASUREMENTS	40	40	40	
SAMPLING EQUIPMENT DATA				
BAROMETRIC PRESSURE ("Hg)	30.00	30.00	30.00	30.00
STATIC PRESSURE ("H ₂ O)	-0.12	-0.12	-0.12	-0.12
PRESSION STATIQUE (kPa)	-0.030	-0.030	-0.030	-0.030
DRY GAS METER COEFFICIENT	1.001	1.001	1.001	n/a
PITOT TUBE COEFFICIENT	0.741	0.741	0.741	n/a
NOZZLE DIAMETER (in)	0.509	0.509	0.509	n/a
DRY GAS METER TEMPERATURE (°F)	55.4	59.9	62.2	n/a
DRY GAS METER TEMPERATURE (°C)	13.0	15.5	16.8	n/a
GAS HUMIDITY & SAMPLED VOLUME				
MASS OF WATER (g)	245.2	255.3	242.0	n/a
VOLUME OF WATER (ft ³ R)	11.76	12.25	11.61	n/a
GAS HUMIDITY (BWO)	0.092	0.100	0.088	0.093
GAS HUMIDITY (% v/v)	9.2	10.0	8.8	9.3
REFERENCE GAS VOLUME (ft ³ R)	115.58	109.74	120.90	115.41
REFERENCE GAS VOLUME (m³R)	3.27	3.11	3.42	3.27
STACK CHARACTERISTICS				
NUMBER OF DIAMETERS BEFORE SAMPLING PORTS	5.0	5.0	5.0	n/a
NUMBER OF DIAMETERS AFTER SAMPLING PORTS	2.0	2.0	2.0	n/a
STACK DIAMETER (ft)	2.8	2.8	2.8	n/a
STACK DIAMETER (m)	0.85	0.85	0.85	n/a
LENGTH OF SAMPLING PORTS (in)	7.8	7.8	7.8	n/a
STACK PRESSURE ("Hg)	29.99	29.99	29.99	29.99
STACK PRESSURE (kPa)	101.56	101.56	101.56	101.56
DRY GAS METER PRESSURE ("Hg)	30.07	30.07	30.08	30.07
STACK SURFACE (pi ²)	6.1	6.1	6.1	n/a
STACK SURFACE (m ²)	0.57	0.57	0.57	n/a
GAZ CHARACTERISTICS				
CHIMNEY TEMPERATURE (°F)	1625.2	1802.5	1410.0	1612.6
CHIMNEY TEMPERATURE (°C)	885.1	983.6	765.6	878.1
CO ₂ (%v, dry)	7.8	8.6	6.6	7.7
O ₂ (%v, dry)	10.6	9.8	12.3	10.9
O ₂ (%v, dry)	9.6	8.8	11.2	9.9
CO (ppmv, dry)	6.0	4.1	3.4	4.5
N ₂ (%v, dry)	81.6	81.6	81.1	81.4
DRY MOLECULAR WEIGHT	29.7	29.8	29.6	29.7
WET MOLECULAR WEIGHT	28.6	28.6	28.5	28.6
GAS VELOCITY (ft/s)	29.2	30.3	27.4	29.0
GAS VELOCITY (m/s)	8.9	9.2	8.3	8.8
ACTUAL GAS FLOW RATE (pi ³ /h)	644 509	669 135	604 247	639 297
ACTUAL GAS FLOW RATE (m ³ /h)	18 250	18 948	17 110	18 103
ACTUAL GAS FLOW RATE (ft ³ /min) (ACFM)	10 742	11 152	10 071	10 655
REFERENCE GAS FLOW RATE (ft ³ R/h)	150 972	143 178	158 657	150 936
REFERENCE GAS FLOW RATE (m³R/h)	4 275	4 054	4 493	4 274
REFERENCE GAS FLOW RATE (ft ³ R/min) (RCFM)	2 516	2 386	2 644	2 516

Agnico Eagle Mines, Meliadine 24-8263 Incinerator 1 Semi-Volatile Organic Compounds				
EXPERIMENTAL SCHEDULE				
RUN NUMBER	INC1-COSV-E1	INC1-COSV-E2	INC1-COSV-E3	AVERAGE
RUN DATE	2024-08-16	2024-08-17	2024-08-18	(1 to 3)
START OF RUN	08h50	15h40	14H00	
END OF RUN	12h10	19h00	17H20	
RUN DURATION (minutes)	200	200	200	
NUMBER OF MEASUREMENTS	40	40	40	
SAMPLING INFORMATION				
DRY GAS METER ORIFICE COEFFICIENT	0.740	0.740	0.740	n/a
MAXIMUM VELOCITY (m/s)	10.0	10.6	9.5	n/a
MINIMUM VELOCITY (m/s)	6.8	7.0	7.0	n/a
10%Vmax (m/s)	1.00	1.06	0.95	n/a
PERCENTAGE >10%Vmax	1.00	1.00	1.00	1.00
AVERAGE ISOKINETISM (%)	99.5	99.5	99.0	99.3
% POINTS RESPECTING ISOKINETIC CRITERIA	100%	100%	100%	100%
MAXIMUM PUMPING FLOW RATE (ft ³ /min)	0.62	0.60	0.66	n/a
MAXIMUM VACCUM PRESSURE DURING RUN ("Hg)	-5.0	-5.0	-4.0	n/a
MAXIMUM PROBE TEMPERATURE (°F)	250	250	250	n/a
MINIMUM PROBE TEMPERATURE (°F)	250	250	250	n/a
MAXIMUM FILTER TEMPERATURE (°F)	255	255	255	n/a
MINIMUM FILTER TEMPERATURE (°F)	247	248	247	n/a
MAXIMUM TEMPERATURE AT EXIT (°F)	50	51	52	n/a
MINIMUM TEMPERATURE AT EXIT (°F)	45	48	50	n/a
MAXIMUM TRAP TEMPERATURE (°F)	53	58	56	n/a
MINIMUM TRAP TEMPERATURE (°F)	46	48	49	n/a
AVERAGE PUMPING FLOW RATE (ft ³ /min)	0.55	0.53	0.58	0.55
4% OF AVERAGE PUMPING FLOW RATE (ft ³ /min)	0.022	0.021	0.023	0.022
LEAK TEST BEFORE RUN AT 15 "Hg (ft ³ /min)	< 0.02	< 0.02	< 0.02	< 0.02
LEAK TEST AFTER RUN (ft ³ /min)	< 0.02	< 0.02	< 0.02	< 0.02
CYCLONIC FLOW				
AVERAGE FLOW ANGLE	0	0	0	0
VERTICAL GAS VELOCITY (m/s)	8.90	9.24	8.35	8.83

Agnico Eagle Mines, Meliadine 24-8263 Incinerator 1 Semi-Volatile Organic Compounds				
EXPERIMENTAL SCHEDULE				
RUN NUMBER	INC1-COSV-E1	INC1-COSV-E2	INC1-COSV-E3	AVERAGE
RUN DATE	2024-08-16	2024-08-17	2024-08-18	(1 to 3)
START OF RUN	08h50	15h40	14H00	
END OF RUN	12h10	19h00	17H20	
RUN DURATION (minutes)	200	200	200	
NUMBER OF MEASUREMENTS	40	40	40	
DIOXINS AND FURANS (pg)				
2,3,7,8-TCDD	3.5	32.3	0.9	n/a
1,2,3,7,8 PeCDD	62.4	297.0	12.9	n/a
1,2,3,4,7,8 HxCDD	59.6	128.0	13.0	n/a
1,2,3,6,7,8 HxCDD	148.0	201.0	25.4	n/a
1,2,3,7,8,9 HxCDD	104.0	173.0	17.5	n/a
1,2,3,4,6,7,8 HpCDD	1020.0	756.0	219.0	n/a
OCDD	1580.0	1070.0	570.0	n/a
2,3,7,8 TCDF	26.6	169.0	9.6	n/a
1,2,3,7,8 PeCDF	47.8	179.0	14.3	n/a
2,3,4,7,8-PeCDF	130.0	404.0	39.8	n/a
1,2,3,4,7,8 HxCDF	124.0	353.0	42.1	n/a
1,2,3,6,7,8 HxCDF	139.0	333.0	41.6	n/a
2,3,4,6,7,8-HxCDF	277.0	556.0	72.4	n/a
1,2,3,7,8,9 HxCDF	52.6	89.6	5.9	n/a
1,2,3,4,6,7,8 HpCDF	763.0	1520.0	351.0	n/a
1,2,3,4,7,8,9 HpCDF	83.4	84.6	7.2	n/a
OCDF	542.0	326.0	40.0	n/a
Summation of Tetrachlorodibenzodioxins	131.0	1650.0	38.0	n/a
Summation of Pentachlorodibenzodioxins	738.0	3350.0	101.0	n/a
Summation of Hexachlorodibenzodioxins	2260.0	3330.0	265.0	n/a
Summation of Heptachlorodibenzodioxins	2550.0	1510.0	408.0	n/a
Summation of PCDDs	7260.0	10900.0	1380.0	n/a
Summation of Tetrachlorodibenzofurans	1040.0	4020.0	253.0	n/a
Summation of Pentachlorodibenzofurans	1310.0	3300.0	326.0	n/a
Summation of Hexachlorodibenzofurans	1410.0	2640.0	396.0	n/a
Summation of Heptachlorodibenzofurans	1120.0	1980.0	399.0	n/a
Summation of PCDFs	5420.0	12300.0	1410.0	n/a
TOTAL TOXIC CONGENERS	5162.9	6671.5	1482.6	n/a
TOTAL HOMOLOGOUS GROUPS	12680.0	23200.0	2790.0	n/a

Agnico Eagle Mines, Meliadine				
24-8263				
Incinerator 1				
Semi-Volatile Organic Compounds				
EXPERIMENTAL SCHEDULE				
RUN NUMBER	INC1-COSV-E1	INC1-COSV-E2	INC1-COSV-E3	AVERAGE
RUN DATE	2024-08-16	2024-08-17	2024-08-18	(1 to 3)
START OF RUN	08h50	15h40	14H00	
END OF RUN	12h10	19h00	17H20	
RUN DURATION (minutes)	200	200	200	
NUMBER OF MEASUREMENTS	40	40	40	
DIOXINS AND FURANS (pg) – Calculated according to the TEF				
2,3,7,8-TCDD	3.5	32.3	0.9	n/a
1,2,3,7,8 PeCDD	62.4	297.0	12.9	n/a
1,2,3,4,7,8 HxCDD	6.0	12.8	1.3	n/a
1,2,3,6,7,8 HxCDD	14.8	20.1	2.5	n/a
1,2,3,7,8,9 HxCDD	10.4	17.3	1.8	n/a
1,2,3,4,6,7,8 HpCDD	10.2	7.6	2.2	n/a
OCDD	0.2	0.1	0.1	n/a
2,3,7,8 TCDF	2.7	16.9	1.0	n/a
1,2,3,7,8 PeCDF	2.4	9.0	0.7	n/a
2,3,4,7,8-PeCDF	65.0	202.0	19.9	n/a
1,2,3,4,7,8 HxCDF	12.4	35.3	4.2	n/a
1,2,3,6,7,8 HxCDF	13.9	33.3	4.2	n/a
2,3,4,6,7,8-HxCDF	27.7	55.6	7.2	n/a
1,2,3,7,8,9 HxCDF	5.3	9.0	0.6	n/a
1,2,3,4,6,7,8 HpCDF	7.6	15.2	3.5	n/a
1,2,3,4,7,8,9 HpCDF	0.8	0.8	0.1	n/a
OCDF	0.1	0.0	0.0	n/a
TOTAL TOXIC EQUIVALENCE	245.2	764.3	63.0	n/a

Agnico Eagle Mines, Meliadine 24-8263 Incinerator 1 Semi-Volatile Organic Compounds				
EXPERIMENTAL SCHEDULE				
RUN NUMBER	INC1-COSV-E1	INC1-COSV-E2	INC1-COSV-E3	AVERAGE
RUN DATE	2024-08-16	2024-08-17	2024-08-18	(1 to 3)
START OF RUN	08h50	15h40	14H00	
END OF RUN	12h10	19h00	17H20	
RUN DURATION (minutes)	200	200	200	
NUMBER OF MEASUREMENTS	40	40	40	
DIOXINS AND FURANS (ng/m³R)				
2,3,7,8-TCDD	0.001069	0.01039	0.0002629	0.003909
1,2,3,7,8 PeCDD	0.01907	0.09558	0.003768	0.03947
1,2,3,4,7,8 HxCDD	0.01821	0.04119	0.003797	0.02107
1,2,3,6,7,8 HxCDD	0.04522	0.06468	0.007419	0.03911
1,2,3,7,8,9 HxCDD	0.03178	0.05567	0.005112	0.03085
1,2,3,4,6,7,8 HpCDD	0.3116	0.2433	0.06397	0.2063
OCDD	0.4827	0.3443	0.1665	0.3312
2,3,7,8 TCDF	0.008127	0.05439	0.002804	0.02177
1,2,3,7,8 PeCDF	0.01460	0.05760	0.004177	0.02546
2,3,4,7,8-PeCDF	0.03972	0.1300	0.01163	0.06045
1,2,3,4,7,8 HxCDF	0.03789	0.1136	0.01230	0.05459
1,2,3,6,7,8 HxCDF	0.04247	0.1072	0.01215	0.05393
2,3,4,6,7,8-HxCDF	0.08463	0.1789	0.02115	0.09490
1,2,3,7,8,9 HxCDF	0.01607	0.02883	0.001723	0.01554
1,2,3,4,6,7,8 HpCDF	0.2331	0.4892	0.1025	0.2749
1,2,3,4,7,8,9 HpCDF	0.02548	0.02723	0.002103	0.01827
OCDF	0.1656	0.1049	0.01168	0.09406
Summation of Tetrachlorodibenzodioxins	0.04003	0.5310	0.01110	0.1940
Summation of Pentachlorodibenzodioxins	0.2255	1.078	0.02950	0.4444
Summation of Hexachlorodibenzodioxins	0.6905	1.072	0.07740	0.6132
Summation of Heptachlorodibenzodioxins	0.7791	0.4859	0.1192	0.4614
Summation of PCDDs	2.218	3.508	0.4031	2.043
Summation of Tetrachlorodibenzofurans	0.3178	1.294	0.07390	0.5618
Summation of Pentachlorodibenzofurans	0.4003	1.062	0.09522	0.5192
Summation of Hexachlorodibenzofurans	0.4308	0.8496	0.1157	0.4654
Summation of Heptachlorodibenzofurans	0.3422	0.6372	0.1165	0.3653
Summation of PCDFs	1.656	3.958	0.4119	2.009
TOTAL TOXIC CONGENERS	1.577	2.147	0.4331	1.386
TOTAL HOMOLOGOUS GROUPS	3.874	7.466	0.8149	4.052

Agnico Eagle Mines, Meliadine				
24-8263				
Incinerator 1				
Semi-Volatile Organic Compounds				
EXPERIMENTAL SCHEDULE				
RUN NUMBER	INC1-COSV-E1	INC1-COSV-E2	INC1-COSV-E3	AVERAGE
RUN DATE	2024-08-16	2024-08-17	2024-08-18	(1 to 3)
START OF RUN	08h50	15h40	14H00	
END OF RUN	12h10	19h00	17H20	
RUN DURATION (minutes)	200	200	200	
NUMBER OF MEASUREMENTS	40	40	40	
DIOXINS AND FURANS (ng/m³R) – Calculated according to the TEF				
2,3,7,8-TCDD	0.001069	0.01039	0.0002629	0.003909
1,2,3,7,8 PeCDD	0.01907	0.09558	0.003768	0.03947
1,2,3,4,7,8 HxCDD	0.001821	0.004119	0.0003797	0.002107
1,2,3,6,7,8 HxCDD	0.004522	0.006468	0.0007419	0.003911
1,2,3,7,8,9 HxCDD	0.003178	0.005567	0.0005112	0.003085
1,2,3,4,6,7,8 HpCDD	0.003116	0.002433	0.0006397	0.002063
OCDD	0.00004827	0.00003443	0.00001665	0.00003312
2,3,7,8 TCDF	0.0008127	0.005439	0.0002804	0.002177
1,2,3,7,8 PeCDF	0.0007302	0.002880	0.0002088	0.001273
2,3,4,7,8-PeCDF	0.01986	0.06501	0.005813	0.03023
1,2,3,4,7,8 HxCDF	0.003789	0.01136	0.001230	0.005459
1,2,3,6,7,8 HxCDF	0.004247	0.01072	0.001215	0.005393
2,3,4,6,7,8-HxCDF	0.008463	0.01789	0.002115	0.009490
1,2,3,7,8,9 HxCDF	0.001607	0.002883	0.0001723	0.001554
1,2,3,4,6,7,8 HpCDF	0.002331	0.004892	0.001025	0.002749
1,2,3,4,7,8,9 HpCDF	0.0002548	0.0002723	0.00002103	0.0001827
OCDF	0.00001656	0.00001049	0.000001168	0.000009406
TOTAL TOXIC EQUIVALENCE	0.07493	0.2459	0.01840	0.1131

Agnico Eagle Mines, Meliadine 24-8263 Incinerator 1 Semi-Volatile Organic Compounds				
EXPERIMENTAL SCHEDULE				
RUN NUMBER	INC1-COSV-E1	INC1-COSV-E2	INC1-COSV-E3	AVERAGE
RUN DATE	2024-08-16	2024-08-17	2024-08-18	(1 to 3)
START OF RUN	08h50	15h40	14H00	
END OF RUN	12h10	19h00	17H20	
RUN DURATION (minutes)	200	200	200	
NUMBER OF MEASUREMENTS	40	40	40	
DIOXINS AND FURANS (ng/m3R at 11% O2)				
2,3,7,8-TCDD	0.001028	0.009271	0.0003026	0.003534
1,2,3,7,8 PeCDD	0.01832	0.08525	0.004338	0.03597
1,2,3,4,7,8 HxCDD	0.01750	0.03674	0.004371	0.01954
1,2,3,6,7,8 HxCDD	0.04346	0.05769	0.008541	0.03657
1,2,3,7,8,9 HxCDD	0.03054	0.04965	0.005884	0.02869
1,2,3,4,6,7,8 HpCDD	0.2995	0.2170	0.07364	0.1967
OCDD	0.4640	0.3071	0.1917	0.3209
2,3,7,8 TCDF	0.007812	0.04851	0.003228	0.01985
1,2,3,7,8 PeCDF	0.01404	0.05138	0.004808	0.02341
2,3,4,7,8-PeCDF	0.03818	0.1160	0.01338	0.05584
1,2,3,4,7,8 HxCDF	0.03641	0.1013	0.01416	0.05063
1,2,3,6,7,8 HxCDF	0.04082	0.09558	0.01399	0.05013
2,3,4,6,7,8-HxCDF	0.08135	0.1596	0.02434	0.08843
1,2,3,7,8,9 HxCDF	0.01545	0.02572	0.001984	0.01438
1,2,3,4,6,7,8 HpCDF	0.2241	0.4363	0.1180	0.2595
1,2,3,4,7,8,9 HpCDF	0.02449	0.02428	0.002421	0.01707
OCDF	0.1592	0.09357	0.01345	0.08873
Summation of Tetrachlorodibenzodioxins	0.03847	0.4736	0.01278	0.1749
Summation of Pentachlorodibenzodioxins	0.2167	0.9615	0.03396	0.4041
Summation of Hexachlorodibenzodioxins	0.6637	0.9558	0.08911	0.5695
Summation of Heptachlorodibenzodioxins	0.7489	0.4334	0.1372	0.4398
Summation of PCDDs	2.132	3.129	0.4640	1.908
Summation of Tetrachlorodibenzofurans	0.3054	1.154	0.08507	0.5148
Summation of Pentachlorodibenzofurans	0.3847	0.9472	0.1096	0.4805
Summation of Hexachlorodibenzofurans	0.4141	0.7577	0.1332	0.4350
Summation of Heptachlorodibenzofurans	0.3289	0.5683	0.1342	0.3438
Summation of PCDFs	1.592	3.530	0.4741	1.865
TOTAL TOXIC CONGENERS	1.516	1.915	0.4985	1.310
TOTAL HOMOLOGOUS GROUPS	3.724	6.659	0.9381	3.774

Agnico Eagle Mines, Meliadine 24-8263 Incinerator 1 Semi-Volatile Organic Compounds				
EXPERIMENTAL SCHEDULE				
RUN NUMBER	INC1-COSV-E1	INC1-COSV-E2	INC1-COSV-E3	AVERAGE
RUN DATE	2024-08-16	2024-08-17	2024-08-18	(1 to 3)
START OF RUN	08h50	15h40	14H00	
END OF RUN	12h10	19h00	17H20	
RUN DURATION (minutes)	200	200	200	
NUMBER OF MEASUREMENTS	40	40	40	
DIOXINS AND FURANS (ng/m3R at 11% O2) – Calculated according to the TEF				
2,3,7,8-TCDD	0.001028	0.009271	0.0003026	0.003534
1,2,3,7,8 PeCDD	0.01832	0.08525	0.004338	0.03597
1,2,3,4,7,8 HxCDD	0.001750	0.003674	0.0004371	0.001954
1,2,3,6,7,8 HxCDD	0.004346	0.005769	0.0008541	0.003657
1,2,3,7,8,9 HxCDD	0.003054	0.004965	0.0005884	0.002869
1,2,3,4,6,7,8 HpCDD	0.002995	0.002170	0.0007364	0.001967
OCDD	0.00004640	0.00003071	0.00001917	0.00003209
2,3,7,8 TCDF	0.0007812	0.004851	0.0003228	0.001985
1,2,3,7,8 PeCDF	0.0007019	0.002569	0.0002404	0.001170
2,3,4,7,8-PeCDF	0.01909	0.05798	0.006691	0.02792
1,2,3,4,7,8 HxCDF	0.003641	0.01013	0.001416	0.005063
1,2,3,6,7,8 HxCDF	0.004082	0.009558	0.001399	0.005013
2,3,4,6,7,8-HxCDF	0.008135	0.01596	0.002434	0.008843
1,2,3,7,8,9 HxCDF	0.001545	0.002572	0.0001984	0.001438
1,2,3,4,6,7,8 HpCDF	0.002241	0.004363	0.001180	0.002595
1,2,3,4,7,8,9 HpCDF	0.0002449	0.0002428	0.00002421	0.0001707
OCDF	0.00001592	0.000009357	0.000001345	0.000008873
TOTAL TOXIC EQUIVALENCE	0.07202	0.2194	0.02118	0.1042
Air Emission Standard for Dioxins and Furans (ng/m3R at 11% O2)		0.08		

Agnico Eagle Mines, Meliadine 24-8263 Incinerator 1 Semi-Volatile Organic Compounds				
EXPERIMENTAL SCHEDULE				
RUN NUMBER	INC1-COSV-E1	INC1-COSV-E2	INC1-COSV-E3	AVERAGE
RUN DATE	2024-08-16	2024-08-17	2024-08-18	(1 to 3)
START OF RUN	08h50	15h40	14H00	
END OF RUN	12h10	19h00	17H20	
RUN DURATION (minutes)	200	200	200	
NUMBER OF MEASUREMENTS	40	40	40	
DIOXINS AND FURANS (µg/h)				
2,3,7,8-TCDD	0.004572	0.04214	0.001181	0.01597
1,2,3,7,8 PeCDD	0.08151	0.3875	0.01693	0.1620
1,2,3,4,7,8 HxCDD	0.07785	0.1670	0.01706	0.08731
1,2,3,6,7,8 HxCDD	0.1933	0.2623	0.03333	0.1630
1,2,3,7,8,9 HxCDD	0.1358	0.2257	0.02296	0.1282
1,2,3,4,6,7,8 HpCDD	1.332	0.9864	0.2874	0.8687
OCDD	2.064	1.396	0.7480	1.403
2,3,7,8 TCDF	0.03474	0.2205	0.01260	0.08928
1,2,3,7,8 PeCDF	0.06244	0.2335	0.01877	0.1049
2,3,4,7,8-PeCDF	0.1698	0.5271	0.05223	0.2497
1,2,3,4,7,8 HxCDF	0.1620	0.4606	0.05525	0.2259
1,2,3,6,7,8 HxCDF	0.1816	0.4345	0.05459	0.2235
2,3,4,6,7,8-HxCDF	0.3618	0.7254	0.09501	0.3941
1,2,3,7,8,9 HxCDF	0.06870	0.1169	0.007742	0.06445
1,2,3,4,6,7,8 HpCDF	0.9966	1.983	0.4606	1.147
1,2,3,4,7,8,9 HpCDF	0.1089	0.1104	0.009448	0.07625
OCDF	0.7079	0.4253	0.05249	0.3953
Summation of Tetrachlorodibenzodioxins	0.1711	2.153	0.04987	0.7913
Summation of Pentachlorodibenzodioxins	0.9640	4.371	0.1325	1.822
Summation of Hexachlorodibenzodioxins	2.952	4.345	0.3478	2.548
Summation of Heptachlorodibenzodioxins	3.331	1.970	0.5354	1.945
Summation of PCDDs	9.483	14.22	1.811	8.505
Summation of Tetrachlorodibenzofurans	1.358	5.245	0.3320	2.312
Summation of Pentachlorodibenzofurans	1.711	4.306	0.4278	2.148
Summation of Hexachlorodibenzofurans	1.842	3.445	0.5197	1.935
Summation of Heptachlorodibenzofurans	1.463	2.583	0.5236	1.523
Summation of PCDFs	7.079	16.05	1.850	8.326
TOTAL TOXIC CONGENERS	6.744	8.705	1.946	5.798
TOTAL HOMOLOGOUS GROUPS	16.56	30.27	3.661	16.83

Agnico Eagle Mines, Meliadine 24-8263 Incinerator 1 Semi-Volatile Organic Compounds				
EXPERIMENTAL SCHEDULE				
RUN NUMBER	INC1-COSV-E1	INC1-COSV-E2	INC1-COSV-E3	AVERAGE
RUN DATE	2024-08-16	2024-08-17	2024-08-18	(1 to 3)
START OF RUN	08h50	15h40	14H00	
END OF RUN	12h10	19h00	17H20	
RUN DURATION (minutes)	200	200	200	
NUMBER OF MEASUREMENTS	40	40	40	
DIOXINS AND FURANS (µg/h) – Calculated according to the TEF				
2,3,7,8-TCDD	0.004572	0.04214	0.001181	0.01597
1,2,3,7,8 PeCDD	0.08151	0.3875	0.01693	0.1620
1,2,3,4,7,8 HxCDD	0.007785	0.01670	0.001706	0.008731
1,2,3,6,7,8 HxCDD	0.01933	0.02623	0.003333	0.01630
1,2,3,7,8,9 HxCDD	0.01358	0.02257	0.002296	0.01282
1,2,3,4,6,7,8 HpCDD	0.01332	0.009864	0.002874	0.008687
OCDD	0.0002064	0.0001396	0.00007480	0.0001403
2,3,7,8 TCDF	0.003474	0.02205	0.001260	0.008928
1,2,3,7,8 PeCDF	0.003122	0.01168	0.0009383	0.005246
2,3,4,7,8-PeCDF	0.08490	0.2636	0.02611	0.1249
1,2,3,4,7,8 HxCDF	0.01620	0.04606	0.005525	0.02259
1,2,3,6,7,8 HxCDF	0.01816	0.04345	0.005459	0.02235
2,3,4,6,7,8-HxCDF	0.03618	0.07254	0.009501	0.03941
1,2,3,7,8,9 HxCDF	0.006870	0.01169	0.0007742	0.006445
1,2,3,4,6,7,8 HpCDF	0.009966	0.01983	0.004606	0.01147
1,2,3,4,7,8,9 HpCDF	0.001089	0.001104	0.00009448	0.0007625
OCDF	0.00007079	0.00004253	0.000005249	0.00003953
TOTAL TOXIC EQUIVALENCE	0.3203	0.9972	0.08267	0.4667
R: Reference conditions at 101.3 kPa and 25°C, on a dry basis				

Sampling survey : Incinerator 1 – SVOC – Run 1																						
Time	Trav. #	Point #	Pumping duration (min)	Pressure difference (in H ₂ O)		Temperatures (°F)				Gas volume (ft³)			Velocity (m/s)	Iso. (%)	O ₂ (%v)	CO ₂ (%v)	CO (ppmv)	Vaccuum (in. Hg)	Temperatures (°F)			
						Stack	Dry gas meter in	Dry gas meter out	Orifice										Probe	Filter	Exit	Trap
				ΔP	ΔH					Start	End	Total										
08h50	1	1	5	0.06	0.64	1659	55	55	55	61.43	63.70	2.27	7.43	99.788	10.3	8.0	11.0	-3	250	249	45	48
		2	5	0.06	0.64	1653	55	55	55	63.70	66.00	2.30	7.42	100.96	10.3	8.0	11.0	-3	250	249	45	48
		3	5	0.06	0.64	1652	55	55	55	66.00	68.30	2.30	7.42	100.94	10.3	8.0	11.0	-3	250	249	45	48
		4	5	0.05	0.54	1645	55	55	55	68.30	70.35	2.05	6.76	98.367	10.3	8.0	11.0	-3	250	249	45	48
		5	5	0.05	0.54	1642	55	55	55	70.35	72.45	2.10	6.75	100.69	10.3	8.0	11.0	-3	250	252	45	48
		6	5	0.05	0.54	1644	55	55	55	72.45	74.50	2.05	6.76	98.344	10.3	8.0	11.0	-3	250	252	45	48
		7	5	0.08	0.86	1643	55	55	55	74.50	77.12	2.62	8.55	99.42	10.3	8.0	11.0	-3	250	252	45	48
		8	5	0.09	0.97	1640	55	55	55	77.12	79.92	2.80	9.06	100.13	10.3	8.0	11.0	-3	250	252	45	48
		9	5	0.09	0.97	1638	55	55	55	79.92	82.71	2.79	9.05	99.724	10.5	7.8	7.0	-3	250	255	45	48
		10	5	0.10	1.08	1634	55	55	55	82.71	85.66	2.95	9.53	99.963	10.5	7.8	7.0	-5	250	255	45	48
		11	5	0.09	0.97	1632	55	55	55	85.66	88.50	2.84	9.04	101.37	10.5	7.8	7.0	-5	250	255	45	48
		12	5	0.09	0.97	1632	55	55	55	88.50	91.26	2.76	9.04	98.511	10.5	7.8	7.0	-5	250	255	45	48
		13	5	0.09	0.97	1630	55	55	55	91.26	94.05	2.79	9.04	99.534	10.5	7.8	7.0	-5	250	253	48	46
		14	5	0.10	1.08	1630	55	55	55	94.05	96.96	2.91	9.53	98.514	10.5	7.8	7.0	-5	250	253	48	46
		15	5	0.10	1.08	1630	55	55	55	96.96	99.90	2.94	9.53	99.53	10.5	7.8	7.0	-5	250	253	48	46
		16	5	0.10	1.08	1629	55	55	55	99.90	102.80	2.90	9.52	98.152	10.5	7.8	7.0	-5	250	253	48	46
		17	5	0.10	1.08	1629	55	55	55	102.80	105.74	2.94	9.52	99.506	10.5	7.8	7.0	-5	250	247	48	46
		18	5	0.10	1.08	1625	55	55	55	105.74	108.70	2.96	9.51	100.09	10.5	7.8	7.0	-5	250	247	48	46
		19	5	0.10	1.08	1624	55	55	55	108.70	111.62	2.92	9.51	98.711	10.5	7.8	7.0	-5	250	247	48	46
		20	5	0.11	1.19	1624	55	55	55	111.62	114.70	3.08	9.98	99.301	10.5	7.8	7.0	-5	250	247	48	46
	2	1	5	0.10	1.08	1623	55	55	55	114.70	117.62	2.92	9.51	98.688	10.5	7.8	7.0	-5	250	249	48	46
		2	5	0.10	1.08	1622	55	55	55	117.62	120.55	2.93	9.51	99.002	10.5	7.8	7.0	-5	250	249	48	46
		3	5	0.11	1.19	1622	55	55	55	120.55	123.60	3.05	9.97	98.287	10.5	7.8	7.0	-5	250	249	48	46
		4	5	0.11	1.19	1622	55	55	55	123.60	126.69	3.09	9.97	99.576	10.5	7.8	7.0	-5	250	249	48	46
		5	5	0.10	1.09	1620	56	56	56	126.69	129.65	2.96	9.50	99.774	10.5	7.8	7.0	-5	250	252	48	46
		6	5	0.09	0.98	1618	56	56	56	129.65	132.47	2.82	9.01	100.12	10.5	7.8	7.0	-5	250	252	48	46
		7	5	0.09	0.98	1616	56	56	56	132.47	135.29	2.82	9.01	100.07	10.5	7.8	7.0	-5	250	252	48	46
		8	5	0.10	1.09	1616	56	56	56	135.29	138.25	2.96	9.49	99.679	10.8	7.7	5.0	-5	250	252	48	46
		9	5	0.10	1.09	1611	56	56	56	138.25	141.18	2.93	9.48	98.55	10.8	7.7	5.0	-5	250	255	50	53
		10	5	0.10	1.09	1611	56	56	56	141.18	144.12	2.94	9.48	98.887	10.8	7.7	5.0	-5	250	255	50	53
		11	5	0.10	1.09	1610	56	56	56	144.12	147.05	2.93	9.48	98.527	10.8	7.7	5.0	-5	250	255	50	53
		12	5	0.10	1.09	1610	56	56	56	147.05	150.00	2.95	9.48	99.199	10.8	7.7	5.0	-5	250	255	50	53
		13	5	0.09	0.98	1610	56	56	56	150.00	152.83	2.83	8.99	100.28	10.8	7.7	5.0	-5	250	251	50	53
		14	5	0.09	0.98	1610	56	56	56	152.83	155.64	2.81	8.99	99.576	10.8	7.7	5.0	-5	250	251	50	53
		15	5	0.09	0.98	1609	56	56	56	155.64	158.46	2.82	8.99	99.907	10.8	7.7	5.0	-5	250	251	50	53
		16	5	0.09	0.98	1609	56	56	56	158.46	161.27	2.81	8.99	99.552	10.8	7.7	5.0	-5	250	251	50	53
		17	5	0.08	0.87	1609	56	56	56	161.27	163.92	2.65	8.48	99.552	10.8	7.7	5.0	-5	250	250	50	53
		18	5	0.08	0.87	1609	56	56	56	163.92	166.57	2.65	8.48	99.552	10.8	7.7	5.0	-5	250	250	50	53
		19	5	0.07	0.76	1608	56	56	56	166.57	169.05	2.48	7.93	99.548	10.8	7.7	5.0	-5	250	250	50	53
12h10		20	5	0.08	0.87	1608	56	56	56	169.05	171.71	2.66	8.48	99.904	10.8	7.7	5.0	-5	250	250	50	53

Sampling survey : Incinerator 1 – SVOC – Run 2																						
Time	Trav. #	Point #	Pumping duration (min)	Pressure difference (in H ₂ O)		Temperatures (°F)				Gas volume (ft³)			Velocity (m/s)	Iso. (%)	O ₂ (%v)	CO ₂ (%v)	CO (ppmv)	Vaccum (in. Hg)	Temperatures (°F)			
				ΔP	ΔH	Stack	Dry gas meter in	Dry gas meter out	Orifice	Start	End	Total							Probe	Filter	Exit	Trap
15h40	1	1	5	0.09	0.87	1872	58	58	58	74.12	76.75	2.63	9.55	99.38	7.5	10.5	5.0	-3	250	253	50	48
		2	5	0.09	0.87	1880	58	58	58	76.75	79.40	2.65	9.56	100.31	7.5	10.5	5.0	-3	250	253	50	48
		3	5	0.10	0.97	1882	58	58	58	79.40	82.15	2.75	10.08	98.816	7.5	10.5	5.0	-3	250	253	50	48
		4	5	0.11	1.06	1885	58	58	58	82.15	85.05	2.90	10.58	99.443	7.5	10.5	5.0	-3	250	253	50	48
		5	5	0.10	0.97	1885	58	58	58	85.05	87.80	2.75	10.09	98.879	7.5	10.5	5.0	-3	250	251	50	48
		6	5	0.10	0.97	1886	59	59	59	87.80	90.58	2.78	10.09	99.786	7.5	10.5	5.0	-5	250	251	50	48
		7	5	0.09	0.87	1889	59	59	59	90.58	93.21	2.63	9.58	99.548	7.5	10.5	5.0	-5	250	251	50	48
		8	5	0.10	0.96	1900	59	59	59	93.21	95.98	2.77	10.12	99.722	8.6	9.5	5.0	-5	250	251	50	48
		9	5	0.10	0.96	1901	59	59	59	95.98	98.77	2.79	10.13	100.46	8.6	9.5	5.0	-5	250	255	50	48
		10	5	0.10	0.96	1901	59	59	59	98.77	101.52	2.75	10.13	99.023	8.6	9.5	5.0	-5	250	255	50	48
		11	5	0.10	0.97	1893	59	59	59	101.52	104.27	2.75	10.11	98.856	8.6	9.5	5.0	-5	250	255	50	48
		12	5	0.08	0.77	1890	59	59	59	104.27	106.76	2.49	9.04	99.964	8.6	9.5	5.0	-5	250	255	50	48
		13	5	0.08	0.78	1885	60	60	60	106.76	109.23	2.47	9.03	98.866	8.6	9.5	5.0	-5	250	251	48	52
		14	5	0.09	0.88	1880	60	60	60	109.23	111.88	2.65	9.56	99.922	8.6	9.5	5.0	-5	250	251	48	52
		15	5	0.09	0.88	1876	60	60	60	111.88	114.50	2.62	9.56	98.706	8.6	9.5	5.0	-5	250	251	48	52
		16	5	0.09	0.88	1875	60	60	60	114.50	117.12	2.62	9.55	98.685	8.6	9.5	5.0	-5	250	251	48	52
		17	5	0.09	0.88	1871	60	60	60	117.12	119.75	2.63	9.54	98.977	8.6	9.5	5.0	-5	250	248	48	52
		18	5	0.08	0.78	1862	60	60	60	119.75	122.26	2.51	8.98	99.975	9.3	9.0	5.0	-5	250	248	48	52
		19	5	0.08	0.79	1858	60	60	60	122.26	124.79	2.53	8.97	100.68	9.3	9.0	5.0	-5	250	248	48	52
	20	5	0.08	0.79	1849	60	60	60	124.79	127.26	2.47	8.96	98.107	9.3	9.0	5.0	-5	250	248	48	52	
	2	1	5	0.06	0.60	1830	60	60	60	127.26	129.46	2.20	7.72	100.44	9.3	9.0	5.0	-5	250	255	48	52
		2	5	0.07	0.70	1825	60	60	60	129.46	131.80	2.34	8.33	98.82	9.3	9.0	5.0	-5	250	255	48	52
		3	5	0.07	0.70	1821	60	60	60	131.80	134.15	2.35	8.33	99.156	9.3	9.0	5.0	-5	250	255	48	52
		4	5	0.06	0.60	1815	60	60	60	134.15	136.37	2.22	7.70	101.02	9.3	9.0	5.0	-5	250	255	48	52
		5	5	0.05	0.50	1810	60	60	60	136.37	138.40	2.03	7.02	101.05	9.3	9.0	5.0	-5	250	253	48	52
		6	5	0.05	0.50	1804	60	60	60	138.40	140.40	2.00	7.01	99.429	9.3	9.0	5.0	-5	250	253	48	52
		7	5	0.08	0.81	1790	60	60	60	140.40	142.95	2.55	8.84	99.987	9.3	9.0	5.0	-5	250	253	48	52
		8	5	0.09	0.91	1782	60	60	60	142.95	145.65	2.70	9.36	99.661	9.3	9.0	5.0	-5	250	253	48	52
		9	5	0.09	0.92	1777	61	61	61	145.65	148.37	2.72	9.35	100.1	9.3	9.0	5.0	-5	250	249	51	58
		10	5	0.11	1.12	1775	61	61	61	148.37	151.37	3.00	10.33	99.866	9.3	9.0	5.0	-5	250	249	51	58
		11	5	0.08	0.84	1720	61	61	61	151.37	153.93	2.56	8.70	98.622	9.3	9.0	5.0	-5	250	249	51	58
		12	5	0.08	0.84	1712	61	61	61	153.93	156.50	2.57	8.69	98.826	11.7	7.0	5.0	-5	250	249	51	58
		13	5	0.09	0.96	1680	61	61	61	156.50	159.26	2.76	9.15	99.351	11.7	7.0	5.0	-5	250	251	51	58
		14	5	0.09	0.96	1667	61	61	61	159.26	162.00	2.74	9.12	98.332	11.7	7.0	5.0	-5	250	251	51	58
		15	5	0.10	1.08	1645	61	61	61	162.00	164.90	2.90	9.56	98.25	11.7	7.0	5.0	-5	250	251	51	58
		16	5	0.10	1.09	1632	61	61	61	164.90	167.85	2.95	9.53	99.637	11.7	7.0	5.0	-5	250	251	51	58
		17	5	0.10	1.09	1625	61	61	61	167.85	170.80	2.95	9.52	99.471	11.7	7.0	5.0	-5	250	250	51	58
		18	5	0.10	1.10	1610	61	61	61	170.80	173.80	3.00	9.48	100.79	11.7	7.0	5.0	-5	250	250	51	58
		19	5	0.10	1.11	1589	61	61	61	173.80	176.75	2.95	9.43	98.613	11.7	7.0	5.0	-5	250	250	51	58
19h00		20	5	0.10	1.12	1570	61	61	61	176.75	179.75	3.00	9.39	99.82	11.7	7.0	5.0	-5	250	250	51	58

Sampling survey : Incinerator 1 – SVOC – Run 3																						
Time	Trav. #	Point #	Pumping duration (min)	Pressure difference (in H ₂ O)		Temperatures (°F)				Gas volume (ft³)			Velocity (m/s)	Iso. (%)	O ₂ (%v)	CO ₂ (%v)	CO (ppmv)	Vaccuum (in. Hg)	Temperatures (°F)			
				ΔP	ΔH	Stack	Dry gas meter in	Dry gas meter out	Orifice	Start	End	Total							Probe	Filter	Exit	Trap
14H00	1	1	5	0.08	0.97	1411	59	59	59	80.05	82.86	2.81	8.07	99.206	11.3	7.4	5.0	-3	250	248	50	49
		2	5	0.07	0.85	1415	60	60	60	82.86	85.50	2.64	7.56	99.525	11.3	7.4	5.0	-3	250	248	50	49
		3	5	0.06	0.73	1416	60	60	60	85.50	87.92	2.42	7.00	98.538	11.3	7.4	5.0	-3	250	248	50	49
		4	5	0.06	0.73	1418	60	60	60	87.92	90.30	2.38	7.00	96.961	11.3	7.4	5.0	-3	250	248	50	49
		5	5	0.06	0.73	1418	60	60	60	90.30	92.75	2.45	7.00	99.812	11.3	7.4	5.0	-3	250	252	50	49
		6	5	0.06	0.73	1420	60	60	60	92.75	95.15	2.40	7.01	97.827	11.3	7.4	5.0	-3	250	252	50	49
		7	5	0.07	0.85	1421	60	60	60	95.15	97.77	2.62	7.57	98.928	11.3	7.4	5.0	-3	250	252	50	49
		8	5	0.07	0.85	1421	60	60	60	97.77	100.37	2.60	7.57	98.173	11.3	7.4	5.0	-3	250	252	50	49
		9	5	0.09	1.09	1421	60	60	60	100.37	103.35	2.98	8.58	99.293	11.3	7.4	5.0	-3	250	255	52	53
		10	5	0.10	1.21	1422	60	60	60	103.35	106.50	3.15	9.05	99.627	11.3	7.4	5.0	-3	250	255	52	53
		11	5	0.07	0.85	1423	60	60	60	106.50	109.13	2.63	7.57	99.358	11.3	7.4	5.0	-3	250	255	52	53
		12	5	0.09	1.09	1424	60	60	60	109.13	112.10	2.97	8.59	99.038	11.8	7.0	5.0	-3	250	255	52	53
		13	5	0.10	1.21	1425	61	61	61	112.10	115.25	3.15	9.06	99.515	11.8	7.0	5.0	-3	250	249	52	53
		14	5	0.09	1.09	1425	61	61	61	115.25	118.23	2.98	8.59	99.208	11.8	7.0	5.0	-3	250	249	52	53
		15	5	0.09	1.09	1426	61	61	61	118.23	121.17	2.94	8.59	97.902	11.8	7.0	5.0	-3	250	249	52	53
		16	5	0.10	1.21	1428	62	62	62	121.17	124.33	3.16	9.06	99.719	11.8	7.0	5.0	-3	250	249	52	53
		17	5	0.10	1.21	1428	62	62	62	124.33	127.50	3.17	9.06	100.03	11.8	7.0	5.0	-3	250	251	52	53
		18	5	0.10	1.21	1429	62	62	62	127.50	130.64	3.14	9.07	99.114	11.8	7.0	5.0	-3	250	251	52	53
		19	5	0.10	1.21	1430	62	62	62	130.64	133.79	3.15	9.07	99.456	11.8	7.0	5.0	-3	250	251	52	53
		20	5	0.10	1.21	1430	62	62	62	133.79	136.90	3.11	9.07	98.193	11.8	7.0	5.0	-3	250	251	52	53
	2	1	5	0.08	0.97	1428	63	63	63	136.90	139.70	2.80	8.11	98.541	11.8	7.0	5.0	-4	250	255	50	56
		2	5	0.08	0.97	1425	63	63	63	139.70	142.53	2.83	8.10	99.518	11.8	7.0	5.0	-4	250	255	50	56
		3	5	0.09	1.09	1422	63	63	63	142.53	145.49	2.96	8.58	98.088	11.8	7.0	5.0	-4	250	255	50	56
		4	5	0.11	1.34	1422	63	63	63	145.49	148.80	3.31	9.49	99.274	11.8	7.0	5.0	-4	250	255	50	56
		5	5	0.11	1.34	1420	63	63	63	148.80	152.12	3.32	9.48	99.521	11.8	7.0	5.0	-4	250	254	50	56
		6	5	0.09	1.10	1415	63	63	63	152.12	155.13	3.01	8.57	99.56	11.8	7.0	5.0	-4	250	254	50	56
		7	5	0.09	1.10	1412	63	63	63	155.13	158.15	3.02	8.56	99.812	12.6	6.3	5.0	-4	250	254	50	56
		8	5	0.09	1.10	1410	63	63	63	158.15	161.12	2.97	8.56	98.107	12.6	6.3	5.0	-4	250	254	50	56
		9	5	0.10	1.23	1407	64	64	64	161.12	164.30	3.18	9.01	99.414	12.6	6.3	5.0	-4	250	252	50	56
		10	5	0.10	1.24	1397	64	64	64	164.30	167.49	3.19	8.99	99.461	12.6	6.3	5.0	-4	250	252	50	56
		11	5	0.10	1.24	1392	64	64	64	167.49	170.68	3.19	8.98	99.327	12.6	6.3	5.0	-4	250	252	50	56
		12	5	0.09	1.12	1390	64	64	64	170.68	173.70	3.02	8.51	99.037	12.6	6.3	5.0	-4	250	252	50	56
		13	5	0.09	1.12	1388	64	64	64	173.70	176.67	2.97	8.51	97.345	12.6	6.3	5.0	-4	250	250	52	54
		14	5	0.09	1.12	1385	64	64	64	176.67	179.70	3.03	8.50	99.232	12.6	6.3	5.0	-4	250	250	52	54
		15	5	0.09	1.12	1383	64	64	64	179.70	182.75	3.05	8.49	99.833	12.6	6.3	5.0	-4	250	250	52	54
		16	5	0.09	1.12	1380	64	64	64	182.75	185.77	3.02	8.49	98.771	12.6	6.3	5.0	-4	250	250	52	54
		17	5	0.08	1.00	1377	65	65	65	185.77	188.63	2.86	8.00	98.913	12.6	6.3	5.0	-4	250	247	52	54
		18	5	0.08	1.00	1371	65	65	65	188.63	191.50	2.87	7.98	99.097	12.6	6.3	5.0	-4	250	247	52	54
		19	5	0.07	0.88	1365	65	65	65	191.50	194.20	2.70	7.45	99.471	12.6	6.3	5.0	-4	250	247	52	54
		17H20		20	5	0.07	0.88	1361	65	65	65	194.20	196.90	2.70	7.45	99.362	12.6	6.3	5.0	-4	250	247

INC1-COSV-E1

Impingers – liquid mass

	Before	After	Difference
IMP. 1	233.89	211.84	22.05
IMP. 2	573.18	377.43	195.75
IMP. 3	643.6	624.26	19.34
IMP. 4	603.65	607.7	-4.05
IMP. 5			
IMP. 6			
IMP. 7			
IMP. 8			
IMP. 9			
Silica gel	1731.73	1719.65	12.08
Total	3786.05	3540.88	245.17

Water mass (g)	245.17
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INC1-COSV-E2

Impingers – liquid mass

	Before	After	Difference
IMP. 1	252.48	234.76	17.72
IMP. 2	732.83	523.89	208.94
IMP. 3	719.12	698.9	20.22
IMP. 4	591.06	590.57	0.49
IMP. 5	1775.17	1767.26	7.91
IMP. 6			
IMP. 7			
IMP. 8			
IMP. 9			
Silica gel			
Total	4070.66	3815.38	255.28

Water mass (g)	255.28
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INC1-COSV-E3

Impingers – liquid mass

	Before	After	Difference
IMP. 1	314.79	296.49	18.3
IMP. 2	704.18	513.27	190.91
IMP. 3	724.24	700.16	24.08
IMP. 4	597.24	596.64	0.6
IMP. 5			
IMP. 6			
IMP. 7			
IMP. 8			
IMP. 9			
Silica gel	1682.74	1674.66	8.08
Total	4023.19	3781.22	241.97

Water mass (g)	241.97
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Agnico Eagle Mines, Meliadine 24-8263 Incinerator 2 Particles and metals				
EXPERIMENTAL SCHEDULE				
RUN NUMBER	INC2-Me-E1	INC2-Me-E2	INC2-Me-E3	AVERAGE
RUN DATE	2024-08-19	2024-08-20	2024-08-20	(1 to 3)
START OF RUN	12h41	08h03	12h22	
END OF RUN	15h25	11h03	15h29	
RUN DURATION (minutes)	95	180	180	
NUMBER OF MEASUREMENTS	19	36	36	
SAMPLING EQUIPMENT DATA				
BAROMETRIC PRESSURE ("Hg)	30.00	30.00	30.00	30.00
STATIC PRESSURE ("H ₂ O)	-0.08	-0.08	-0.08	-0.08
PRESSION STATIQUE (kPa)	-0.020	-0.020	-0.020	-0.020
DRY GAS METER COEFFICIENT	0.990	0.990	0.990	n/a
PITOT TUBE COEFFICIENT	0.779	0.779	0.779	n/a
NOZZLE DIAMETER (in)	0.502	0.502	0.481	n/a
DRY GAS METER TEMPERATURE (°F)	62.2	58.3	63.8	n/a
DRY GAS METER TEMPERATURE (°C)	16.8	14.6	17.7	n/a
GAS HUMIDITY & SAMPLED VOLUME				
MASS OF WATER (g)	167.1	206.2	188.5	n/a
VOLUME OF WATER (ft ³ R)	8.02	9.89	9.04	n/a
GAS HUMIDITY (BWO)	0.123	0.083	0.082	0.096
GAS HUMIDITY (% v/v)	12.3	8.3	8.2	9.6
REFERENCE GAS VOLUME (ft ³ R)	57.14	108.72	100.88	88.91
REFERENCE GAS VOLUME (m³R)	1.62	3.08	2.86	2.52
STACK CHARACTERISTICS				
NUMBER OF DIAMETERS BEFORE SAMPLING PORTS	6.7	6.7	6.7	n/a
NUMBER OF DIAMETERS AFTER SAMPLING PORTS	1.4	1.4	1.4	n/a
STACK DIAMETER (ft)	1.5	1.5	1.5	n/a
STACK DIAMETER (m)	0.46	0.46	0.46	n/a
LENGTH OF SAMPLING PORTS (in)	7.5	7.5	7.5	n/a
STACK PRESSURE ("Hg)	29.99	29.99	29.99	29.99
STACK PRESSURE (kPa)	101.57	101.57	101.57	101.57
DRY GAS METER PRESSURE ("Hg)	30.05	30.04	30.04	30.04
STACK SURFACE (pi ²)	1.8	1.8	1.8	n/a
STACK SURFACE (m ²)	0.16	0.16	0.16	n/a
GAZ CHARACTERISTICS				
CHIMNEY TEMPERATURE (°F)	1747.1	1792.9	1697.4	1745.8
CHIMNEY TEMPERATURE (°C)	952.8	978.3	925.2	952.1
CO ₂ (%v, dry)	10.3	9.0	7.8	9.0
O ₂ (%v, dry)	7.5	8.9	11.1	9.2
O ₂ (%v, dry)	6.6	8.2	10.2	8.3
CO (ppmv, dry)	4.0	3.9	4.6	4.2
N ₂ (%v, dry)	82.2	82.1	81.1	81.8
DRY MOLECULAR WEIGHT	30.0	29.8	29.7	29.8
WET MOLECULAR WEIGHT	28.5	28.8	28.7	28.7
GAS VELOCITY (ft/s)	33.9	33.8	33.2	33.7
GAS VELOCITY (m/s)	10.3	10.3	10.1	10.3
ACTUAL GAS FLOW RATE (pi ³ /h)	215 712	215 325	211 526	214 188
ACTUAL GAS FLOW RATE (m ³ /h)	6 108	6 097	5 990	6 065
ACTUAL GAS FLOW RATE (ft ³ /min) (ACFM)	3 595	3 589	3 525	3 570
REFERENCE GAS FLOW RATE (ft ³ R/h)	46 128	47 150	48 427	47 235
REFERENCE GAS FLOW RATE (m³R/h)	1 306	1 335	1 371	1 338
REFERENCE GAS FLOW RATE (ft ³ R/min) (RCFM)	769	786	807	787

Agnico Eagle Mines, Meliadine 24-8263 Incinerator 2 Particles and metals				
EXPERIMENTAL SCHEDULE				
RUN NUMBER	INC2-Me-E1	INC2-Me-E2	INC2-Me-E3	AVERAGE
RUN DATE	2024-08-19	2024-08-20	2024-08-20	(1 to 3)
START OF RUN	12h41	08h03	12h22	
END OF RUN	15h25	11h03	15h29	
RUN DURATION (minutes)	95	180	180	
NUMBER OF MEASUREMENTS	19	36	36	
SAMPLING INFORMATION				
DRY GAS METER ORIFICE COEFFICIENT	0.989	0.989	0.989	n/a
MAXIMUM VELOCITY (m/s)	11.0	11.0	10.7	n/a
MINIMUM VELOCITY (m/s)	7.9	7.2	7.9	n/a
10%Vmax (m/s)	1.10	1.10	1.07	n/a
PERCENTAGE >10%Vmax	1.00	1.00	1.00	1.00
AVERAGE ISOKINETISM (%)	100.7	98.9	97.2	98.9
% POINTS RESPECTING ISOKINETIC CRITERIA	100%	100%	97%	99%
MAXIMUM PUMPING FLOW RATE (ft ³ /min)	0.63	0.62	0.60	n/a
MAXIMUM VACCUUM PRESSURE DURING RUN ("Hg)	-14.0	-14.0	-14.0	n/a
MAXIMUM PROBE TEMPERATURE (°F)	250	250	250	n/a
MINIMUM PROBE TEMPERATURE (°F)	250	250	250	n/a
MAXIMUM FILTER TEMPERATURE (°F)	256	258	257	n/a
MINIMUM FILTER TEMPERATURE (°F)	247	247	244	n/a
MAXIMUM TEMPERATURE AT EXIT (°F)	52	55	55	n/a
MINIMUM TEMPERATURE AT EXIT (°F)	49	52	52	n/a
AVERAGE PUMPING FLOW RATE (ft ³ /min)	0.58	0.58	0.54	0.57
4% OF AVERAGE PUMPING FLOW RATE (ft ³ /min)	0.023	0.023	0.022	0.023
LEAK TEST BEFORE RUN AT 15 "Hg (ft ³ /min)	< 0.02	< 0.02	< 0.02	< 0.02
LEAK TEST AFTER RUN (ft ³ /min)	< 0.02	< 0.02	< 0.02	< 0.02
CYCLONIC FLOW				
AVERAGE FLOW ANGLE	0	0	0	0
VERTICAL GAS VELOCITY (m/s)	10.34	10.32	10.13	10.26
FILTRABLE PARTICLES – SPE 1/RM/8				
MASS FILTER (mg)	488.6	91.3	98.2	n/a
MASS NOZZLE & PROBE (mg)	37.4	6.1	18.0	n/a
MASS ACETONE BLANK (mg)		<LDR		n/a
VOLUME ACETONE BLANK (mL)		96.0		n/a
ACETONE RESIDUAL (%)		0.0		n/a
DETECTION LIMIT NOZZLE & PROBE (mg)	1.0	1.0	1.0	n/a
DETECTION LIMIT FILTER (mg)	0.1	0.1	0.1	n/a
MASS NOZZLE & PROBE (mg)	37.4	6.1	18.0	n/a
MASS FILTER (mg)	488.6	91.3	98.2	n/a
TOTAL MASS (mg)	526.0	97.4	116.2	n/a
CONCENTRATION (mg/m³R)	325.1	31.6	40.7	132.5
METHOD DETECTION LIMIT (mg/m ³ R)	0.7	0.4	0.4	0.5
CONCENTRATION (mg/m³R) at 11% O2	240.2	26.1	41.1	102.5
EMISSION RATE (kg/h)	0.4	0.0	0.1	0.2
PARTICULATE SULFUR				
PARTICULATE SULFUR (µg)	424.38	89.22	117.43	210.3433333
DETECTION LIMIT PARTICULATE SULFUR (µg)	7	2.56	2.48	4.013333333
SULFUR BLANK (µg)		<LDR		#DIV/0!
DETECTION LIMIT SULFUR BLANK (µg)		0		#DIV/0!
SULFUR CONCENTRATION (µg/m ³ R)	269.7690904	56.71520393	74.64768435	133.7106596
SULFUR EMISSION (g/h)	199.3070145	46.79004324	75.40939541	107.1688177
METALS – USEPA Method 29				

Agnico Eagle Mines, Meliadine 24-8263 Incinerator 2 Particles and metals				
EXPERIMENTAL SCHEDULE				
RUN NUMBER	INC2-Me-E1	INC2-Me-E2	INC2-Me-E3	AVERAGE
RUN DATE	2024-08-19	2024-08-20	2024-08-20	(1 to 3)
START OF RUN	12h41	08h03	12h22	
END OF RUN	15h25	11h03	15h29	
RUN DURATION (minutes)	95	180	180	
NUMBER OF MEASUREMENTS	19	36	36	
PARTICULATE METALS (µg)				
Aluminum (Al)	120.0	48.0	195.0	121.0
Antimony (Sb)	270.0	22.8	131.9	141.6
Silver (Ag)	4.8	1.9	2.9	3.2
Arsenic (As)	212.9	36.4	80.0	109.8
Barium (Ba)	21.5	0.9	13.0	11.8
Beryllium (Be)	< 0.2	< 0.1	< 0.1	< 0.1
Bismuth (Bi)	5.6	0.5	3.3	3.2
Cadmium (Cd)	3.5	1.3	1.5	2.1
Calcium (Ca)	1426.0	168.0	1014.0	869.3
Chrome (Cr)	54.2	49.2	30.5	44.6
Cobalt (Co)	1.4	< 0.1	0.6	0.7
Copper (Cu)	360.0	48.1	181.0	196.4
Tin (Sn)	43.6	< 0.7	15.6	20.0
Iron (Fe)	229.0	40.0	127.0	132.0
Lithium (Li)	14.5	3.0	8.0	8.5
Magnesium (Mg)	138.0	19.0	97.0	84.7
Manganese (Mn)	9.5	1.0	5.9	5.5
Molybdenum (Mo)	7.6	21.1	16.4	15.0
Nickel (Ni)	2.4	< 0.5	1.3	1.4
Lead (Pb)	152.0	69.3	76.6	99.3
Potassium (K)	47400.0	11000.0	19900.0	26100.0
Selenium (Se)	< 1.5	< 0.5	< 1.0	< 1.0
Silicon (Si)	1144.0	105.0	781.0	676.7
Sodium (Na)	129900.0	29300.0	58600.0	72600.0
Strontium (Sr)	3.9	0.3	2.3	2.2
Thallium (Tl)	0.4	< 0.1	0.1	0.2
Titanium (Ti)	27.9	3.0	17.3	16.1
Vanadium (V)	< 0.8	< 0.3	< 0.4	< 0.5
Zinc (Zn)	2293.0	263.0	831.0	1129.0
Mercury (Hg)	< 0.3	< 0.1	< 0.2	< 0.2
DETECTED METALS	183845.8	41201.8	82133.4	102393.6
TOTAL METALS	183848.5	41204.2	82135.1	102395.9
Proportion metals vs particles (%)	35.0	42.3	70.7	49.3

Agnico Eagle Mines, Meliadine 24-8263 Incinerator 2 Particles and metals				
EXPERIMENTAL SCHEDULE				
RUN NUMBER	INC2-Me-E1	INC2-Me-E2	INC2-Me-E3	AVERAGE
RUN DATE	2024-08-19	2024-08-20	2024-08-20	(1 to 3)
START OF RUN	12h41	08h03	12h22	
END OF RUN	15h25	11h03	15h29	
RUN DURATION (minutes)	95	180	180	
NUMBER OF MEASUREMENTS	19	36	36	
GASEOUS METALS (µg)				
Aluminum (Al)	59.0	26.0	63.0	49.3
Antimony (Sb)	2.5	< 0.6	0.6	1.2
Silver (Ag)	< 4.0	< 4.0	< 4.0	< 4.0
Arsenic (As)	4.2	0.8	1.8	2.3
Barium (Ba)	1.3	< 0.4	4.8	2.2
Beryllium (Be)	< 0.4	< 0.4	< 0.4	< 0.4
Bismuth (Bi)	< 0.4	< 0.4	< 0.4	< 0.4
Boron (B)	57.4	35.4	34.0	42.3
Cadmium (Cd)	< 0.4	< 0.4	< 0.4	< 0.4
Calcium (Ca)	290.0	113.0	303.0	235.3
Chrome (Cr)	< 0.8	< 0.6	0.7	0.7
Cobalt (Co)	< 0.8	< 0.6	< 0.6	< 0.7
Copper (Cu)	7.1	1.1	9.4	5.9
Tin (Sn)	18.0	17.0	40.0	25.0
Iron (Fe)	83.0	44.0	119.0	82.0
Lithium (Li)	< 8.0	< 6.0	< 6.0	< 6.7
Magnesium (Mg)	83.0	25.0	60.0	56.0
Manganese (Mn)	4.2	1.3	2.0	2.5
Molybdenum (Mo)	< 4.0	< 4.0	< 4.0	< 4.0
Nickel (Ni)	0.8	< 0.6	0.7	0.7
Lead (Pb)	< 4.0	< 4.0	< 4.0	< 4.0
Potassium (K)	632.0	< 60.0	75.0	255.7
Selenium (Se)	2.4	0.7	1.7	1.6
Silicon (Si)	116.0	45.0	372.0	177.7
Sodium (Na)	16010.0	9710.0	12000.0	12573.3
Strontium (Sr)	< 0.8	< 0.6	0.8	0.7
Thallium (Tl)	< 0.8	< 0.6	< 0.6	< 0.7
Titanium (Ti)	< 8.0	< 6.0	6.0	6.7
Vanadium (V)	< 1.4	< 1.2	< 1.2	< 1.3
Zinc (Zn)	202.4	22.8	36.5	87.2
Mercury (Hg)	< 1.1	< 1.1	< 1.1	< 1.1
DETECTED METALS	17573.3	10042.1	13131.0	13582.1
TOTAL METALS	17608.2	10133.6	13153.7	13631.8

Agnico Eagle Mines, Meliadine				
24-8263				
Incinerator 2				
Particles and metals				
EXPERIMENTAL SCHEDULE				
RUN NUMBER	INC2-Me-E1	INC2-Me-E2	INC2-Me-E3	AVERAGE
RUN DATE	2024-08-19	2024-08-20	2024-08-20	(1 to 3)
START OF RUN	12h41	08h03	12h22	
END OF RUN	15h25	11h03	15h29	
RUN DURATION (minutes)	95	180	180	
NUMBER OF MEASUREMENTS	19	36	36	
TOTAL METALS (µg)				
Aluminum (Al)	179.0	74.0	258.0	170.3
Antimony (Sb)	272.5	23.4	132.5	142.8
Silver (Ag)	8.8	5.9	6.9	7.2
Arsenic (As)	217.1	37.2	81.8	112.0
Barium (Ba)	22.8	1.3	17.8	14.0
Beryllium (Be)	< 0.6	< 0.5	< 0.5	< 0.5
Bismuth (Bi)	6.0	0.9	3.7	3.6
Boron (B)	57.4	35.4	34.0	42.3
Cadmium (Cd)	3.9	1.7	1.9	2.5
Calcium (Ca)	1716.0	281.0	1317.0	1104.7
Chrome (Cr)	55.0	49.8	31.2	45.3
Cobalt (Co)	2.2	< 0.7	1.2	1.4
Copper (Cu)	367.1	49.2	190.4	202.2
Tin (Sn)	61.6	17.7	55.6	45.0
Iron (Fe)	312.0	84.0	246.0	214.0
Lithium (Li)	22.5	9.0	14.0	15.2
Magnesium (Mg)	221.0	44.0	157.0	140.7
Manganese (Mn)	13.7	2.3	7.9	8.0
Molybdenum (Mo)	11.6	25.1	20.4	19.0
Nickel (Ni)	3.2	< 1.1	2.0	2.1
Lead (Pb)	156.0	73.3	80.6	103.3
Potassium (K)	48032.0	11060.0	19975.0	26355.7
Selenium (Se)	3.9	1.2	2.7	2.6
Silicon (Si)	1260.0	150.0	1153.0	854.3
Sodium (Na)	145910.0	39010.0	70600.0	85173.3
Strontium (Sr)	4.7	0.9	3.1	2.9
Thallium (Tl)	1.2	< 0.7	0.7	0.9
Titanium (Ti)	35.9	9.0	23.3	22.7
Vanadium (V)	< 2.2	< 1.5	< 1.6	< 1.8
Zinc (Zn)	2495.4	285.8	867.5	1216.2
Mercury (Hg)	< 1.4	< 1.2	< 1.3	< 1.3
DETECTED METALS	201452.6	51332.1	95285.4	116023.3
TOTAL METALS	201456.7	51337.8	95288.7	116027.7

Agnico Eagle Mines, Meliadine				
24-8263				
Incinerator 2				
Particles and metals				
EXPERIMENTAL SCHEDULE				
RUN NUMBER	INC2-Me-E1	INC2-Me-E2	INC2-Me-E3	AVERAGE
RUN DATE	2024-08-19	2024-08-20	2024-08-20	(1 to 3)
START OF RUN	12h41	08h03	12h22	
END OF RUN	15h25	11h03	15h29	
RUN DURATION (minutes)	95	180	180	
NUMBER OF MEASUREMENTS	19	36	36	
PARTICULATE METALS (µg/m³R)				
Aluminum (Al)	74.17	15.59	68.27	52.68
Antimony (Sb)	166.9	7.406	46.18	73.49
Silver (Ag)	2.967	0.6172	1.015	1.533
Arsenic (As)	131.6	11.82	28.01	57.14
Barium (Ba)	13.29	0.2988	4.558	6.048
Beryllium (Be)	< 0.09889	< 0.02274	< 0.02801	< 0.04988
Bismuth (Bi)	3.461	0.1722	1.162	1.599
Cadmium (Cd)	2.163	0.4060	0.5391	1.036
Calcium (Ca)	881.4	54.57	355.0	430.3
Chrome (Cr)	33.50	15.98	10.68	20.05
Cobalt (Co)	0.8956	< 0.03248	0.2244	0.3842
Copper (Cu)	222.5	15.62	63.36	100.5
Tin (Sn)	26.95	< 0.2274	5.461	10.88
Iron (Fe)	141.5	12.99	44.46	66.33
Lithium (Li)	8.962	0.9744	2.801	4.246
Magnesium (Mg)	85.29	6.172	33.96	41.81
Manganese (Mn)	5.872	0.3248	2.065	2.754
Molybdenum (Mo)	4.697	6.854	5.741	5.764
Nickel (Ni)	1.483	< 0.1624	0.4551	0.7003
Lead (Pb)	93.95	22.51	26.82	47.76
Potassium (K)	29300	3573	6967	13280
Selenium (Se)	< 0.9271	< 0.1624	< 0.3501	< 0.4799
Silicon (Si)	707.1	34.11	273.4	338.2
Sodium (Na)	80290	9517	20510	36770
Strontium (Sr)	2.417	0.09744	0.8122	1.109
Thallium (Tl)	0.2441	< 0.03248	0.04831	0.1083
Titanium (Ti)	17.24	0.9744	6.056	8.092
Vanadium (V)	< 0.4945	< 0.09744	< 0.1400	< 0.2440
Zinc (Zn)	1417	85.43	290.9	597.9
Mercury (Hg)	< 0.1854	< 0.03248	< 0.07002	< 0.09597
DETECTED METALS	113600	13380	28750	51920
TOTAL METALS	113600	13380	28750	51920

Agnico Eagle Mines, Meliadine 24-8263 Incinerator 2 Particles and metals				
EXPERIMENTAL SCHEDULE				
RUN NUMBER	INC2-Me-E1	INC2-Me-E2	INC2-Me-E3	AVERAGE
RUN DATE	2024-08-19	2024-08-20	2024-08-20	(1 to 3)
START OF RUN	12h41	08h03	12h22	
END OF RUN	15h25	11h03	15h29	
RUN DURATION (minutes)	95	180	180	
NUMBER OF MEASUREMENTS	19	36	36	
GASEOUS METALS (µg/m³R)				
Aluminum (Al)	36.47	8.445	22.06	22.32
Antimony (Sb)	1.545	< 0.1949	0.2100	0.6500
Silver (Ag)	< 2.472	< 1.299	< 1.400	< 1.724
Arsenic (As)	2.596	0.2599	0.6301	1.162
Barium (Ba)	0.8035	< 0.1299	1.680	0.8713
Beryllium (Be)	< 0.2472	< 0.1299	< 0.1400	< 0.1724
Bismuth (Bi)	< 0.2472	< 0.1299	< 0.1400	< 0.1724
Boron (B)	35.48	11.50	11.90	19.63
Cadmium (Cd)	< 0.2472	< 0.1299	< 0.1400	< 0.1724
Calcium (Ca)	179.2	36.70	106.1	107.3
Chrome (Cr)	< 0.4945	< 0.1949	0.2451	0.3115
Cobalt (Co)	< 0.4945	< 0.1949	< 0.2100	< 0.2998
Copper (Cu)	4.388	0.3573	3.291	2.679
Tin (Sn)	11.13	5.522	14.00	10.22
Iron (Fe)	51.30	14.29	41.66	35.75
Lithium (Li)	< 4.945	< 1.949	< 2.100	< 2.998
Magnesium (Mg)	51.30	8.120	21.00	26.81
Manganese (Mn)	2.596	0.4223	0.7002	1.239
Molybdenum (Mo)	< 2.472	< 1.299	< 1.400	< 1.724
Nickel (Ni)	0.4945	< 0.1949	0.2451	0.3115
Lead (Pb)	< 2.472	< 1.299	< 1.400	< 1.724
Potassium (K)	390.6	< 19.49	26.26	145.5
Selenium (Se)	1.483	0.2274	0.5951	0.7686
Silicon (Si)	71.70	14.62	130.2	72.18
Sodium (Na)	9895	3154	4201	5750
Strontium (Sr)	< 0.4945	< 0.1949	0.2801	0.3231
Thallium (Tl)	< 0.4945	< 0.1949	< 0.2100	< 0.2998
Titanium (Ti)	< 4.945	< 1.949	2.100	2.998
Vanadium (V)	< 0.8653	< 0.3898	< 0.4201	< 0.5584
Zinc (Zn)	125.1	7.406	12.78	48.43
Mercury (Hg)	< 0.6737	< 0.3508	< 0.3781	< 0.4675
DETECTED METALS	10860	3262	4597	6240
TOTAL METALS	10880	3292	4605	6260

Agnico Eagle Mines, Meliadine 24-8263 Incinerator 2 Particles and metals				
EXPERIMENTAL SCHEDULE				
RUN NUMBER	INC2-Me-E1	INC2-Me-E2	INC2-Me-E3	AVERAGE
RUN DATE	2024-08-19	2024-08-20	2024-08-20	(1 to 3)
START OF RUN	12h41	08h03	12h22	
END OF RUN	15h25	11h03	15h29	
RUN DURATION (minutes)	95	180	180	
NUMBER OF MEASUREMENTS	19	36	36	
TOTAL METALS (µg/m³R)				
Aluminum (Al)	110.6	24.04	90.32	75.00
Antimony (Sb)	168.4	7.601	46.39	74.14
Silver (Ag)	5.439	1.916	2.416	3.257
Arsenic (As)	134.2	12.08	28.64	58.30
Barium (Ba)	14.09	0.4288	6.238	6.920
Beryllium (Be)	< 0.3461	< 0.1527	< 0.1680	< 0.2223
Bismuth (Bi)	3.708	0.3021	1.302	1.771
Boron (B)	35.48	11.50	11.90	19.63
Cadmium (Cd)	2.410	0.5359	0.6792	1.209
Calcium (Ca)	1061	91.27	461.1	537.6
Chrome (Cr)	33.99	16.18	10.92	20.36
Cobalt (Co)	1.390	< 0.2274	0.4345	0.6840
Copper (Cu)	226.9	15.98	66.66	103.2
Tin (Sn)	38.07	5.749	19.46	21.10
Iron (Fe)	192.8	27.28	86.12	102.1
Lithium (Li)	13.91	2.923	4.901	7.244
Magnesium (Mg)	136.6	14.29	54.96	68.62
Manganese (Mn)	8.468	0.7471	2.766	3.993
Molybdenum (Mo)	7.170	8.153	7.142	7.488
Nickel (Ni)	1.978	< 0.3573	0.7002	1.012
Lead (Pb)	96.42	23.81	28.22	49.48
Potassium (K)	29690	3592	6993	13420
Selenium (Se)	2.410	0.3898	0.9452	1.248
Silicon (Si)	778.8	48.72	403.6	410.4
Sodium (Na)	90180	12670	24720	42520
Strontium (Sr)	2.911	0.2923	1.092	1.432
Thallium (Tl)	0.7386	< 0.2274	0.2584	0.4081
Titanium (Ti)	22.19	2.923	8.157	11.09
Vanadium (V)	< 1.360	< 0.4872	< 0.5601	< 0.8024
Zinc (Zn)	1542	92.83	303.7	646.3
Mercury (Hg)	< 0.8591	< 0.3833	< 0.4481	< 0.5635
DETECTED METALS	124500	16670	33360	58180
TOTAL METALS	124500	16680	33360	58180

Agnico Eagle Mines, Meliadine 24-8263 Incinerator 2 Particles and metals				
EXPERIMENTAL SCHEDULE				
RUN NUMBER	INC2-Me-E1	INC2-Me-E2	INC2-Me-E3	AVERAGE
RUN DATE	2024-08-19	2024-08-20	2024-08-20	(1 to 3)
START OF RUN	12h41	08h03	12h22	
END OF RUN	15h25	11h03	15h29	
RUN DURATION (minutes)	95	180	180	
NUMBER OF MEASUREMENTS	19	36	36	
TOTAL METALS (µg/m3R) at 11% O2				
Aluminum (Al)	81.74	19.83	91.24	64.27
Antimony (Sb)	124.4	6.271	46.86	59.19
Silver (Ag)	4.018	1.581	2.440	2.680
Arsenic (As)	99.14	9.969	28.93	46.01
Barium (Ba)	10.41	0.3537	6.302	5.689
Beryllium (Be)	< 0.2557	< 0.1259	< 0.1698	< 0.1838
Bismuth (Bi)	2.740	0.2492	1.316	1.435
Boron (B)	26.21	9.486	12.02	15.91
Cadmium (Cd)	1.781	0.4422	0.6861	0.9697
Calcium (Ca)	783.6	75.30	465.8	441.5
Chrome (Cr)	25.11	13.35	11.03	16.50
Cobalt (Co)	1.027	< 0.1876	0.4389	0.5511
Copper (Cu)	167.6	13.18	67.34	82.72
Tin (Sn)	28.13	4.743	19.66	17.51
Iron (Fe)	142.5	22.51	87.00	83.99
Lithium (Li)	10.27	2.412	4.951	5.879
Magnesium (Mg)	100.9	11.79	55.52	56.08
Manganese (Mn)	6.256	0.6163	2.794	3.222
Molybdenum (Mo)	5.297	6.726	7.215	6.413
Nickel (Ni)	1.461	< 0.2948	0.7073	0.8211
Lead (Pb)	71.23	19.64	28.50	39.79
Potassium (K)	21930	2964	7064	10650
Selenium (Se)	1.781	0.3216	0.9549	1.019
Silicon (Si)	575.4	40.20	407.8	341.1
Sodium (Na)	66630	10450	24970	34020
Strontium (Sr)	2.151	0.2412	1.103	1.165
Thallium (Tl)	0.5457	< 0.1876	0.2610	0.3314
Titanium (Ti)	16.39	2.412	8.240	9.015
Vanadium (V)	< 1.005	< 0.4020	< 0.5658	< 0.6575
Zinc (Zn)	1139	76.59	306.8	507.6
Mercury (Hg)	< 0.6347	< 0.3162	< 0.4527	< 0.4679
DETECTED METALS	91990	13760	33700	46480
TOTAL METALS	91990	13760	33700	46480

Agnico Eagle Mines, Meliadine				
24-8263				
Incinerator 2				
Particles and metals				
EXPERIMENTAL SCHEDULE				
RUN NUMBER	INC2-Me-E1	INC2-Me-E2	INC2-Me-E3	AVERAGE
RUN DATE	2024-08-19	2024-08-20	2024-08-20	(1 to 3)
START OF RUN	12h41	08h03	12h22	
END OF RUN	15h25	11h03	15h29	
RUN DURATION (minutes)	95	180	180	
NUMBER OF MEASUREMENTS	19	36	36	
PARTICULATE METALS (g/h)				
Aluminum (Al)	0.09688	0.02082	0.09361	0.07044
Antimony (Sb)	0.2180	0.009888	0.06332	0.09706
Silver (Ag)	0.003875	0.0008240	0.001392	0.002030
Arsenic (As)	0.1719	0.01579	0.03841	0.07536
Barium (Ba)	0.01736	0.0003990	0.006250	0.008002
Beryllium (Be)	< 0.0001292	< 0.00003036	< 0.00003841	< 0.00006598
Bismuth (Bi)	0.004521	0.0002298	0.001594	0.002115
Cadmium (Cd)	0.002826	0.0005421	0.0007393	0.001369
Calcium (Ca)	1.151	0.07286	0.4868	0.5703
Chrome (Cr)	0.04376	0.02134	0.01464	0.02658
Cobalt (Co)	0.001170	< 0.00004337	0.0003077	0.0005070
Copper (Cu)	0.2906	0.02086	0.08689	0.1328
Tin (Sn)	0.03520	< 0.0003036	0.007489	0.01433
Iron (Fe)	0.1849	0.01735	0.06097	0.08773
Lithium (Li)	0.01171	0.001301	0.003841	0.005616
Magnesium (Mg)	0.1114	0.008240	0.04657	0.05541
Manganese (Mn)	0.007670	0.0004337	0.002832	0.003645
Molybdenum (Mo)	0.006136	0.009151	0.007873	0.007720
Nickel (Ni)	0.001938	< 0.0002168	0.0006241	0.0009262
Lead (Pb)	0.1227	0.03005	0.03677	0.06318
Potassium (K)	38.27	4.770	9.553	17.53
Selenium (Se)	< 0.001211	< 0.0002168	< 0.0004801	< 0.0006360
Silicon (Si)	0.9236	0.04554	0.3749	0.4480
Sodium (Na)	104.9	12.71	28.13	48.57
Strontium (Sr)	0.003157	0.0001301	0.001114	0.001467
Thallium (Tl)	0.0003189	< 0.00004337	0.00006625	0.0001428
Titanium (Ti)	0.02252	0.001301	0.008305	0.01071
Vanadium (V)	< 0.0006459	< 0.0001301	< 0.0001920	< 0.0003227
Zinc (Zn)	1.851	0.1141	0.3989	0.7881
Mercury (Hg)	< 0.0002422	< 0.00004337	< 0.00009601	< 0.0001272
DETECTED METALS	148.4	17.87	39.43	68.57
TOTAL METALS	148.4	17.87	39.43	68.57

Agnico Eagle Mines, Meliadine 24-8263 Incinerator 2 Particles and metals				
EXPERIMENTAL SCHEDULE				
RUN NUMBER	INC2-Me-E1	INC2-Me-E2	INC2-Me-E3	AVERAGE
RUN DATE	2024-08-19	2024-08-20	2024-08-20	(1 to 3)
START OF RUN	12h41	08h03	12h22	
END OF RUN	15h25	11h03	15h29	
RUN DURATION (minutes)	95	180	180	
NUMBER OF MEASUREMENTS	19	36	36	
GASEOUS METALS (g/h)				
Aluminum (Al)	0.04763	0.01128	0.03024	0.02972
Antimony (Sb)	0.002018	< 0.0002602	0.0002880	0.0008555
Silver (Ag)	< 0.003229	< 0.001735	< 0.001920	< 0.002295
Arsenic (As)	0.003391	0.0003469	0.0008641	0.001534
Barium (Ba)	0.001050	< 0.0001735	0.002304	0.001176
Beryllium (Be)	< 0.0003229	< 0.0001735	< 0.0001920	< 0.0002295
Bismuth (Bi)	< 0.0003229	< 0.0001735	< 0.0001920	< 0.0002295
Boron (B)	0.04634	0.01535	0.01632	0.02600
Cadmium (Cd)	< 0.0003229	< 0.0001735	< 0.0001920	< 0.0002295
Calcium (Ca)	0.2341	0.04901	0.1455	0.1429
Chrome (Cr)	< 0.0006459	< 0.0002602	0.0003360	0.0004140
Cobalt (Co)	< 0.0006459	< 0.0002602	< 0.0002880	< 0.0003980
Copper (Cu)	0.005732	0.0004770	0.004513	0.003574
Tin (Sn)	0.01453	0.007372	0.01920	0.01370
Iron (Fe)	0.06701	0.01908	0.05713	0.04774
Lithium (Li)	< 0.006459	< 0.002602	< 0.002880	< 0.003980
Magnesium (Mg)	0.06701	0.01084	0.02880	0.03555
Manganese (Mn)	0.003391	0.0005638	0.0009601	0.001638
Molybdenum (Mo)	< 0.003229	< 0.001735	< 0.001920	< 0.002295
Nickel (Ni)	0.0006459	< 0.0002602	0.0003360	0.0004140
Lead (Pb)	< 0.003229	< 0.001735	< 0.001920	< 0.002295
Potassium (K)	0.5102	< 0.02602	0.03600	0.1908
Selenium (Se)	0.001938	0.0003036	0.0008161	0.001019
Silicon (Si)	0.09365	0.01952	0.1786	0.09725
Sodium (Na)	12.93	4.211	5.761	7.632
Strontium (Sr)	< 0.0006459	< 0.0002602	0.0003841	0.0004300
Thallium (Tl)	< 0.0006459	< 0.0002602	< 0.0002880	< 0.0003980
Titanium (Ti)	< 0.006459	< 0.002602	0.002880	0.003980
Vanadium (V)	< 0.001130	< 0.0005204	< 0.0005761	< 0.0007422
Zinc (Zn)	0.1634	0.009888	0.01752	0.06360
Mercury (Hg)	< 0.0008800	< 0.0004684	< 0.0005185	< 0.0006223
DETECTED METALS	14.19	4.355	6.304	8.282
TOTAL METALS	14.22	4.395	6.315	8.308

Agnico Eagle Mines, Meliadine				
24-8263				
Incinerator 2				
Particles and metals				
EXPERIMENTAL SCHEDULE				
RUN NUMBER	INC2-Me-E1	INC2-Me-E2	INC2-Me-E3	AVERAGE
RUN DATE	2024-08-19	2024-08-20	2024-08-20	(1 to 3)
START OF RUN	12h41	08h03	12h22	
END OF RUN	15h25	11h03	15h29	
RUN DURATION (minutes)	95	180	180	
NUMBER OF MEASUREMENTS	19	36	36	
TOTAL METALS (g/h)				
Aluminum (Al)	0.1445	0.03209	0.1239	0.1002
Antimony (Sb)	0.2200	0.01015	0.06361	0.09792
Silver (Ag)	0.007104	0.002559	0.003312	0.004325
Arsenic (As)	0.1753	0.01613	0.03927	0.07689
Barium (Ba)	0.01841	0.0005725	0.008555	0.009178
Beryllium (Be)	< 0.0004521	< 0.0002038	< 0.0002304	< 0.0002955
Bismuth (Bi)	0.004844	0.0004033	0.001786	0.002344
Boron (B)	0.04634	0.01535	0.01632	0.02600
Cadmium (Cd)	0.003149	0.0007156	0.0009313	0.001598
Calcium (Ca)	1.385	0.1219	0.6322	0.7132
Chrome (Cr)	0.04440	0.02160	0.01498	0.02699
Cobalt (Co)	0.001816	< 0.0003036	0.0005958	0.0009050
Copper (Cu)	0.2964	0.02134	0.09140	0.1364
Tin (Sn)	0.04973	0.007676	0.02669	0.02803
Iron (Fe)	0.2519	0.03643	0.1181	0.1355
Lithium (Li)	0.01816	0.003903	0.006721	0.009596
Magnesium (Mg)	0.1784	0.01908	0.07537	0.09096
Manganese (Mn)	0.01106	0.0009975	0.003793	0.005283
Molybdenum (Mo)	0.009365	0.01089	0.009793	0.01001
Nickel (Ni)	0.002583	< 0.0004770	0.0009601	0.001340
Lead (Pb)	0.1259	0.03179	0.03869	0.06547
Potassium (K)	38.78	4.796	9.589	17.72
Selenium (Se)	0.003149	0.0005204	0.001296	0.001655
Silicon (Si)	1.017	0.06505	0.5535	0.5453
Sodium (Na)	117.8	16.92	33.89	56.20
Strontium (Sr)	0.003803	0.0003903	0.001498	0.001897
Thallium (Tl)	0.0009648	< 0.0003036	0.0003543	0.0005409
Titanium (Ti)	0.02898	0.003903	0.01119	0.01469
Vanadium (V)	< 0.001776	< 0.0006505	< 0.0007681	< 0.001065
Zinc (Zn)	2.015	0.1239	0.4165	0.8517
Mercury (Hg)	< 0.001122	< 0.0005117	< 0.0006145	< 0.0007495
DETECTED METALS	162.6	22.26	45.74	76.88
TOTAL METALS	162.6	22.26	45.74	76.88
R: Reference conditions at 101.3 kPa and 25°C, on a dry basis				

Sampling survey : Incinerator 2 – Particles and metals – Run 1

Time	Trav. #	Point #	Pumping duration (min)	Pressure difference (in H ₂ O)		Temperatures (°F)				Gas volume (ft³)			Velocity (m/s)	Iso. (%)	O ₂ (%v)	CO ₂ (%v)	CO (ppmv)	Vacuum (in. Hg)	Temperatures (°F)		
				ΔP	ΔH	Stack	Dry gas meter in	Dry gas meter out	Orifice	Start	End	Total							Probe	Filter	Exit
12h41	1	1	5	0.06	0.37	1700	58	58	58	58.90	61.32	2.42	7.90	106.66	5.0	12.0	4.0	-2	250	255	49
		2	5	0.07	0.44	1679	58	58	58	61.32	63.81	2.49	8.49	101.12	5.0	12.0	4.0	-4	250	249	49
		3	5	0.07	0.44	1673	58	58	58	63.81	66.41	2.60	8.48	105.44	8.5	10.0	4.0	-6	250	253	49
		4	5	0.09	0.54	1750	59	59	59	66.41	69.21	2.80	9.79	101.76	8.5	10.0	4.0	-8	250	253	49
		5	5	0.10	0.60	1760	60	60	60	69.21	72.09	2.88	10.34	99.348	4.5	12.0	4.0	-8	250	256	49
13h11		6	5	0.10	0.60	1764	60	60	60	72.09	74.95	2.86	10.35	98.746	4.5	12.0	4.0	-12	250	252	49
13h17		7	5	0.11	0.66	1781	61	61	61	74.95	78.15	3.20	10.90	105.56	8.7	9.5	4.0	-3	250	253	49
		8	5	0.11	0.66	1788	63	63	63	78.15	81.29	3.14	10.92	103.34	8.7	9.5	4.0	-6	250	253	49
		9	5	0.11	0.66	1775	63	63	63	81.29	84.41	3.12	10.89	102.39	4.1	12.0	4.0	-8	250	253	49
		10	5	0.11	0.66	1788	63	63	63	84.41	87.46	3.05	10.92	100.38	4.1	12.0	4.0	-12	250	249	51
		11	5	0.11	0.66	1790	63	63	63	87.46	90.34	2.88	10.92	94.828	4.1	12.0	4.0	-13	250	250	51
13h47		12	5	0.11	0.66	1792	63	63	63	90.34	93.19	2.85	10.93	93.882	8.6	10.0	4.0	-14	250	251	51
14h50		13	5	0.11	0.65	1814	64	64	64	93.19	96.23	3.04	10.98	100.43	8.6	10.0	4.0	-3	250	248	51
		14	5	0.11	0.67	1748	64	64	64	96.23	99.32	3.09	10.82	100.6	8.6	10.0	4.0	-6	250	248	51
		15	5	0.11	0.65	1811	64	64	64	99.32	102.49	3.17	10.97	104.66	4.1	12.0	4.0	-9	250	247	51
		16	5	0.11	0.69	1683	65	65	65	102.49	105.66	3.17	10.66	101.48	4.1	12.0	4.0	-10	250	253	51
		17	5	0.11	0.68	1725	65	65	65	105.66	108.78	3.12	10.76	100.85	4.1	12.0	4.0	-12	250	252	52
		18	5	0.11	0.68	1714	65	65	65	108.78	111.85	3.07	10.74	98.989	4.1	12.0	4.0	-14	250	256	52
		19	5	0.11	0.68	1714	65	65	65	108.78	111.85	3.07	10.74	98.989	4.1	12.0	4.0	-14	250	256	52
fin 15h2	2	1	5	0.11	0.70	1660	65	65	65	111.85	114.75	2.90	10.60	92.343	4.1	12.0	4.0	-14	250	254	52

Sampling survey : Incinerator 2 – Particles and metals – Run 2																					
Time	Trav. #	Point #	Pumping duration (min)	Pressure difference (in H ₂ O)		Temperatures (°F)				Gas volume (ft³)			Velocity (m/s)	Iso. (%)	O ₂ (%v)	CO ₂ (%v)	CO (ppmv)	Vacuum (in. Hg)	Temperatures (°F)		
						Stack	Dry gas meter in	Dry gas meter out	Orifice	Start	End	Total							Probe	Filter	Exit
				ΔP	ΔH																
08h03	1	1	5	0.05	0.30	1737	52	52	52	16.10	18.24	2.14	7.23	101.43	8.0	9.5	5.0	-2	250	254	53
		2	5	0.06	0.36	1730	52	52	52	18.24	20.61	2.37	7.91	102.4	8.0	9.5	5.0	-3	250	256	53
		3	5	0.08	0.48	1753	52	52	52	20.61	23.17	2.56	9.18	96.317	8.0	9.5	5.0	-3	250	251	53
		4	5	0.09	0.55	1698	53	53	53	23.17	26.07	2.90	9.62	101.4	8.0	9.5	5.0	-3	250	254	53
		5	5	0.11	0.67	1698	53	53	53	26.07	29.19	3.12	10.63	98.71	8.0	9.5	5.0	-5	250	254	53
		6	5	0.10	0.60	1755	53	53	53	29.19	32.19	3.00	10.27	100.83	8.0	9.5	5.0	-6	250	252	54
		7	5	0.10	0.60	1727	53	53	53	32.19	35.08	2.89	10.21	96.522	8.0	9.5	5.0	-6	250	253	54
		8	5	0.10	0.59	1783	53	53	53	35.08	38.10	3.02	10.34	102.14	8.0	9.5	5.0	-7	250	249	54
		9	5	0.11	0.66	1739	55	55	55	38.10	41.20	3.10	10.73	98.618	8.0	9.5	5.0	-8	250	248	54
		10	5	0.11	0.65	1766	55	55	55	41.20	44.31	3.11	10.80	99.54	8.0	9.5	5.0	-9	250	247	54
		11	5	0.11	0.65	1776	55	55	55	44.31	47.42	3.11	10.82	99.762	8.0	9.5	5.0	-9	250	253	54
		12	5	0.11	0.65	1781	56	56	56	47.42	50.52	3.10	10.84	99.359	8.0	9.5	5.0	-9	250	253	55
		13	5	0.11	0.65	1787	56	56	56	50.52	53.61	3.09	10.85	99.171	8.0	9.5	5.0	-9	250	253	55
		14	5	0.11	0.65	1788	56	56	56	53.61	56.60	2.99	10.85	95.983	8.0	9.5	5.0	-9	250	256	55
		15	5	0.11	0.65	1793	58	58	58	56.60	59.67	3.07	10.87	98.28	8.0	9.5	5.0	-9	250	254	55
		16	5	0.11	0.65	1803	58	58	58	59.67	62.75	3.08	10.89	98.818	8.0	9.5	5.0	-9	250	256	55
		17	5	0.11	0.65	1802	59	59	59	62.75	65.81	3.06	10.89	97.965	8.0	9.5	5.0	-10	250	257	55
		18	5	0.11	0.65	1807	59	59	59	65.81	68.86	3.05	10.90	97.753	8.0	9.5	5.0	-10	250	253	52
	2	1	5	0.11	0.65	1814	60	60	60	68.86	71.93	3.07	10.92	98.356	8.0	9.5	5.0	-10	250	253	52
		2	5	0.11	0.65	1812	60	60	60	71.93	75.03	3.10	10.91	99.273	8.0	9.5	5.0	-11	250	254	52
		3	5	0.11	0.65	1817	60	60	60	75.03	78.15	3.12	10.92	100.02	8.0	9.5	5.0	-11	250	257	52
		4	5	0.11	0.65	1818	61	61	61	78.15	81.28	3.13	10.93	100.17	8.0	9.5	5.0	-11	250	249	52
		5	5	0.11	0.65	1821	61	61	61	81.28	84.38	3.10	10.93	99.278	8.0	9.5	5.0	-11	250	250	52
		6	5	0.11	0.65	1820	61	61	61	84.38	87.43	3.05	10.93	97.656	8.0	9.5	5.0	-11	250	252	52
		7	5	0.11	0.64	1829	61	61	61	87.43	90.48	3.05	10.95	97.848	8.0	9.5	5.0	-12	250	254	52
		8	5	0.11	0.64	1837	62	62	62	90.48	93.50	3.02	10.97	96.868	8.0	9.5	5.0	-12	250	257	52
		9	5	0.11	0.64	1836	62	62	62	93.50	96.51	3.01	10.97	96.527	8.0	9.5	5.0	-13	250	256	52
		10	5	0.11	0.64	1835	62	62	62	96.51	99.54	3.03	10.97	97.147	8.0	9.5	5.0	-13	250	253	54
		11	5	0.11	0.64	1841	62	62	62	99.54	102.63	3.09	10.98	99.2	8.0	9.5	5.0	-14	250	250	54
		12	5	0.10	0.58	1842	62	62	62	102.63	105.52	2.89	10.47	97.315	8.0	9.5	5.0	-14	250	253	54
		13	5	0.10	0.58	1842	63	63	63	105.52	108.40	2.88	10.47	96.793	8.0	9.5	5.0	-14	250	255	54
		14	5	0.10	0.58	1846	63	63	63	108.40	111.30	2.90	10.48	97.549	8.0	9.5	5.0	-14	250	258	54
		15	5	0.09	0.52	1849	63	63	63	111.30	114.05	2.75	9.95	97.557	8.0	9.5	5.0	-14	250	256	54
		16	5	0.09	0.53	1809	63	63	63	114.05	116.87	2.82	9.86	99.172	8.0	9.5	5.0	-14	250	256	54
		17	5	0.07	0.41	1809	63	63	63	116.87	119.41	2.54	8.70	101.26	8.0	9.5	5.0	-14	250	254	54
11h03		18	5	0.05	0.31	1743	63	63	63	119.41	121.60	2.19	7.24	101.76	8.0	9.5	5.0	-14	250	253	54

Sampling survey : Incinerator 2 – Particles and metals – Run 3																					
Time	Trav. #	Point #	Pumping duration (min)	Pressure difference (in H ₂ O)		Temperatures (°F)				Gas volume (ft³)			Velocity (m/s)	Iso. (%)	O ₂ (%v)	CO ₂ (%v)	CO (ppmv)	Vacuum (in. Hg)	Temperatures (°F)		
						Stack	Dry gas meter in	Dry gas meter out	Orifice										Probe	Filter	Exit
				ΔP	ΔH					Start	End	Total									
12h22	1	1	5	0.06	0.30	1766	61	61	61	22.02	24.12	2.10	7.99	97.689	8.5	10.1	9.0	-2	250	250	52
		2	5	0.06	0.31	1742	61	61	61	24.12	26.23	2.11	7.94	97.624	8.5	10.1	9.0	-2	250	253	52
		3	5	0.07	0.36	1757	61	61	61	26.23	28.49	2.26	8.61	97.148	8.5	10.1	9.0	-3	250	253	52
		4	5	0.09	0.46	1743	61	61	61	28.49	31.07	2.58	9.73	97.524	8.5	10.1	9.0	-3	250	253	52
		5	5	0.09	0.47	1723	61	61	61	31.07	33.66	2.59	9.69	97.457	8.5	10.1	9.0	-5	250	254	52
		6	5	0.10	0.52	1705	61	61	61	33.66	36.43	2.77	10.17	98.486	8.5	10.1	9.0	-5	250	256	52
		7	5	0.10	0.52	1712	62	62	62	36.43	39.21	2.78	10.19	98.812	8.5	10.1	9.0	-6	250	256	52
		8	5	0.10	0.52	1714	62	62	62	39.21	41.92	2.71	10.19	96.368	8.5	10.1	9.0	-6	250	257	52
		9	5	0.10	0.52	1699	62	62	62	41.92	44.68	2.76	10.16	97.807	8.5	10.1	9.0	-8	250	248	53
		10	5	0.11	0.58	1688	63	63	63	44.68	47.55	2.87	10.62	96.553	8.5	10.1	9.0	-9	250	245	53
		11	5	0.11	0.57	1714	63	63	63	47.55	50.38	2.83	10.69	95.781	8.5	10.1	9.0	-9	250	244	53
		12	5	0.11	0.58	1693	64	64	64	50.38	53.36	2.98	10.64	100.18	8.5	10.1	9.0	-10	250	248	53
		13	5	0.11	0.57	1715	64	64	64	53.36	56.28	2.92	10.69	98.661	8.5	10.1	9.0	-10	250	249	53
		14	5	0.11	0.58	1682	64	64	64	56.28	59.18	2.90	10.61	97.241	8.5	10.1	9.0	-11	250	254	54
		15	5	0.11	0.57	1712	64	64	64	59.18	62.00	2.82	10.68	95.216	8.5	10.1	9.0	-12	250	253	54
		16	5	0.11	0.57	1717	64	64	64	62.00	64.89	2.89	10.70	97.692	8.5	10.1	9.0	-13	250	252	54
		17	5	0.11	0.58	1675	64	64	64	64.89	67.77	2.88	10.59	96.413	8.5	10.1	9.0	-13	250	252	54
		14h22 14h29	2	18	5	0.11	0.58	1710	64	64	64	67.77	70.62	2.85	10.68	96.185	8.5	10.1	9.0	-13	250
1	5			0.11	0.58	1682	65	65	65	70.62	73.57	2.95	10.61	98.729	8.5	10.1	9.0	-13	250	253	55
2	5			0.11	0.58	1700	65	65	65	73.57	76.47	2.90	10.65	97.462	8.5	10.1	9.0	-14	250	253	55
3	5			0.11	0.58	1706	65	65	65	76.47	79.31	2.84	10.67	95.577	8.5	10.1	9.0	-14	250	253	55
4	5			0.11	0.59	1670	65	65	65	79.31	82.15	2.84	10.58	94.782	8.5	10.1	9.0	-14	250	253	55
5	5			0.11	0.59	1673	65	65	65	82.15	84.86	2.71	10.59	90.507	8.5	10.1	9.0	-14	250	256	53
6	5			0.11	0.59	1676	65	65	65	84.86	87.55	2.69	10.59	89.902	8.5	10.1	9.0	-14	250	256	53
7	5			0.11	0.58	1700	64	64	64	87.55	90.52	2.97	10.65	100	8.5	10.1	9.0	-14	250	256	53
8	5			0.11	0.59	1673	64	64	64	90.52	93.39	2.87	10.59	96.033	8.5	10.1	9.0	-3	250	256	53
9	5			0.11	0.58	1694	64	64	64	93.39	96.40	3.01	10.64	101.21	8.5	10.1	9.0	-3	250	257	53
10	5			0.11	0.59	1661	64	64	64	96.40	99.38	2.98	10.56	99.434	8.5	10.1	9.0	-4	250	253	53
11	5			0.11	0.58	1694	64	64	64	99.38	102.25	2.87	10.64	96.503	8.5	10.1	9.0	-4	250	250	52
12	5			0.10	0.53	1699	64	64	64	102.25	105.00	2.75	10.16	97.081	8.5	10.1	9.0	-5	250	250	52
13	5			0.10	0.53	1709	66	66	66	105.00	107.79	2.79	10.18	98.346	8.5	10.1	9.0	-5	250	252	52
14	5			0.10	0.54	1667	66	66	66	107.79	110.57	2.78	10.08	97.042	8.5	10.1	9.0	-5	250	251	52
15	5			0.09	0.48	1670	66	66	66	110.57	113.27	2.70	9.57	99.405	8.5	10.1	9.0	-5	250	252	54
16	5			0.08	0.43	1657	66	66	66	113.27	115.84	2.57	8.99	100.04	8.5	10.1	9.0	-5	250	252	54
17	5			0.09	0.48	1654	66	66	66	115.84	118.47	2.63	9.53	96.464	8.5	10.1	9.0	-5	250	253	54
15h29		18	5	0.08	0.43	1654	66	66	66	118.47	120.95	2.48	8.99	96.467	8.5	10.1	9.0	-5	250	249	54

INC2-Me-E1
Impingers – liquid mass

	Before	After	Difference
IMP. 1	755.06	663.56	91.5
IMP. 2	641.42	611.55	29.87
IMP. 3	649.44	625.07	24.37
IMP. 4	692.9	690.74	2.16
IMP. 5	589.64	591.41	-1.77
IMP. 6	704.46	705.24	-0.78
IMP. 7	700.87	703.58	-2.71
IMP. 8			
IMP. 9			
Silica gel	2094.94	2070.46	24.48
Total	6828.73	6661.61	167.12

Water mass (g)	167.12
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INC2-Me-E2
Impingers – liquid mass

	Before	After	Difference
IMP. 1	745.1	636.56	108.54
IMP. 2	634.31	592.15	42.16
IMP. 3	712.05	697.98	14.07
IMP. 4	643.31	641.06	2.25
IMP. 5	513.04	514.73	-1.69
IMP. 6	735.42	736.99	-1.57
IMP. 7	587.43	589.18	-1.75
IMP. 8			
IMP. 9			
Silica gel	1927.9	1883.72	44.18
Total	6498.56	6292.37	206.19

Water mass (g)	206.19
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INC2-Me-E3
Impingers – liquid mass

	Before	After	Difference
IMP. 1	786.54	656.81	129.73
IMP. 2	627.17	611.5	15.67
IMP. 3	626.83	617.58	9.25
IMP. 4	626.06	625.11	0.95
IMP. 5	589.2	592.6	-3.4
IMP. 6	707.1	709.75	-2.65
IMP. 7	703.82	707.21	-3.39
IMP. 8	1973.85	1931.48	42.37
IMP. 9			
Silica gel			
Total	6640.57	6452.04	188.53

Water mass (g)	188.53
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Agnico Eagle Mines, Meliadine 24-8263 Incinerator 2 Semi-Volatile Organic Compounds				
EXPERIMENTAL SCHEDULE				
RUN NUMBER	INC2-COSV-E1	INC2-COSV-E2	INC2-COSV-E3	AVERAGE
RUN DATE	2024-08-19	2024-08-20	2024-08-20	(1 to 3)
START OF RUN	12h42	08h02	12h21	
END OF RUN	16h26	11h02	15h21	
RUN DURATION (minutes)	180	180	180	
NUMBER OF MEASUREMENTS	36	36	36	
SAMPLING EQUIPMENT DATA				
BAROMETRIC PRESSURE ("Hg)	30.00	30.00	30.00	30.00
STATIC PRESSURE ("H ₂ O)	-0.08	-0.08	-0.08	-0.08
PRESSION STATIQUE (kPa)	-0.020	-0.020	-0.020	-0.020
DRY GAS METER COEFFICIENT	1.001	1.001	1.001	n/a
PITOT TUBE COEFFICIENT	0.741	0.741	0.741	n/a
NOZZLE DIAMETER (in)	0.509	0.509	0.509	n/a
DRY GAS METER TEMPERATURE (°F)	64.7	59.8	63.5	n/a
DRY GAS METER TEMPERATURE (°C)	18.2	15.4	17.5	n/a
GAS HUMIDITY & SAMPLED VOLUME				
MASS OF WATER (g)	296.7	195.4	188.0	n/a
VOLUME OF WATER (ft ³ R)	14.23	9.37	9.02	n/a
GAS HUMIDITY (BWO)	0.118	0.080	0.076	0.091
GAS HUMIDITY (% v/v)	11.8	8.0	7.6	9.1
REFERENCE GAS VOLUME (ft ³ R)	105.96	107.99	110.11	108.02
REFERENCE GAS VOLUME (m³R)	3.00	3.06	3.12	3.06
STACK CHARACTERISTICS				
NUMBER OF DIAMETERS BEFORE SAMPLING PORTS	6.7	6.7	6.7	n/a
NUMBER OF DIAMETERS AFTER SAMPLING PORTS	1.4	1.4	1.4	n/a
STACK DIAMETER (ft)	1.5	1.5	1.5	n/a
STACK DIAMETER (m)	0.46	0.46	0.46	n/a
LENGTH OF SAMPLING PORTS (in)	7.5	7.5	7.5	n/a
STACK PRESSURE ("Hg)	29.99	29.99	29.99	29.99
STACK PRESSURE (kPa)	101.57	101.57	101.57	101.57
DRY GAS METER PRESSURE ("Hg)	30.08	30.08	30.08	30.08
STACK SURFACE (pi ²)	1.8	1.8	1.8	n/a
STACK SURFACE (m ²)	0.16	0.16	0.16	n/a
GAZ CHARACTERISTICS				
CHIMNEY TEMPERATURE (°F)	1750.9	1755.6	1681.6	1729.3
CHIMNEY TEMPERATURE (°C)	954.9	957.5	916.5	943.0
CO ₂ (%v, dry)	10.3	9.0	7.8	9.0
O ₂ (%v, dry)	7.5	8.9	11.1	9.2
O ₂ (%v, dry)	6.6	8.2	10.3	8.4
CO (ppmv, dry)	4.0	3.9	4.6	4.2
N ₂ (%v, dry)	82.2	82.1	81.1	81.8
DRY MOLECULAR WEIGHT	30.0	29.8	29.7	29.8
WET MOLECULAR WEIGHT	28.5	28.9	28.8	28.7
GAS VELOCITY (ft/s)	32.5	32.3	31.8	32.2
GAS VELOCITY (m/s)	9.9	9.8	9.7	9.8
ACTUAL GAS FLOW RATE (pi ³ /h)	206 627	205 519	202 285	204 810
ACTUAL GAS FLOW RATE (m ³ /h)	5 851	5 820	5 728	5 800
ACTUAL GAS FLOW RATE (ft ³ /min) (ACFM)	3 444	3 425	3 371	3 414
REFERENCE GAS FLOW RATE (ft ³ R/h)	44 342	45 936	46 988	45 755
REFERENCE GAS FLOW RATE (m³R/h)	1 256	1 301	1 331	1 296
REFERENCE GAS FLOW RATE (ft ³ R/min) (RCFM)	739	766	783	763

Agnico Eagle Mines, Meliadine 24-8263 Incinerator 2 Semi-Volatile Organic Compounds				
EXPERIMENTAL SCHEDULE				
RUN NUMBER	INC2-COSV-E1	INC2-COSV-E2	INC2-COSV-E3	AVERAGE
RUN DATE	2024-08-19	2024-08-20	2024-08-20	(1 to 3)
START OF RUN	12h42	08h02	12h21	
END OF RUN	16h26	11h02	15h21	
RUN DURATION (minutes)	180	180	180	
NUMBER OF MEASUREMENTS	36	36	36	
SAMPLING INFORMATION				
DRY GAS METER ORIFICE COEFFICIENT	0.740	0.740	0.740	n/a
MAXIMUM VELOCITY (m/s)	10.8	10.4	10.5	n/a
MINIMUM VELOCITY (m/s)	8.0	8.0	8.1	n/a
10%Vmax (m/s)	1.08	1.04	1.05	n/a
PERCENTAGE >10%Vmax	1.00	1.00	1.00	1.00
AVERAGE ISOKINETISM (%)	99.6	97.9	97.8	98.5
% POINTS RESPECTING ISOKINETIC CRITERIA	100%	100%	100%	100%
MAXIMUM PUMPING FLOW RATE (ft ³ /min)	0.61	0.62	0.66	n/a
MAXIMUM VACCUM PRESSURE DURING RUN ("Hg)	-19.0	-8.0	-9.0	n/a
MAXIMUM PROBE TEMPERATURE (°F)	250	250	250	n/a
MINIMUM PROBE TEMPERATURE (°F)	250	250	250	n/a
MAXIMUM FILTER TEMPERATURE (°F)	255	258	259	n/a
MINIMUM FILTER TEMPERATURE (°F)	245	247	244	n/a
MAXIMUM TEMPERATURE AT EXIT (°F)	53	54	56	n/a
MINIMUM TEMPERATURE AT EXIT (°F)	49	48	50	n/a
MAXIMUM TRAP TEMPERATURE (°F)	54	59	58	n/a
MINIMUM TRAP TEMPERATURE (°F)	50	51	51	n/a
AVERAGE PUMPING FLOW RATE (ft ³ /min)	0.57	0.58	0.59	0.58
4% OF AVERAGE PUMPING FLOW RATE (ft ³ /min)	0.023	0.023	0.024	0.023
LEAK TEST BEFORE RUN AT 15 "Hg (ft ³ /min)	< 0.02	< 0.02	< 0.02	< 0.02
LEAK TEST AFTER RUN (ft ³ /min)	< 0.02	< 0.02	< 0.02	< 0.02
CYCLONIC FLOW				
AVERAGE FLOW ANGLE	0	0	0	0
VERTICAL GAS VELOCITY (m/s)	9.90	9.85	9.69	9.81

Agnico Eagle Mines, Meliadine 24-8263 Incinerator 2 Semi-Volatile Organic Compounds				
EXPERIMENTAL SCHEDULE				
RUN NUMBER	INC2-COSV-E1	INC2-COSV-E2	INC2-COSV-E3	AVERAGE
RUN DATE	2024-08-19	2024-08-20	2024-08-20	(1 to 3)
START OF RUN	12h42	08h02	12h21	
END OF RUN	16h26	11h02	15h21	
RUN DURATION (minutes)	180	180	180	
NUMBER OF MEASUREMENTS	36	36	36	
DIOXINS AND FURANS (pg)				
2,3,7,8-TCDD	1.5	4.1	0.8	n/a
1,2,3,7,8 PeCDD	19.6	50.0	7.2	n/a
1,2,3,4,7,8 HxCDD	17.7	30.7	4.1	n/a
1,2,3,6,7,8 HxCDD	34.9	65.6	6.5	n/a
1,2,3,7,8,9 HxCDD	26.7	55.8	5.7	n/a
1,2,3,4,6,7,8 HpCDD	230.0	316.0	44.2	n/a
OCDD	395.0	329.0	62.8	n/a
2,3,7,8 TCDF	14.4	34.6	5.0	n/a
1,2,3,7,8 PeCDF	24.7	58.8	8.9	n/a
2,3,4,7,8-PeCDF	53.3	150.0	21.3	n/a
1,2,3,4,7,8 HxCDF	56.8	115.0	16.6	n/a
1,2,3,6,7,8 HxCDF	65.2	141.0	21.6	n/a
2,3,4,6,7,8-HxCDF	113.0	229.0	34.2	n/a
1,2,3,7,8,9 HxCDF	18.6	14.4	3.3	n/a
1,2,3,4,6,7,8 HpCDF	330.0	437.0	75.9	n/a
1,2,3,4,7,8,9 HpCDF	22.6	12.2	3.2	n/a
OCDF	47.2	21.0	5.6	n/a
Summation of Tetrachlorodibenzodioxins	54.6	129.0	18.9	n/a
Summation of Pentachlorodibenzodioxins	144.0	564.0	48.4	n/a
Summation of Hexachlorodibenzodioxins	362.0	1010.0	79.0	n/a
Summation of Heptachlorodibenzodioxins	460.0	740.0	86.6	n/a
Summation of PCDDs	1420.0	2770.0	296.0	n/a
Summation of Tetrachlorodibenzofurans	343.0	1080.0	155.0	n/a
Summation of Pentachlorodibenzofurans	451.0	1350.0	190.0	n/a
Summation of Hexachlorodibenzofurans	484.0	1180.0	171.0	n/a
Summation of Heptachlorodibenzofurans	435.0	507.0	90.3	n/a
Summation of PCDFs	1760.0	4140.0	611.0	n/a
TOTAL TOXIC CONGENERS	1471.2	2064.2	326.9	n/a
TOTAL HOMOLOGOUS GROUPS	3180.0	6910.0	907.0	n/a

Agnico Eagle Mines, Meliadine				
24-8263				
Incinerator 2				
Semi-Volatile Organic Compounds				
EXPERIMENTAL SCHEDULE				
RUN NUMBER	INC2-COSV-E1	INC2-COSV-E2	INC2-COSV-E3	AVERAGE
RUN DATE	2024-08-19	2024-08-20	2024-08-20	(1 to 3)
START OF RUN	12h42	08h02	12h21	
END OF RUN	16h26	11h02	15h21	
RUN DURATION (minutes)	180	180	180	
NUMBER OF MEASUREMENTS	36	36	36	
DIOXINS AND FURANS (pg) – Calculated according to the TEF				
2,3,7,8-TCDD	1.5	4.1	0.8	n/a
1,2,3,7,8 PeCDD	19.6	50.0	7.2	n/a
1,2,3,4,7,8 HxCDD	1.8	3.1	0.4	n/a
1,2,3,6,7,8 HxCDD	3.5	6.6	0.7	n/a
1,2,3,7,8,9 HxCDD	2.7	5.6	0.6	n/a
1,2,3,4,6,7,8 HpCDD	2.3	3.2	0.4	n/a
OCDD	0.0	0.0	0.0	n/a
2,3,7,8 TCDF	1.4	3.5	0.5	n/a
1,2,3,7,8 PeCDF	1.2	2.9	0.4	n/a
2,3,4,7,8-PeCDF	26.7	75.0	10.7	n/a
1,2,3,4,7,8 HxCDF	5.7	11.5	1.7	n/a
1,2,3,6,7,8 HxCDF	6.5	14.1	2.2	n/a
2,3,4,6,7,8-HxCDF	11.3	22.9	3.4	n/a
1,2,3,7,8,9 HxCDF	1.9	1.4	0.3	n/a
1,2,3,4,6,7,8 HpCDF	3.3	4.4	0.8	n/a
1,2,3,4,7,8,9 HpCDF	0.2	0.1	0.0	n/a
OCDF	0.0	0.0	0.0	n/a
TOTAL TOXIC EQUIVALENCE	89.6	208.3	30.0	n/a

Agnico Eagle Mines, Meliadine 24-8263 Incinerator 2 Semi-Volatile Organic Compounds				
EXPERIMENTAL SCHEDULE				
RUN NUMBER	INC2-COSV-E1	INC2-COSV-E2	INC2-COSV-E3	AVERAGE
RUN DATE	2024-08-19	2024-08-20	2024-08-20	(1 to 3)
START OF RUN	12h42	08h02	12h21	
END OF RUN	16h26	11h02	15h21	
RUN DURATION (minutes)	180	180	180	
NUMBER OF MEASUREMENTS	36	36	36	
DIOXINS AND FURANS (ng/m³R)				
2,3,7,8-TCDD	0.0004999	0.001341	0.0002566	0.0006991
1,2,3,7,8 PeCDD	0.006532	0.01635	0.002309	0.008398
1,2,3,4,7,8 HxCDD	0.005899	0.01004	0.001315	0.005751
1,2,3,6,7,8 HxCDD	0.01163	0.02145	0.002085	0.01172
1,2,3,7,8,9 HxCDD	0.008899	0.01825	0.001828	0.009658
1,2,3,4,6,7,8 HpCDD	0.07666	0.1033	0.01418	0.06472
OCDD	0.1316	0.1076	0.02014	0.08646
2,3,7,8 TCDF	0.004799	0.01132	0.001604	0.005906
1,2,3,7,8 PeCDF	0.008232	0.01923	0.002854	0.01011
2,3,4,7,8-PeCDF	0.01776	0.04905	0.006831	0.02455
1,2,3,4,7,8 HxCDF	0.01893	0.03761	0.005324	0.02062
1,2,3,6,7,8 HxCDF	0.02173	0.04611	0.006927	0.02492
2,3,4,6,7,8-HxCDF	0.03766	0.07489	0.01097	0.04117
1,2,3,7,8,9 HxCDF	0.006199	0.004709	0.001058	0.003989
1,2,3,4,6,7,8 HpCDF	0.1100	0.1429	0.02434	0.09241
1,2,3,4,7,8,9 HpCDF	0.007532	0.003990	0.001026	0.004183
OCDF	0.01573	0.006868	0.001796	0.008132
Summation of Tetrachlorodibenzodioxins	0.01820	0.04219	0.006061	0.02215
Summation of Pentachlorodibenzodioxins	0.04799	0.1844	0.01552	0.08265
Summation of Hexachlorodibenzodioxins	0.1207	0.3303	0.02534	0.1588
Summation of Heptachlorodibenzodioxins	0.1533	0.2420	0.02777	0.1410
Summation of PCDDs	0.4733	0.9059	0.09493	0.4914
Summation of Tetrachlorodibenzofurans	0.1143	0.3532	0.04971	0.1724
Summation of Pentachlorodibenzofurans	0.1503	0.4415	0.06093	0.2176
Summation of Hexachlorodibenzofurans	0.1613	0.3859	0.05484	0.2007
Summation of Heptachlorodibenzofurans	0.1450	0.1658	0.02896	0.1132
Summation of PCDFs	0.5866	1.354	0.1960	0.7121
TOTAL TOXIC CONGENERS	0.4903	0.6751	0.1048	0.4234
TOTAL HOMOLOGOUS GROUPS	1.060	2.260	0.2909	1.204

Agnico Eagle Mines, Meliadine				
24-8263				
Incinerator 2				
Semi-Volatile Organic Compounds				
EXPERIMENTAL SCHEDULE				
RUN NUMBER	INC2-COSV-E1	INC2-COSV-E2	INC2-COSV-E3	AVERAGE
RUN DATE	2024-08-19	2024-08-20	2024-08-20	(1 to 3)
START OF RUN	12h42	08h02	12h21	
END OF RUN	16h26	11h02	15h21	
RUN DURATION (minutes)	180	180	180	
NUMBER OF MEASUREMENTS	36	36	36	
DIOXINS AND FURANS (ng/m³R) – Calculated according to the TEF				
2,3,7,8-TCDD	0.0004999	0.001341	0.0002566	0.0006991
1,2,3,7,8 PeCDD	0.006532	0.01635	0.002309	0.008398
1,2,3,4,7,8 HxCDD	0.0005899	0.001004	0.0001315	0.0005751
1,2,3,6,7,8 HxCDD	0.001163	0.002145	0.0002085	0.001172
1,2,3,7,8,9 HxCDD	0.0008899	0.001825	0.0001828	0.0009658
1,2,3,4,6,7,8 HpCDD	0.0007666	0.001033	0.0001418	0.0006472
OCDD	0.00001316	0.00001076	0.000002014	0.000008646
2,3,7,8 TCDF	0.0004799	0.001132	0.0001604	0.0005906
1,2,3,7,8 PeCDF	0.0004116	0.0009615	0.0001427	0.0005053
2,3,4,7,8-PeCDF	0.008882	0.02453	0.003416	0.01227
1,2,3,4,7,8 HxCDF	0.001893	0.003761	0.0005324	0.002062
1,2,3,6,7,8 HxCDF	0.002173	0.004611	0.0006927	0.002492
2,3,4,6,7,8-HxCDF	0.003766	0.007489	0.001097	0.004117
1,2,3,7,8,9 HxCDF	0.0006199	0.0004709	0.0001058	0.0003989
1,2,3,4,6,7,8 HpCDF	0.001100	0.001429	0.0002434	0.0009241
1,2,3,4,7,8,9 HpCDF	0.00007532	0.00003990	0.00001026	0.00004183
OCDF	0.000001573	0.0000006868	0.0000001796	0.0000008132
TOTAL TOXIC EQUIVALENCE	0.02986	0.06813	0.009632	0.03587

Agnico Eagle Mines, Meliadine 24-8263 Incinerator 2 Semi-Volatile Organic Compounds				
EXPERIMENTAL SCHEDULE				
RUN NUMBER	INC2-COSV-E1	INC2-COSV-E2	INC2-COSV-E3	AVERAGE
RUN DATE	2024-08-19	2024-08-20	2024-08-20	(1 to 3)
START OF RUN	12h42	08h02	12h21	
END OF RUN	16h26	11h02	15h21	
RUN DURATION (minutes)	180	180	180	
NUMBER OF MEASUREMENTS	36	36	36	
DIOXINS AND FURANS (ng/m3R at 11% O2)				
2,3,7,8-TCDD	0.0003694	0.001106	0.0002592	0.0005782
1,2,3,7,8 PeCDD	0.004826	0.01349	0.002333	0.006883
1,2,3,4,7,8 HxCDD	0.004358	0.008283	0.001328	0.004657
1,2,3,6,7,8 HxCDD	0.008594	0.01770	0.002106	0.009466
1,2,3,7,8,9 HxCDD	0.006575	0.01505	0.001847	0.007825
1,2,3,4,6,7,8 HpCDD	0.05663	0.08526	0.01432	0.05207
OCDD	0.09726	0.08876	0.02035	0.06879
2,3,7,8 TCDF	0.003546	0.009335	0.001620	0.004834
1,2,3,7,8 PeCDF	0.006082	0.01586	0.002883	0.008277
2,3,4,7,8-PeCDF	0.01312	0.04047	0.006901	0.02017
1,2,3,4,7,8 HxCDF	0.01399	0.03103	0.005378	0.01680
1,2,3,6,7,8 HxCDF	0.01605	0.03804	0.006998	0.02036
2,3,4,6,7,8-HxCDF	0.02782	0.06178	0.01108	0.03356
1,2,3,7,8,9 HxCDF	0.004580	0.003885	0.001069	0.003178
1,2,3,4,6,7,8 HpCDF	0.08126	0.1179	0.02459	0.07458
1,2,3,4,7,8,9 HpCDF	0.005565	0.003292	0.001037	0.003298
OCDF	0.01162	0.005666	0.001814	0.006367
Summation of Tetrachlorodibenzodioxins	0.01344	0.03480	0.006123	0.01812
Summation of Pentachlorodibenzodioxins	0.03546	0.1522	0.01568	0.06777
Summation of Hexachlorodibenzodioxins	0.08914	0.2725	0.02559	0.1291
Summation of Heptachlorodibenzodioxins	0.1133	0.1997	0.02806	0.1137
Summation of PCDDs	0.3497	0.7473	0.09590	0.3976
Summation of Tetrachlorodibenzofurans	0.08446	0.2914	0.05022	0.1420
Summation of Pentachlorodibenzofurans	0.1111	0.3642	0.06156	0.1789
Summation of Hexachlorodibenzofurans	0.1192	0.3184	0.05540	0.1643
Summation of Heptachlorodibenzofurans	0.1071	0.1368	0.02926	0.09105
Summation of PCDFs	0.4334	1.117	0.1980	0.5828
TOTAL TOXIC CONGENERS	0.3623	0.5569	0.1059	0.3417
TOTAL HOMOLOGOUS GROUPS	0.7830	1.864	0.2939	0.9804

Agnico Eagle Mines, Meliadine 24-8263 Incinerator 2 Semi-Volatile Organic Compounds				
EXPERIMENTAL SCHEDULE				
RUN NUMBER	INC2-COSV-E1	INC2-COSV-E2	INC2-COSV-E3	AVERAGE
RUN DATE	2024-08-19	2024-08-20	2024-08-20	(1 to 3)
START OF RUN	12h42	08h02	12h21	
END OF RUN	16h26	11h02	15h21	
RUN DURATION (minutes)	180	180	180	
NUMBER OF MEASUREMENTS	36	36	36	
DIOXINS AND FURANS (ng/m3R at 11% O2) – Calculated according to the TEF				
2,3,7,8-TCDD	0.0003694	0.001106	0.0002592	0.0005782
1,2,3,7,8 PeCDD	0.004826	0.01349	0.002333	0.006883
1,2,3,4,7,8 HxCDD	0.0004358	0.0008283	0.0001328	0.0004657
1,2,3,6,7,8 HxCDD	0.0008594	0.001770	0.0002106	0.0009466
1,2,3,7,8,9 HxCDD	0.0006575	0.001505	0.0001847	0.0007825
1,2,3,4,6,7,8 HpCDD	0.0005663	0.0008526	0.0001432	0.0005207
OCDD	0.000009726	0.000008876	0.000002035	0.000006879
2,3,7,8 TCDF	0.0003546	0.0009335	0.0001620	0.0004834
1,2,3,7,8 PeCDF	0.0003041	0.0007932	0.0001442	0.0004138
2,3,4,7,8-PeCDF	0.006562	0.02023	0.003450	0.01008
1,2,3,4,7,8 HxCDF	0.001399	0.003103	0.0005378	0.001680
1,2,3,6,7,8 HxCDF	0.001605	0.003804	0.0006998	0.002036
2,3,4,6,7,8-HxCDF	0.002782	0.006178	0.001108	0.003356
1,2,3,7,8,9 HxCDF	0.0004580	0.0003885	0.0001069	0.0003178
1,2,3,4,6,7,8 HpCDF	0.0008126	0.001179	0.0002459	0.0007458
1,2,3,4,7,8,9 HpCDF	0.00005565	0.00003292	0.00001037	0.00003298
OCDF	0.000001162	0.0000005666	0.0000001814	0.0000006367
TOTAL TOXIC EQUIVALENCE	0.02206	0.05621	0.009731	0.02933
Air Emission Standard for Dioxins and Furans (ng/m3R at 11% O2)		0.08		

Agnico Eagle Mines, Meliadine 24-8263 Incinerator 2 Semi-Volatile Organic Compounds				
EXPERIMENTAL SCHEDULE				
RUN NUMBER	INC2-COSV-E1	INC2-COSV-E2	INC2-COSV-E3	AVERAGE
RUN DATE	2024-08-19	2024-08-20	2024-08-20	(1 to 3)
START OF RUN	12h42	08h02	12h21	
END OF RUN	16h26	11h02	15h21	
RUN DURATION (minutes)	180	180	180	
NUMBER OF MEASUREMENTS	36	36	36	
DIOXINS AND FURANS (µg/h)				
2,3,7,8-TCDD	0.0006277	0.001744	0.0003414	0.0009044
1,2,3,7,8 PeCDD	0.008202	0.02127	0.003072	0.01085
1,2,3,4,7,8 HxCDD	0.007407	0.01306	0.001750	0.007405
1,2,3,6,7,8 HxCDD	0.01461	0.02791	0.002774	0.01509
1,2,3,7,8,9 HxCDD	0.01117	0.02374	0.002432	0.01245
1,2,3,4,6,7,8 HpCDD	0.09625	0.1344	0.01886	0.08318
OCDD	0.1653	0.1400	0.02680	0.1107
2,3,7,8 TCDF	0.006026	0.01472	0.002134	0.007626
1,2,3,7,8 PeCDF	0.01034	0.02501	0.003798	0.01305
2,3,4,7,8-PeCDF	0.02231	0.06381	0.009089	0.03173
1,2,3,4,7,8 HxCDF	0.02377	0.04892	0.007083	0.02659
1,2,3,6,7,8 HxCDF	0.02729	0.05998	0.009217	0.03216
2,3,4,6,7,8-HxCDF	0.04729	0.09741	0.01459	0.05310
1,2,3,7,8,9 HxCDF	0.007784	0.006126	0.001408	0.005106
1,2,3,4,6,7,8 HpCDF	0.1381	0.1859	0.03239	0.1188
1,2,3,4,7,8,9 HpCDF	0.009458	0.005190	0.001365	0.005338
OCDF	0.01975	0.008933	0.002390	0.01036
Summation of Tetrachlorodibenzodioxins	0.02285	0.05488	0.008065	0.02860
Summation of Pentachlorodibenzodioxins	0.06026	0.2399	0.02065	0.1069
Summation of Hexachlorodibenzodioxins	0.1515	0.4296	0.03371	0.2049
Summation of Heptachlorodibenzodioxins	0.1925	0.3148	0.03695	0.1814
Summation of PCDDs	0.5943	1.178	0.1263	0.6330
Summation of Tetrachlorodibenzofurans	0.1435	0.4594	0.06614	0.2230
Summation of Pentachlorodibenzofurans	0.1887	0.5743	0.08108	0.2814
Summation of Hexachlorodibenzofurans	0.2025	0.5020	0.07297	0.2592
Summation of Heptachlorodibenzofurans	0.1820	0.2157	0.03853	0.1454
Summation of PCDFs	0.7365	1.761	0.2607	0.9195
TOTAL TOXIC CONGENERS	0.6157	0.8781	0.1395	0.5444
TOTAL HOMOLOGOUS GROUPS	1.331	2.939	0.3870	1.552

Agnico Eagle Mines, Meliadine 24-8263 Incinerator 2 Semi-Volatile Organic Compounds				
EXPERIMENTAL SCHEDULE				
RUN NUMBER	INC2-COSV-E1	INC2-COSV-E2	INC2-COSV-E3	AVERAGE
RUN DATE	2024-08-19	2024-08-20	2024-08-20	(1 to 3)
START OF RUN	12h42	08h02	12h21	
END OF RUN	16h26	11h02	15h21	
RUN DURATION (minutes)	180	180	180	
NUMBER OF MEASUREMENTS	36	36	36	
DIOXINS AND FURANS (µg/h) – Calculated according to the TEF				
2,3,7,8-TCDD	0.0006277	0.001744	0.0003414	0.0009044
1,2,3,7,8 PeCDD	0.008202	0.02127	0.003072	0.01085
1,2,3,4,7,8 HxCDD	0.0007407	0.001306	0.0001750	0.0007405
1,2,3,6,7,8 HxCDD	0.001461	0.002791	0.0002774	0.001509
1,2,3,7,8,9 HxCDD	0.001117	0.002374	0.0002432	0.001245
1,2,3,4,6,7,8 HpCDD	0.0009625	0.001344	0.0001886	0.0008318
OCDD	0.00001653	0.00001400	0.000002680	0.00001107
2,3,7,8 TCDF	0.0006026	0.001472	0.0002134	0.0007626
1,2,3,7,8 PeCDF	0.0005168	0.001251	0.0001899	0.0006525
2,3,4,7,8-PeCDF	0.01115	0.03190	0.004545	0.01587
1,2,3,4,7,8 HxCDF	0.002377	0.004892	0.0007083	0.002659
1,2,3,6,7,8 HxCDF	0.002729	0.005998	0.0009217	0.003216
2,3,4,6,7,8-HxCDF	0.004729	0.009741	0.001459	0.005310
1,2,3,7,8,9 HxCDF	0.0007784	0.0006126	0.0001408	0.0005106
1,2,3,4,6,7,8 HpCDF	0.001381	0.001859	0.0003239	0.001188
1,2,3,4,7,8,9 HpCDF	0.00009458	0.00005190	0.00001365	0.00005338
OCDF	0.000001975	0.0000008933	0.0000002390	0.000001036
TOTAL TOXIC EQUIVALENCE	0.03749	0.08862	0.01282	0.04631
R: Reference conditions at 101.3 kPa and 25°C, on a dry basis				

Sampling survey : Incinerator 2 – SVOC – Run 1																						
Time	Trav. #	Point #	Pumping duration (min)	Pressure difference (in H ₂ O)		Temperatures (°F)				Gas volume (ft³)			Velocity (m/s)	Iso. (%)	O ₂ (%v)	CO ₂ (%v)	CO (ppmv)	Vaccuum (in. Hg)	Temperatures (°F)			
				ΔP	ΔH	Stack	Dry gas meter in	Dry gas meter out	Orifice	Start	End	Total							Probe	Filter	Exit	Trap
12H42	1	1	5	0.07	0.76	1660	63	63	63	97.36	99.80	2.44	8.03	100.62	7.0	11.0	5.0	-4	250	249	50	52
		2	5	0.07	0.75	1675	63	63	63	99.80	102.27	2.47	8.06	102.21	7.0	11.0	5.0	-4	250	249	50	52
		3	5	0.08	0.85	1695	63	63	63	102.27	104.86	2.59	8.66	100.75	7.0	11.0	5.0	-4	250	249	50	52
		4	5	0.09	0.95	1720	64	64	64	104.86	107.60	2.74	9.24	100.9	7.0	11.0	5.0	-6	250	249	50	52
		5	5	0.09	0.95	1723	64	64	64	107.60	110.37	2.77	9.25	102.08	7.0	11.0	5.0	-6	250	252	50	52
		6	5	0.09	0.94	1732	64	64	64	110.37	113.12	2.75	9.26	101.55	7.0	11.0	5.0	-8	250	252	50	52
		7	5	0.10	1.04	1738	64	64	64	113.12	116.00	2.88	9.78	101.05	7.0	11.0	5.0	-8	250	252	50	52
		8	5	0.10	1.04	1741	64	64	64	116.00	118.87	2.87	9.79	100.77	7.0	11.0	5.0	-10	250	252	50	52
		9	5	0.11	1.15	1743	64	64	64	118.87	121.88	3.01	10.27	100.84	7.0	11.0	5.0	-10	250	251	49	53
		10	5	0.11	1.15	1745	64	64	64	121.88	124.92	3.04	10.27	101.89	7.0	11.0	5.0	-12	250	251	49	53
		11	5	0.11	1.14	1750	64	64	64	124.92	127.90	2.98	10.28	99.992	7.0	11.0	5.0	-12	250	251	49	53
		12	5	0.11	1.14	1762	64	64	64	127.90	130.85	2.95	10.31	99.252	7.0	11.0	5.0	-13	250	251	49	53
		13	5	0.11	1.13	1773	64	64	64	130.85	133.76	2.91	10.34	98.147	7.0	11.0	5.0	-14	250	255	49	53
		14	5	0.11	1.13	1780	64	64	64	133.76	136.64	2.88	10.35	97.287	7.0	11.0	5.0	-15	250	255	49	53
		15	5	0.11	1.13	1782	64	64	64	136.64	139.48	2.84	10.36	95.978	7.0	11.0	5.0	-15	250	255	49	53
		16	5	0.11	1.13	1777	65	65	65	139.48	142.30	2.82	10.35	95.015	7.0	11.0	5.0	-19	250	255	49	53
		17	5	0.11	1.13	1775	65	65	65	142.30	145.10	2.80	10.34	94.3	7.0	11.0	5.0	-19	250	253	49	53
14h12	2	18	5	0.11	1.13	1772	65	65	65	145.10	147.88	2.78	10.33	93.564	7.0	11.0	5.0	-19	250	253	49	53
14H56		1	5	0.10	1.03	1765	65	65	65	148.12	151.00	2.88	9.84	101.48	7.0	11.0	5.0	-4	250	255	53	50
		2	5	0.10	1.03	1769	65	65	65	151.00	153.90	2.90	9.85	102.27	7.0	11.0	5.0	-4	250	255	53	50
		3	5	0.10	1.03	1765	65	65	65	153.90	156.79	2.89	9.84	101.83	7.0	11.0	5.0	-4	250	253	53	50
		4	5	0.10	1.04	1760	65	65	65	156.79	159.70	2.91	9.83	102.42	7.0	11.0	5.0	-5	250	253	53	50
		5	5	0.09	0.93	1758	65	65	65	159.70	162.44	2.74	9.32	101.58	7.0	11.0	5.0	-5	250	253	53	50
		6	5	0.09	0.93	1758	65	65	65	162.44	165.18	2.74	9.32	101.58	7.0	11.0	5.0	-6	250	253	53	50
		7	5	0.09	0.93	1755	65	65	65	165.18	167.94	2.76	9.31	102.25	7.0	11.0	5.0	-7	250	249	53	50
		8	5	0.10	1.04	1751	65	65	65	167.94	170.80	2.86	9.81	100.46	7.0	11.0	5.0	-8	250	249	53	50
		9	5	0.11	1.15	1749	65	65	65	170.80	173.84	3.04	10.28	101.79	7.0	11.0	5.0	-8	250	249	53	50
		10	5	0.11	1.14	1753	65	65	65	173.84	176.85	3.01	10.29	100.87	7.0	11.0	5.0	-10	250	249	53	50
		11	5	0.11	1.14	1755	66	66	66	176.85	179.80	2.95	10.30	98.721	7.0	11.0	5.0	-10	250	247	53	50
		12	5	0.11	1.14	1755	66	66	66	179.80	182.75	2.95	10.30	98.721	7.0	11.0	5.0	-12	250	247	50	54
		13	5	0.11	1.14	1759	66	66	66	182.75	185.70	2.95	10.30	98.809	7.0	11.0	5.0	-13	250	247	50	54
		14	5	0.11	1.14	1762	66	66	66	185.70	188.63	2.93	10.31	98.205	7.0	11.0	5.0	-14	250	247	50	54
		15	5	0.11	1.14	1764	66	66	66	188.63	191.55	2.92	10.32	97.914	7.0	11.0	5.0	-15	250	245	50	54
		16	5	0.11	1.14	1768	66	66	66	191.55	194.47	2.92	10.33	98.001	7.0	11.0	5.0	-17	250	245	50	54
		17	5	0.12	1.24	1771	66	66	66	194.47	197.50	3.03	10.79	97.454	7.0	11.0	5.0	-18	250	245	50	54
16h26	18	5	0.12	1.24	1771	66	66	66	197.50	200.50	3.00	10.79	96.489	7.0	11.0	5.0	-18	250	245	50	54	

Sampling survey : Incinerator 2 – SVOC – Run 2																						
Time	Trav. #	Point #	Pumping duration (min)	Pressure difference (in H ₂ O)		Temperatures (°F)				Gas volume (ft³)			Velocity (m/s)	Iso. (%)	O ₂ (%v)	CO ₂ (%v)	CO (ppmv)	Vaccum (in. Hg)	Temperatures (°F)			
				ΔP	ΔH	Stack	Dry gas meter in	Dry gas meter out	Orifice	Start	End	Total							Probe	Filter	Exit	Trap
08h02	1	1	5	0.08	0.86	1654	57	57	57	1.11	3.81	2.70	8.53	101.39	8.0	9.5	5.0	-2	250	253	48	51
		2	5	0.07	0.75	1667	57	57	57	3.81	6.31	2.50	8.00	100.64	8.0	9.5	4.0	-2	250	251	48	51
		3	5	0.09	0.95	1686	57	57	57	6.31	8.99	2.68	9.12	95.621	8.0	9.5	4.0	-2	250	254	48	51
		4	5	0.09	0.95	1685	57	57	57	8.99	11.67	2.68	9.11	95.598	8.0	9.5	4.0	-3	250	255	48	51
		5	5	0.09	0.95	1698	58	58	58	11.67	14.47	2.80	9.14	99.987	8.0	9.5	4.0	-4	250	253	48	51
		6	5	0.10	1.04	1714	58	58	58	14.47	17.42	2.95	9.67	100.33	8.0	9.5	4.0	-5	250	252	49	52
		7	5	0.10	1.05	1700	58	58	58	17.42	20.37	2.95	9.64	100.01	8.0	9.5	4.0	-5	250	254	49	52
		8	5	0.10	1.03	1746	58	58	58	20.37	23.24	2.87	9.74	98.322	8.0	9.5	4.0	-5	250	254	49	52
		9	5	0.11	1.16	1692	58	58	58	23.24	26.21	2.97	10.09	95.849	8.0	9.5	4.0	-5	250	257	49	52
		10	5	0.11	1.16	1694	58	58	58	26.21	29.28	3.07	10.10	99.122	8.0	9.5	4.0	-5	250	257	49	52
		11	5	0.11	1.14	1728	59	59	59	29.28	32.24	2.96	10.18	96.132	8.0	9.5	4.0	-5	250	256	49	52
		12	5	0.11	1.14	1739	59	59	59	32.24	35.20	2.96	10.20	96.372	8.0	9.5	4.0	-5	250	254	50	52
		13	5	0.11	1.13	1749	59	59	59	35.20	38.19	2.99	10.22	97.569	8.0	9.5	4.0	-5	250	249	50	53
		14	5	0.11	1.13	1755	59	59	59	38.19	41.27	3.08	10.24	100.64	8.0	9.5	4.0	-5	250	247	50	53
		15	5	0.11	1.13	1756	59	59	59	41.27	44.35	3.08	10.24	100.66	8.0	9.5	4.0	-5	250	248	50	53
		16	5	0.11	1.13	1762	59	59	59	44.35	47.34	2.99	10.25	97.854	8.0	9.5	4.0	-6	250	250	49	51
		17	5	0.11	1.13	1766	60	60	60	47.34	50.39	3.05	10.26	99.715	8.0	9.5	4.0	-6	250	250	49	51
		18	5	0.11	1.12	1771	60	60	60	50.39	53.40	3.01	10.28	98.518	8.0	9.5	4.0	-6	250	250	49	51
	2	1	5	0.10	1.02	1780	60	60	60	53.40	56.26	2.86	9.82	98.349	8.0	9.5	4.0	-6	250	253	49	51
		2	5	0.10	1.01	1786	60	60	60	56.26	59.07	2.81	9.83	96.759	8.0	9.5	4.0	-6	250	254	49	51
		3	5	0.10	1.02	1781	60	60	60	59.07	61.90	2.83	9.82	97.339	8.0	9.5	4.0	-6	250	255	49	51
		4	5	0.10	1.02	1783	60	60	60	61.90	64.80	2.90	9.82	99.791	8.0	9.5	4.0	-6	250	255	49	51
		5	5	0.09	0.91	1785	61	61	61	64.80	67.48	2.68	9.32	97.042	8.0	9.5	4.0	-6	250	252	49	51
		6	5	0.09	0.91	1788	61	61	61	67.48	70.21	2.73	9.33	98.918	8.0	9.5	4.0	-6	250	249	51	53
		7	5	0.09	0.91	1788	61	61	61	70.21	72.90	2.69	9.33	97.469	8.0	9.5	4.0	-6	250	248	51	53
		8	5	0.10	1.01	1798	61	61	61	72.90	75.70	2.80	9.86	96.485	8.0	9.5	4.0	-6	250	249	51	53
		9	5	0.11	1.11	1802	61	61	61	75.70	78.62	2.92	10.35	96.046	8.0	9.5	4.0	-6	250	258	51	53
		10	5	0.11	1.11	1806	62	62	62	78.62	81.60	2.98	10.36	97.918	8.0	9.5	4.0	-7	250	257	51	53
		11	5	0.11	1.11	1806	62	62	62	81.60	84.53	2.93	10.36	96.275	8.0	9.5	4.0	-7	250	255	51	53
		12	5	0.11	1.11	1807	62	62	62	84.53	87.48	2.95	10.36	96.953	8.0	9.5	4.0	-8	250	255	51	54
		13	5	0.11	1.11	1810	62	62	62	87.48	90.36	2.88	10.36	94.715	8.0	9.5	4.0	-8	250	254	52	54
		14	5	0.11	1.11	1811	62	62	62	90.36	93.30	2.94	10.37	96.709	8.0	9.5	4.0	-8	250	253	52	58
		15	5	0.11	1.11	1815	62	62	62	93.30	96.22	2.92	10.38	96.136	8.0	9.5	4.0	-8	250	252	52	58
		16	5	0.10	1.00	1819	62	62	62	96.22	99.12	2.90	9.90	100.2	8.0	9.5	4.0	-8	250	252	52	58
		17	5	0.11	1.14	1750	62	62	62	99.12	102.12	3.00	10.23	97.356	8.0	9.5	4.0	-8	250	252	52	58
11h02		18	5	0.10	1.05	1723	62	62	62	102.12	105.00	2.88	9.69	97.401	8.0	9.5	4.0	-8	250	251	54	59

Sampling survey : Incinerator 2 – SVOC – Run 3																						
Time	Trav. #	Point #	Pumping duration (min)	Pressure difference (in H ₂ O)		Temperatures (°F)				Gas volume (ft³)			Velocity (m/s)	Iso. (%)	O ₂ (%v)	CO ₂ (%v)	CO (ppmv)	Vaccum (in. Hg)	Temperatures (°F)			
				ΔP	ΔH	Stack	Dry gas meter in	Dry gas meter out	Orifice	Start	End	Total							Probe	Filter	Exit	Trap
12h21	1	1	5	0.07	0.72	1756	61	61	61	5.25	7.73	2.48	8.18	100.82	8.5	10.1	9.0	-1	250	253	50	51
		2	5	0.07	0.73	1728	61	61	61	7.73	10.19	2.46	8.12	99.377	8.5	10.1	9.0	-1	250	254	50	51
		3	5	0.08	0.83	1730	61	61	61	10.19	12.76	2.57	8.69	97.184	8.5	10.1	9.0	-1	250	255	50	51
		4	5	0.09	0.93	1732	61	61	61	12.76	15.46	2.70	9.22	96.329	8.5	10.1	9.0	-2	250	256	50	51
		5	5	0.09	0.94	1705	61	61	61	15.46	18.25	2.79	9.16	98.928	8.5	10.1	9.0	-2	250	249	50	51
		6	5	0.09	0.95	1687	61	61	61	18.25	21.00	2.75	9.12	97.105	8.5	10.1	9.0	-2	250	250	51	51
		7	5	0.10	1.05	1716	62	62	62	21.00	23.92	2.92	9.68	98.309	8.5	10.1	9.0	-4	250	250	51	51
		8	5	0.10	1.06	1680	62	62	62	23.92	26.87	2.95	9.60	98.498	8.5	10.1	9.0	-4	250	252	51	51
		9	5	0.11	1.16	1691	62	62	62	26.87	29.87	3.00	10.10	95.775	8.5	10.1	9.0	-4	250	253	51	51
		10	5	0.11	1.16	1690	62	62	62	29.87	32.86	2.99	10.09	95.434	8.5	10.1	9.0	-4	250	253	51	51
		11	5	0.11	1.18	1667	63	63	63	32.86	36.00	3.14	10.04	99.496	8.5	10.1	9.0	-4	250	256	51	51
		12	5	0.11	1.17	1686	63	63	63	36.00	39.12	3.12	10.09	99.301	8.5	10.1	9.0	-5	250	254	51	53
		13	5	0.11	1.19	1657	64	64	64	39.12	42.23	3.11	10.02	98.128	8.5	10.1	9.0	-5	250	259	52	53
		14	5	0.11	1.17	1692	64	64	64	42.23	45.32	3.09	10.10	98.295	8.5	10.1	9.0	-5	250	256	52	53
		15	5	0.11	1.18	1671	64	64	64	45.32	48.35	3.03	10.05	95.918	8.5	10.1	9.0	-5	250	257	52	53
		16	5	0.11	1.18	1675	64	64	64	48.35	51.38	3.03	10.06	96.007	8.5	10.1	9.0	-5	250	254	52	53
		17	5	0.11	1.19	1660	64	64	64	51.38	54.50	3.12	10.02	98.513	8.5	10.1	9.0	-5	250	250	52	53
		18	5	0.11	1.18	1675	64	64	64	54.50	57.56	3.06	10.06	96.958	8.5	10.1	9.0	-5	250	252	52	53
	2	1	5	0.10	1.06	1689	65	65	65	57.56	60.56	3.00	9.62	99.805	8.5	10.1	9.0	-5	250	252	55	55
		2	5	0.10	1.08	1659	65	65	65	60.56	63.57	3.01	9.56	99.439	8.5	10.1	9.0	-5	250	254	55	55
		3	5	0.10	1.07	1674	65	65	65	63.57	66.52	2.95	9.59	97.8	8.5	10.1	9.0	-5	250	256	55	55
		4	5	0.10	1.06	1689	65	65	65	66.52	69.47	2.95	9.62	98.141	8.5	10.1	9.0	-5	250	250	55	55
		5	5	0.09	0.98	1649	65	65	65	69.47	72.28	2.81	9.04	97.598	8.5	10.1	9.0	-5	250	254	55	55
		6	5	0.09	0.96	1681	64	64	64	72.28	75.11	2.83	9.11	99.221	8.5	10.1	9.0	-5	250	256	55	55
		7	5	0.09	0.96	1675	64	64	64	75.11	78.00	2.89	9.10	101.18	8.5	10.1	9.0	-5	250	256	55	55
		8	5	0.10	1.08	1651	64	64	64	78.00	80.88	2.88	9.54	95.147	8.5	10.1	9.0	-5	250	255	56	58
		9	5	0.11	1.19	1648	64	64	64	80.88	83.97	3.09	10.00	97.291	8.5	10.1	9.0	-6	250	255	56	58
		10	5	0.11	1.18	1671	64	64	64	83.97	87.03	3.06	10.05	96.867	8.5	10.1	9.0	-6	250	254	56	58
		11	5	0.11	1.17	1680	64	64	64	87.03	90.08	3.05	10.07	96.753	8.5	10.1	9.0	-6	250	249	56	58
		12	5	0.11	1.17	1680	64	64	64	90.08	93.08	3.00	10.07	95.167	8.5	10.1	9.0	-6	250	249	56	58
		13	5	0.11	1.17	1681	64	64	64	93.08	96.12	3.04	10.07	96.459	8.5	10.1	9.0	-6	250	244	54	54
		14	5	0.11	1.17	1684	65	65	65	96.12	99.25	3.13	10.08	99.194	8.5	10.1	9.0	-6	250	245	54	54
		15	5	0.11	1.19	1649	65	65	65	99.25	102.36	3.11	10.00	97.757	8.5	10.1	9.0	-7	250	249	54	54
		16	5	0.11	1.20	1645	65	65	65	102.36	105.44	3.08	9.99	96.723	8.5	10.1	9.0	-9	250	245	54	54
		17	5	0.12	1.30	1660	65	65	65	105.44	108.72	3.28	10.47	98.993	8.5	10.1	9.0	-9	250	253	54	54
15h21		18	5	0.12	1.29	1675	65	65	65	108.72	111.93	3.21	10.51	97.221	8.5	10.1	9.0	-9	250	257	54	54

INC2-COSV-E1

Impingers – liquid mass

	Before	After	Difference
IMP. 1	263.6	250.23	13.37
IMP. 2	743.83	507.86	235.97
IMP. 3	730.79	695.95	34.84
IMP. 4	610.06	609.87	0.19
IMP. 5			
IMP. 6			
IMP. 7			
IMP. 8			
IMP. 9			
Silica gel	1695.12	1682.76	12.36
Total	4043.4	3746.67	296.73

Water mass (g)	296.73
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INC2-COSV-E2

Impingers – liquid mass

	Before	After	Difference
IMP. 1	322.39	311.71	10.68
IMP. 2	523.83	371	152.83
IMP. 3	716.44	694.28	22.16
IMP. 4	534.45	536.16	-1.71
IMP. 5			
IMP. 6			
IMP. 7			
IMP. 8			
IMP. 9			
Silica gel	1703.61	1692.16	11.45
Total	3800.72	3605.31	195.41

Water mass (g)	195.41
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INC2-COSV-E3

Impingers – liquid mass

	Before	After	Difference
IMP. 1	264.4	247.7	16.7
IMP. 2	662.54	522.69	139.85
IMP. 3	719.42	696.44	22.98
IMP. 4	590.59	590.28	0.31
IMP. 5	1711.72	1703.61	8.11
IMP. 6			
IMP. 7			
IMP. 8			
IMP. 9			
Silica gel			
Total	3948.67	3760.72	187.95

Water mass (g)	187.95
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APPENDIX 2

CALIBRATION CERTIFICATES



AGNICO EAGLE

Module 23

Technician: Paul Vachon

Date : December 7, 2023

Barometric pressure : 29.70 inHg

Compensated at 60°F : NO

$\Delta H@$: 0.952 inH₂O

Orifice (inH ₂ O)	Total volume (cu. ft)		Temperature (°F)				Pressure wet meter (inH ₂ O)	Time (min)	Coefficients		Y (<1.5%)
	Wet meter	Dry meter	Wet meter	Dry meter					Ko	Kc	
				IN	OUT	Average					
0.39	4.16	4.26	72.6	78.0	78.0	78.0	-0.24	10.0	0.851	0.987	0.4
0.79	6.77	6.89	72.5	77.5	77.5	77.5	-0.36	10.0	0.969	0.989	0.1
0.98	7.82	7.96	72.6	76.8	76.8	76.8	-0.37	10.3	0.979	0.987	0.3
1.57	10.04	10.13	72.6	75.3	75.3	75.3	-0.47	10.2	0.997	0.991	0.1
1.97	11.38	11.39	72.7	73.3	73.3	73.3	-0.55	10.2	1.001	0.994	0.4
Average									0.989	0.990	

Check of the temperature meter						
Thermometer of reference (°F)	Probe (°F)	Oven (°F)	Aux (°F)	Stack (°F)	Exit (°F)	OUT (°F)
32	30	31	31	31	31	31
212	211	212	212	213	212	210
500	498	499	498	498	499	498
1000			1001	1001	1001	

Reference: Prova 123 Multifunction Calibrator

Check of the inclined pressure gauges		
Reference pressure gauge (inH ₂ O)	ΔP (inH ₂ O)	ΔH (inH ₂ O)
0.05	0.052	0.051
0.20	0.201	0.201
0.50	0.501	0.500
1.0	0.99	0.99
2.0	2.01	2.01
5.0	5.01	4.99

Reference: Kimo MPR 2500 Differential Pressure Gauge

Check of the vacuum gauge	
Vacuum (inHg)	Reference pressure gauge (inHg)
-5.0	-4.78
-10.0	-10.22
-15.0	-15.49
-20.0	-20.33

Reference: Dwyer DPG-000 Pressure Gauge

Module 25

Technician: Jean-Sébastien Dumas

Date : October 17, 2023

Barometric pressure : 29.66 inHg

Compensated at 60°F : NO

$\Delta H@$: 1.680 inH₂O

Orifice (inH ₂ O)	Total volume (cu. ft)		Temperature (°F)				Pressure wet meter (inH ₂ O)	Time (min)	Coefficients		Y (<1.5%)
	Wet meter	Dry meter	Wet meter	Dry meter					Ko	Kc	
				IN	OUT	Average					
0.39	3.01	3.08	73.0	81.0	81.0	81.0	-0.12	11.3	0.551	0.990	1.0
0.79	6.32	6.37	72.9	81.0	81.0	81.0	-0.22	12.3	0.734	1.005	0.4
0.98	6.52	6.60	72.9	80.8	80.8	80.8	-0.24	11.3	0.744	0.999	0.1
1.57	7.92	7.96	73.1	79.8	79.8	79.8	-0.33	10.8	0.744	1.003	0.3
1.97	8.63	8.66	73.0	78.5	78.5	78.5	-0.36	10.5	0.742	1.001	0.0
Average									0.740	1.001	

Check of the temperature meter						
Thermometer of reference (°F)	Probe (°F)	Oven (°F)	Aux (°F)	Stack (°F)	Exit (°F)	OUT (°F)
32	30	33	33	33	33	34
212	213	215	214	214	214	216
500	500	501	501	501	501	502
1000			1005	1005	1005	

Reference: Prova 123 Multifunction Calibrator

Check of the inclined pressure gauges		
Reference pressure gauge (inH ₂ O)	ΔP (inH ₂ O)	ΔH (inH ₂ O)
0.05	0.049	0.050
0.20	0.200	0.200
0.50	0.500	0.500
1.0	1.00	1.00
2.0	2.00	2.05
5.0	5.00	5.05

Reference: Kimo MPR 2500 Differential Pressure Gauge

Check of the vacuum gauge	
Vacuum (inHg)	Reference pressure gauge (inHg)
-5.0	-5.30
-10.0	-10.20
-15.0	-15.10
-20.0	-20.30

Reference: Dwyer DPG-000 Pressure Gauge

SUMMARY - CALIBRATION OF QUARTZ NOZZLES/INCONEL - 2024

Liner of 3 ft		Liner of 5 ft		Liner of 9 ft		Air -cooled probe		INCONEL	
#	Ø (po)	#	Ø (po)	#	Ø (po)	#	Ø (po)	#	Ø (po)
3Q-372	0.3729	5Q-371	0.3564	9Q-681	0.6676	SRA-681	0.6840		
		5Q-372	0.3519	9Q-682	0.6929	SRA-751	0.7494		
3Q-373	0.3746	5Q-373	0.3538	9Q-683	0.6750	SRA-752	0.7466		
3Q-374	0.3520	5Q-374	0.3569			SRA-801	0.8094		
3Q-375	0.3514	5Q-375	0.3519						
3Q-376	0.3516	5Q-376	0.3495						
3Q-432	0.4324	5Q-378	0.3529						
3Q-434	0.4299	5Q-437	0.4330						
3Q-435	0.4313								
3Q-436	0.4318	5Q-501	0.5538						
3Q-437	0.4343	5Q-504	0.5018						
3Q-501	0.5085								
3Q-504	0.5023	5Q-506	0.5626						
3Q-507	0.5093	5Q-507	0.5068						
3Q-508	0.5086	5Q-508	0.5074						
		5Q-509	0.5111						
3Q-681	0.6655	5Q-510	0.5101						
		5Q-511	0.5105						
		5Q-512	0.5139						
3Q-684	0.6659								
		5Q-681	0.6534						
		5Q-682	0.6630						
		5Q-683	0.6701						
Validation:	2024-07-29					2023-03-20			
Version 24-12									

PROBE CALIBRATION SUMMARY - V-03

Version 1 (2024)

#	Year	MDF	LV	#	1	2	3	4	5	6	7	8	9	10	11	12	13	Avg. V L. Eff. L. Total Thermocouple PTB Location
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	--- in. (Validate) ---
03-05	2024	O	O	Nozzle	v-125	v-180	v-218 v-250 v-280			v-312	v-343	v-375	v-406	v-437	v-500	v-562 v-625	---	
				Ct	0.785	0.778	0.784 0.793 0.781			0.783	0.788	0.788	0.783	0.775	0.795	0.799 0.802	0.787	
				E. Rel	0.3	0.3	0.5 0.9 0.4			0.8	0.5	0.7	0.2	0.5	0.5	0.9 0.8	0.6	
03-06	2024			Nozzle	Q-370	Q-430	Q-500 Q-680										---	
				Ct	0.781	0.760	0.779 0.767										0.772	
				E. Rel	1.2	1.0	1.2 0.9										1.1	
03-07	2024	O	O	Nozzle	v-125	v-180	v-218 v-250 v-280			v-312	v-343	v-375	v-406	v-437	v-500	v-562 v-625	---	
				Ct	0.792	0.789	0.788 0.791 0.788			0.789	0.791	0.787	0.787	0.786	0.788	0.787 0.785	0.788	
				E. Rel	0.7	0.6	0.5 0.6 0.5			0.5	0.6	0.6	0.4	0.5	0.4	0.4 0.4	0.5	
03-08	2024			Nozzle	Q-370	Q-430	Q-500 Q-680										---	
				Ct	0.756	0.754	0.741 0.731										0.745	
				E. Rel	1.1	0.7	1.4 1.4										1.2	
03-09	2024	O	O	Nozzle	v-125	v-180	v-218 v-250 v-280			v-312	v-343	v-375	v-406	v-437	v-500	v-562 v-625	---	
				Ct	0.806	0.807	0.812 0.818 0.811			0.806	0.815	0.815	0.808	0.812	0.815	0.816 0.814	0.812	
				E. Rel	1.1	1.3	1.4 1.3 1.2			1.0	0.9	1.0	1.1	0.9	1.2	1.3 1.0	1.1	
03-10	2024	O	O	Nozzle	v-125	v-180	v-218 v-250 v-280			v-312	v-343	v-375	v-406	v-437	v-500	v-562 v-625	---	
				Ct	0.832	0.834	0.835 0.818 0.824			0.836	0.844	0.832	0.836	0.818	0.836	0.840 0.830	0.832	
				E. Rel	0.6	0.8	0.7 0.3 0.9			1.1	0.6	1.0	1.0	1.1	0.8	0.9 1.1	0.8	
03-33	2024	O	O	Nozzle	v-125	v-180	v-218 v-250 v-280			v-312	v-343	v-375	v-406	v-437	v-500	v-562 v-625	---	
				Ct	0.785	0.784	0.779 0.785 0.783			0.784	0.783	0.787	0.783	0.780	0.783	0.778 0.778	0.783	
				E. Rel	0.9	1.0	0.3 0.8 1.0			0.9	1.0	0.7	0.9	0.7	0.9	0.6 0.3	0.8	
03-34	2024	O	O	Nozzle	v-125	v-180	v-218 v-250 v-280			v-312	v-343	v-375	v-406	v-437	v-500	v-562 v-625	---	
				Ct	0.801	0.796	0.800 0.804 0.801			0.802	0.796	0.801	0.800	0.802	0.802	0.799 0.788	0.799	
				E. Rel	0.6	1.0	0.5 0.6 0.8			0.8	0.6	0.7	0.4	0.5	0.8	0.7 0.4	0.6	
03-35	2024	O	O	Nozzle	v-125	v-180	v-218 v-250 v-280			v-312	v-343	v-375	v-406	v-437	v-500	v-562 v-625	---	
				Ct	0.809	0.812	0.811 0.811 0.811			0.808	0.805	0.808	0.805	0.808	0.811	0.809 0.800	0.808	
				E. Rel	1.3	1.0	1.2 1.2 0.9			1.3	1.2	1.1	1.2	1.2	1.2	1.3 1.2	1.2	
03-36	2024	O	O	Nozzle	v-125	v-180	v-218 v-250 v-280			v-312	v-343	v-375	v-406	v-437	v-500	v-562 v-625	---	
				Ct	0.804	0.797	0.796 0.796 0.795			0.796	0.789	0.793	0.788	0.786	0.789	0.785 0.784	0.792	
				E. Rel	0.7	1.1	0.9 0.9 1.1			0.9	1.2	1.0	0.7	1.0	1.2	0.9 0.9	1.0	
03-37	2024	O	O	Nozzle	v-125	v-180	v-218 v-250 v-280			v-312	v-343	v-375	v-406	v-437	v-500	v-562 v-625	---	
				Ct	0.817	0.810	0.809 0.817 0.815			0.808	0.808	0.807	0.811	0.804	0.810	0.814 0.803	0.810	
				E. Rel	0.4	1.1	0.5 0.4 1.4			1.0	0.6	1.0	1.2	0.3	1.1	1.3 0.7	0.8	

Performed by: AL/EF/SAP/YZ/SB/NDR/PV/JSD

Date: February 2024

Calibration location: Laval University

Verified by: Eric Trépanier

Signature: 

Date: February 2024

CERTIFICATE OF ANALYSIS

Grade of Product: EPA PROTOCOL STANDARD

Part Number # 24075272
Lot # 1701184
Cylinder Number: CC168530

PGVP ID # L12023
Procedure: G1
Gas Type Code: NO
Cylinder pressure: 2000 psig

Certification date
May 24, 2023
Expiration Date
May 25, 2031

ANALYTICAL RESULTS

Component	Requested Concentration ± blending tolerance	Date of Assay	Mean Concentration	Certified Concentration Uncertainty expressed at 95% confidence
Nitric Oxide	900 ppm ± 5%	May 17, 2023	902.2 ppm	903.3 ± 2.81 ppm
		May 24, 2023	904.3 ppm	
Oxides of Nitrogen -	900 ppm ± 5%	May 17, 2023	902.2 ppm	903.3 ± 2.81 ppm
		May 24, 2023	904.3 ppm	

BALANCE GAS: Nitrogen

REFERENCE STANDARDS

Component	Type	Serial Number	Reference Number	Concentration	Expiration Date
Nitric Oxide	GMIS	CC173641	1499807	1011.9 ± 4.45 ppm	July 23, 2029
	SRM	FF28064	41-M-30	996.7 ± 50 ppm	April 13, 2025
Oxides of Nitrogen	GMIS	CC173641-NOX	1499807	1011.9 ± 4.45 ppm	July 23, 2029
	SRM	FF28064-NOX	41-M-30	996.7 ± 50 ppm	April 13, 2025

CERTIFICATION INSTRUMENTS

Component	Make/Model	Measurement Principle	Serial Number	Last calibration
Nitric Oxide	FTIR CX 4015	infrared	122434	May 4, 2023
Oxides of Nitrogen -	FTIR CX 4015	Infrared	122434	May 4, 2023

THIS STANDARD IS NIST TRACEABLE. IT WAS CERTIFIED ACCORDING TO THE 2012 EPA PROTOCOL PROCEDURE
DO NOT USE THIS CYLINDER WHEN THE PRESSURE FALLS BELOW 100 PSIG

Analyst: Joey Zhao Signature

Date: May 24, 2023

Notes:

CERTIFICATE OF ANALYSIS

Grade of Product: EPA PROTOCOL STANDARD

Part Number # 24100494

PGVP ID # L12023

Lot # 1701187

Procedure: G1

Cylinder Number: AS759522

Gas Type Code: OCC

Cylinder pressure: 2000 psig

Certification date

May 18, 2023

Expiration Date

May 19, 2031

ANALYTICAL RESULTS

Component	Requested Concentration ± blending tolerance	Date of Assay	Mean Concentration	Certified Concentration Uncertainty expressed at 95% confidence
Oxygen	12.5 % ± 5%	May 18, 2023	12.59 %	12.59 ± 0.06 %
Carbon Monoxide	500 ppm ± 5%	May 18, 2023	487.9 ppm	487.9 ± 2.1 ppm
Carbon Dioxide	10 % ± 5%	May 18, 2023	10.08 %	10.08 ± 0.09 %

BALANCE GAS: Nitrogen

REFERENCE STANDARDS

Component	Type	Serial Number	Reference Number	Concentration	Expiration Date
Oxygen	GMIS	551109	1501278	24 ± 0.05 %	June 25, 2029
	SRM	FF61023	71-F-XX	20.753 ± 0.02 %	February 27, 2026
Carbon Monoxide	GMIS	SX11478	1482400	995.3 ± 10.3 ppm	August 30, 2027
	NTRM	D167891	56-G-15	2472.8 ± 4.2 ppm	July 7, 2022
Carbon Dioxide	GMIS	CC173721	1438051	19.96 ± 0.02 %	May 31, 2026
	NTRM	SG9916842	101001	19.98 ± 0.14 %	June 16, 2022

CERTIFICATION INSTRUMENTS

Component	Make/Model	Measurement Principle	Serial Number	Last calibration
Oxygen	Servomex 04100 C1	Paramagnetic Sensor	392350	April 25, 2023
Carbon Monoxide	FTIR CX 4015	Infrared	122434	May 1, 2023
Carbon Dioxide	FTIR CX 4015	Infrared	122434	May 1, 2023

THIS STANDARD IS NIST TRACEABLE. IT WAS CERTIFIED ACCORDING TO THE 2012 EPA PROTOCOL PROCEDURE

DO NOT USE THIS CYLINDER WHEN THE PRESSURE FALLS BELOW 100 PSIG

Analyst: Joey Zhao Signature

Date: May 18, 2023

Notes:

114 3M-01880394
CERTIFICATE OF ANALYSIS

47623-057

Grade of Product: EPA PROTOCOL STANDARD

Part Number # 24099176

Lot # 1701186

Cylinder Number: AS759561

PGVP ID # L12023

Procedure: G1

Gas Type Code: OCC

Cylinder pressure: 2000 psig

Certification date

May 18, 2023

Expiration Date

May 19, 2031

ANALYTICAL RESULTS

Component	Requested Concentration ± blending tolerance	Date of Assay	Mean Concentration	Certified Concentration Uncertainty expressed as 95% confidence
Oxygen	22.5 % ± 5%	May 18, 2023	22.51%	22.51 ± 0.07 %
Carbon Monoxide	900 ppm ± 5%	May 18, 2023	935.5 ppm	935.5 ± 6.45 ppm
Carbon Dioxide	18 % ± 5%	May 18, 2023	17.91%	17.91 ± 0.15 %

BALANCE GAS: Nitrogen

REFERENCE STANDARDS

Component	Type	Serial Number	Reference Number	Concentration	Expiration Date
Oxygen	GMIS	551109	1501278	24 ± 0.05 %	June 25, 2029
	SRM	FF61023	71 F-XX	20.753 ± 0.02 %	February 27, 2026
Carbon Monoxide	GMIS	5x11478	1482400	995.3 ± 10.3 ppm	August 30, 2027
	NTRM	D167891	56-G-15	2472.8 ± 4.2 ppm	July 7, 2022
Carbon Dioxide	GMIS	CC173721	1438051	19.96 ± 0.02 %	May 31, 2026
	NTRM	SG9916842	101601	19.98 ± 0.14 %	June 16, 2022

CERTIFICATION INSTRUMENTS

Component	Make/Model	Measurement Principle	Serial Number	Last calibration
Oxygen	Servomex 04100 C1	Paramagnetic Sensor	392350	April 25, 2023
Carbon Monoxide	FTIR CX 4015	Infrared	122434	May 1, 2023
Carbon Dioxide	FTIR CX 4015	Infrared	122434	May 1, 2023

THIS STANDARD IS NIST TRACEABLE. IT WAS CERTIFIED ACCORDING TO THE 2012 EPA PROTOCOL PROCEDURE

DO NOT USE THIS CYLINDER WHEN THE PRESSURE FALLS BELOW 100 PSIG

Analyst: Joey Zhao Signature: 

Date: May 18, 2023

Notes:

**MCRT SULPHUR DIOXIDE 900PPM N2 BAL 152SZ/ MCRT DIOXYDE SOUFRE 900PPM N2 BAL 152SZ
CERTIFIED**

REF 3M-01359693

CYL23-058

Component Composant	Nominal Nominale	Certified Certifiée
Sulfur Dioxide / DIOXYDE SOUFRE	900 PPM	924.6 PPM
Nitrogen / AZOTE	BAL	

Cylinder Details/ Détails - bouteille:

Cylinder Size/ Taille de la bouteille: 152 Contents/ Capacité: 3.800 M3 Valve Outlet/ Robinet de sortie: 660 Nominal
Pressure/Pression nominale: 2,000 PSI

Analytical Details/ Détails d'analyse:

Certification Accuracy $\pm 2\%$ for concentrations 10 ppm and above, $\pm 5\%$ for concentrations < 10 ppm.
INMS and NIST traceability by one of the following: 1) Mass calibration certificate 2154736Z, 2154736B, 1845447, 2204452, W-017181-11799 or W-028737-17611; 2) Comparison to SRM or NTRM gas mixture.
Certification de précision $\pm 2\%$ pour des concentrations de 10 ppm et plus, $\pm 5\%$ pour des concentrations < 10 ppm.
Traçabilité IENM et NIST par l'une des façons suivantes : 1) Certificat d'étalonnage de la masse 2154736Z, 2154736B, 1845447, 2204452, W-017181-11799 ou W-028737-17611; 2) Comparaison avec le mélange gazeux SRM ou NTRM.

Messer Canada Inc. plant management quality system is ISO 9001 registered. The product furnished under the referenced lot number is certified to contain the component concentration listed above. All values are mole/mole basis gas phase unless otherwise indicated. The reported uncertainty is at the 95% confidence level assuming a normal distribution. Messer Canada Inc. warrants that the above product conforms at time of shipment to the above description. The customers exclusive remedy should any of the products furnished under this certificate of analysis not conform to the manufacturers description shall be to receive replacement of the product or refund of the purchase price.

Le système de gestion de la qualité des usines de Messer Canada Inc. a été enregistré avec la Norme internationale ISO 9001. Il est certifié que tout produit fourni, avec un numéro de lot spécifié, contient la concentration d'éléments ci-dessus mentionnés. Toutes les valeurs sont exprimés en mole/ phase gazeuse, sauf indication contraire. Les incertitudes indiquées dans les descriptions sont des incertitudes élargies correspondant à un niveau de confiance d'environ 95 p. 100. Elles sont fondées sur une distribution normale. Messer Canada Inc. garantit qu'au moment de l'expédition, le produit est conforme à la description ci-dessus. Si l'un des produits fournis en vertu de ce certificat d'analyse n'est pas conforme à la description du fabricant, le recours exclusif du client sera d'exiger le remboursement ou le remplacement du produit.

To reorder, please quote/ Pour renouveler une commande, veuillez indiquer le code: 24075556

Certificate Date (mm/dd/yy) / Date du certificat (mm/jj/aa) 05/25/2023

Use by / Utilisé par: 05/24/2028

Approved Signature/ Approbation du Signataire
Analyst/Analyste: Guihai Zhao



APPENDIX 3

LABORATORY ANALYSIS REPORTS



AGNICO EAGLE

CLIENT NAME: CONSULAIR GASTON BOULANGER INC
2022 LAVOISIER LOCAL 125
QUEBEC, QC G1N4L5
(418) 650-5960

ATTENTION TO: Eric Trepanier

PROJECT: 24-8263-Agnico Eagle Meliadine

AGAT WORK ORDER: 24M194846

ULTRA TRACE REVIEWED BY: Robert Roch, Chimiste, AGAT Montréal

DATE REPORTED: Dec 13, 2024

PAGES (INCLUDING COVER): 20

VERSION*: 1

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

*Notes

Disclaimer:

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.
- AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.
- This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
- The test results reported herewith relate only to the samples as received by the laboratory.
- Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.
- All reportable information is available on request from AGAT Laboratories, in accordance with ISO/IEC 17025:2017, ISO/IEC 17025:2005 (Quebec), DR-12-PALA and/or NELAP Standards.
- This document is signed by an authorized signatory who meets the requirements of the MELCCFP, CALA, CCN and NELAP.
- For environmental samples in the Province of Quebec: The analysis is performed on and results apply to samples as received. A temperature above 6°C upon receipt, as indicated in the Sample Reception Notification (SRN), could indicate the integrity of the samples has been compromised if the delay between sampling and submission to the laboratory could not be minimized.



Certificate of Analysis

AGAT WORK ORDER: 24M194846

PROJECT: 24-8263-Agnico Eagle Meliadine

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

CLIENT NAME: CONSULAIR GASTON BOULANGER INC

ATTENTION TO: Eric Trepanier

SAMPLED BY:

SAMPLING SITE: Meliadine, Qc

Consulair - Dioxins and furans - Air (sampling train - OMS 1998)

DATE RECEIVED: 2024-09-04

DATE REPORTED: 2024-12-13

		SAMPLE DESCRIPTION: 106-INC 1-Fin-1				112-INC 1-Fin-2		118-INC 1-Fin-3		124-INC 1-Fin-BI	
		SAMPLE TYPE: Solvant		Solvant		Solvant		Solvant		Solvant	
		DATE SAMPLED: 2024-08-16		2024-08-17		2024-08-18		2024-08-18		2024-08-20	
Parameter	Unit	G / S	RD L	6130538	RD L	6130548	RD L	6130552	RD L	6130562	
2,3,7,8-Tetra CDD	pg		0.1	3.5	0.1	32.3	0.1	0.9	0.1	<0.1	
1,2,3,7,8-Penta CDD	pg		0.2	62.4	0.1	297	0.1	12.9	0.1	<0.1	
1,2,3,4,7,8-Hexa CDD	pg		0.3	59.6	0.2	128	0.1	13.0	0.1	<0.1	
1,2,3,6,7,8-Hexa CDD	pg		0.3	148	0.2	201	0.1	25.4	0.1	<0.1	
1,2,3,7,8,9-Hexa CDD	pg		0.3	104	0.2	173	0.1	17.5	0.1	<0.1	
1,2,3,4,6,7,8-Hepta CDD	pg		0.1	1020	0.1	756	0.1	219	0.1	<0.1	
Octa CDD	pg		0.4	1580	2.7	1070	0.6	570	0.2	2.6	
2,3,7,8-Tetra CDF	pg		0.1	26.6	0.1	169	0.1	9.6	0.1	<0.1	
1,2,3,7,8-Penta CDF	pg		0.2	47.8	0.3	179	0.2	14.3	0.1	<0.1	
2,3,4,7,8-Penta CDF	pg		0.2	130	0.3	404	0.2	39.8	0.1	<0.1	
1,2,3,4,7,8-Hexa CDF	pg		0.2	124	0.3	353	0.2	42.1	0.1	<0.1	
1,2,3,6,7,8-Hexa CDF	pg		0.2	139	0.3	333	0.2	41.6	0.1	<0.1	
2,3,4,6,7,8-Hexa CDF	pg		0.2	277	0.2	556	0.2	72.4	0.1	<0.1	
1,2,3,7,8,9-Hexa CDF	pg		0.2	52.6	0.2	89.6	0.2	5.9	0.1	<0.1	
1,2,3,4,6,7,8-Hepta CDF	pg		0.1	763	0.1	1520	0.1	351	0.1	<0.1	
1,2,3,4,7,8,9-Hepta CDF	pg		0.1	83.4	0.2	84.6	0.2	7.2	0.1	<0.1	
Octa CDF	pg		0.4	542	0.5	326	0.2	40.0	0.2	<0.2	
Summation of Tetra CDD	pg		0.1	131	0.1	1650	0.1	38.0	0.1	<0.1	
Summation of Penta CDD	pg		0.2	738	0.1	3350	0.1	101	0.1	0.4	
Summation of Hexa CDD	pg		0.3	2260	0.2	3330	0.1	265	0.1	0.8	
Summation of Hepta CDD	pg		0.1	2550	0.1	1510	0.1	408	0.1	DNQ	
Summation of PCDDs	pg		0.4	7260	2.7	10900	0.6	1380	0.2	4.2	
Summation of Tetra CDF	pg		0.1	1040	0.1	4020	0.1	253	0.1	1.6	
Summation of Penta CDF	pg		0.2	1310	0.3	3300	0.2	326	0.1	DNQ	
Summation of Hexa CDF	pg		0.2	1410	0.3	2640	0.2	396	0.1	0.4	
Summation of Hepta CDF	pg		0.1	1120	0.2	1980	0.2	399	0.1	<0.1	
Summation of PCDFs	pg		0.4	5420	0.5	12300	0.2	1410	0.2	2.1	
2,3,7,8-Tetra CDD (TEQ)	pg TEQ			3.48		32.3		0.920		0	
1,2,3,7,8-Penta CDD (TEQ)	pg TEQ			62.4		297		12.9		0	
1,2,3,4,7,8-Hexa CDD (TEQ)	pg TEQ			5.96		12.8		1.30		0	

Certified By:



Robert Roch



Certificate of Analysis

AGAT WORK ORDER: 24M194846

PROJECT: 24-8263-Agnico Eagle Meliadine

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

CLIENT NAME: CONSULAIR GASTON BOULANGER INC

ATTENTION TO: Eric Trepanier

SAMPLED BY:

SAMPLING SITE: Meliadine, Qc

Consulair - Dioxins and furans - Air (sampling train - OMS 1998)

DATE RECEIVED: 2024-09-04

DATE REPORTED: 2024-12-13

		SAMPLE DESCRIPTION: 106-INC 1-Fin-1				112-INC 1-Fin-2		118-INC 1-Fin-3		124-INC 1-Fin-BI	
		SAMPLE TYPE: Solvant		Solvant		Solvant		Solvant		Solvant	
		DATE SAMPLED: 2024-08-16		2024-08-17		2024-08-18		2024-08-18		2024-08-20	
Parameter	Unit	G / S	RDL	6130538	RDL	6130548	RDL	6130552	RDL	6130562	
1,2,3,6,7,8-Hexa CDD (TEQ)	pg TEQ			14.8		20.1		2.54		0	
1,2,3,7,8,9-Hexa CDD (TEQ)	pg TEQ			10.4		17.3		1.75		0	
1,2,3,4,6,7,8-Hepta CDD (TEQ)	pg TEQ			10.2		7.56		2.19		0	
Octa CDD (TEQ)	pg TEQ			0.158		0.107		0.0570		0.000264	
2,3,7,8-Tetra CDF (TEQ)	pg TEQ			2.66		16.9		0.964		0	
1,2,3,7,8-Penta CDF (TEQ)	pg TEQ			2.39		8.94		0.716		0	
2,3,4,7,8-Penta CDF (TEQ)	pg TEQ			64.9		202		19.9		0	
1,2,3,4,7,8-Hexa CDF (TEQ)	pg TEQ			12.4		35.3		4.21		0	
1,2,3,6,7,8-Hexa CDF (TEQ)	pg TEQ			13.9		33.3		4.16		0	
2,3,4,6,7,8-Hexa CDF (TEQ)	pg TEQ			27.7		55.6		7.24		0	
1,2,3,7,8,9-Hexa CDF (TEQ)	pg TEQ			5.26		8.96		0.592		0	
1,2,3,4,6,7,8-Hepta CDF (TEQ)	pg TEQ			7.63		15.2		3.51		0	
1,2,3,4,7,8,9-Hepta CDF (TEQ)	pg TEQ			0.834		0.846		0.0716		0	
Octa CDF (TEQ)	pg TEQ			0.0542		0.0326		0.00400		0	
Summation of PCDDs et PCDFs (TEQ)	pg TEQ			245		764		63.0		0.000264	

Certified By:



Robert Roch

Certificate of Analysis

AGAT WORK ORDER: 24M194846

PROJECT: 24-8263-Agnico Eagle Meliadine

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

CLIENT NAME: CONSULAIR GASTON BOULANGER INC

ATTENTION TO: Eric Trepanier

SAMPLED BY:

SAMPLING SITE: Meliadine, Qc

Consulair - Dioxins and furans - Air (sampling train - OMS 1998)

DATE RECEIVED: 2024-09-04

DATE REPORTED: 2024-12-13

		SAMPLE DESCRIPTION: 106-INC 1-Fin-1		112-INC 1-Fin-2	118-INC 1-Fin-3	124-INC 1-Fin-BI
		SAMPLE TYPE:	Solvent	Solvent	Solvent	Solvent
		DATE SAMPLED:	2024-08-16	2024-08-17	2024-08-18	2024-08-20
Surrogate	Unit	Acceptable Limits	6130538	6130548	6130552	6130562
13C-2,3,7,8-TCDF	%	30-140	88	85	61	81
13C-1,2,3,7,8-PeCDF	%	30-140	101	95	60	95
13C-2,3,4,7,8-PeCDF	%	30-140	92	92	60	94
13C-1,2,3,4,7,8-HxCDF	%	30-140	73	59	40	53
13C-1,2,3,6,7,8-HxCDF	%	30-140	85	71	49	66
13C-2,3,4,6,7,8-HxCDF	%	30-140	85	87	54	72
13C-1,2,3,7,8,9-HxCDF	%	30-140	83	94	62	84
13C-1,2,3,4,6,7,8-HpCDF	%	30-140	105	96	61	82
13C-1,2,3,4,7,8,9-HpCDF	%	30-140	101	101	64	87
13C-2,3,7,8-TCDD	%	30-140	93	93	64	90
13C-1,2,3,7,8-PeCDD	%	30-140	96	95	59	92
13C-1,2,3,4,7,8-HxCDD	%	30-140	87	83	53	71
13C-1,2,3,6,7,8-HxCDD	%	30-140	90	86	56	79
13C-1,2,3,4,6,7,8-HpCDD	%	30-140	122	125	78	97
13C-OCDD	%	30-140	113	118	71	95

Certified By:



Robert Roch



Certificate of Analysis

AGAT WORK ORDER: 24M194846

PROJECT: 24-8263-Agnico Eagle Meliadine

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CLIENT NAME: CONSULAIR GASTON BOULANGER INC

ATTENTION TO: Eric Trepanier

SAMPLED BY:

SAMPLING SITE: Meliadine, Qc

Consulair - Dioxins and furans - Air (sampling train - OMS 1998)

DATE RECEIVED: 2024-09-04

DATE REPORTED: 2024-12-13

		SAMPLE DESCRIPTION: 131-INC 2-Fin-1				137-INC 2-Fin-2		143-INC 2-Fin-3	
		SAMPLE TYPE: Solvant		Solvant		Solvant		Solvant	
		DATE SAMPLED: 2024-08-19		2024-08-20		2024-08-20		2024-08-20	
Parameter	Unit	G / S	RDL	6130597	RDL	6130602	RDL	6130621	
2,3,7,8-Tetra CDD	pg		0.1	1.5	0.1	4.1	0.1	0.8	
1,2,3,7,8-Penta CDD	pg		0.2	19.6	0.3	50.0	0.1	7.2	
1,2,3,4,7,8-Hexa CDD	pg		0.2	17.7	0.1	30.7	0.1	4.1	
1,2,3,6,7,8-Hexa CDD	pg		0.2	34.9	0.1	65.6	0.1	6.5	
1,2,3,7,8,9-Hexa CDD	pg		0.2	26.7	0.1	55.8	0.1	5.7	
1,2,3,4,6,7,8-Hepta CDD	pg		0.1	230	0.1	316	0.1	44.2	
Octa CDD	pg		0.2	395	0.2	329	0.2	62.8	
2,3,7,8-Tetra CDF	pg		0.1	14.4	0.1	34.6	0.1	5.0	
1,2,3,7,8-Penta CDF	pg		0.2	24.7	0.2	58.8	0.1	8.9	
2,3,4,7,8-Penta CDF	pg		0.2	53.3	0.2	150	0.1	21.3	
1,2,3,4,7,8-Hexa CDF	pg		0.4	56.8	0.1	115	0.2	16.6	
1,2,3,6,7,8-Hexa CDF	pg		0.3	65.2	0.1	141	0.2	21.6	
2,3,4,6,7,8-Hexa CDF	pg		0.3	113	0.1	229	0.2	34.2	
1,2,3,7,8,9-Hexa CDF	pg		0.3	18.6	0.1	14.4	0.2	3.3	
1,2,3,4,6,7,8-Hepta CDF	pg		0.1	330	0.1	437	0.1	75.9	
1,2,3,4,7,8,9-Hepta CDF	pg		0.1	22.6	0.1	12.2	0.1	3.2	
Octa CDF	pg		0.2	47.2	0.2	21.0	0.2	5.6	
Summation of Tetra CDD	pg		0.1	54.6	0.1	129	0.1	18.9	
Summation of Penta CDD	pg		0.2	144	0.3	564	0.1	48.4	
Summation of Hexa CDD	pg		0.2	362	0.1	1010	0.1	79.0	
Summation of Hepta CDD	pg		0.1	460	0.1	740	0.1	86.6	
Summation of PCDDs	pg		0.2	1420	0.3	2770	0.2	296	
Summation of Tetra CDF	pg		0.1	343	0.1	1080	0.1	155	
Summation of Penta CDF	pg		0.2	451	0.2	1350	0.1	190	
Summation of Hexa CDF	pg		0.4	484	0.1	1180	0.2	171	
Summation of Hepta CDF	pg		0.1	435	0.1	507	0.1	90.3	
Summation of PCDFs	pg		0.4	1760	0.2	4140	0.2	611	
2,3,7,8-Tetra CDD (TEQ)	pg TEQ			1.52		4.12		0.760	
1,2,3,7,8-Penta CDD (TEQ)	pg TEQ			19.6		50.0		7.16	
1,2,3,4,7,8-Hexa CDD (TEQ)	pg TEQ			1.77		3.07		0.408	

Certified By:



Robert Roch



Certificate of Analysis

AGAT WORK ORDER: 24M194846

PROJECT: 24-8263-Agnico Eagle Meliadine

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

CLIENT NAME: CONSULAIR GASTON BOULANGER INC

ATTENTION TO: Eric Trepanier

SAMPLED BY:

SAMPLING SITE: Meliadine, Qc

Consulair - Dioxins and furans - Air (sampling train - OMS 1998)

DATE RECEIVED: 2024-09-04

DATE REPORTED: 2024-12-13

		SAMPLE DESCRIPTION: 131-INC 2-Fin-1				137-INC 2-Fin-2		143-INC 2-Fin-3	
		SAMPLE TYPE: Solvant		Solvant		Solvant		Solvant	
		DATE SAMPLED: 2024-08-19		2024-08-20		2024-08-20		2024-08-20	
Parameter	Unit	G / S	RDL	6130597	RDL	6130602	RDL	6130621	
1,2,3,6,7,8-Hexa CDD (TEQ)	pg TEQ			3.49		6.56		0.648	
1,2,3,7,8,9-Hexa CDD (TEQ)	pg TEQ			2.67		5.58		0.568	
1,2,3,4,6,7,8-Hepta CDD (TEQ)	pg TEQ			2.30		3.16		0.442	
Octa CDD (TEQ)	pg TEQ			0.0395		0.0329		0.00628	
2,3,7,8-Tetra CDF (TEQ)	pg TEQ			1.44		3.46		0.504	
1,2,3,7,8-Penta CDF (TEQ)	pg TEQ			1.24		2.94		0.446	
2,3,4,7,8-Penta CDF (TEQ)	pg TEQ			26.7		74.8		10.6	
1,2,3,4,7,8-Hexa CDF (TEQ)	pg TEQ			5.68		11.5		1.66	
1,2,3,6,7,8-Hexa CDF (TEQ)	pg TEQ			6.52		14.1		2.16	
2,3,4,6,7,8-Hexa CDF (TEQ)	pg TEQ			11.3		22.9		3.42	
1,2,3,7,8,9-Hexa CDF (TEQ)	pg TEQ			1.86		1.44		0.328	
1,2,3,4,6,7,8-Hepta CDF (TEQ)	pg TEQ			3.30		4.37		0.759	
1,2,3,4,7,8,9-Hepta CDF (TEQ)	pg TEQ			0.226		0.122		0.0320	
Octa CDF (TEQ)	pg TEQ			0.00472		0.00210		0.000560	
Summation of PCDDs et PCDFs (TEQ)	pg TEQ			89.5		208		29.9	

Certified By:



Robert Roch

Certificate of Analysis

AGAT WORK ORDER: 24M194846

PROJECT: 24-8263-Agnico Eagle Meliadine

9770 ROUTE TRANSCANADIENNE
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CLIENT NAME: CONSULAIR GASTON BOULANGER INC

ATTENTION TO: Eric Trepanier

SAMPLED BY:

SAMPLING SITE: Meliadine, Qc

Consulair - Dioxins and furans - Air (sampling train - OMS 1998)

DATE RECEIVED: 2024-09-04

DATE REPORTED: 2024-12-13

		SAMPLE DESCRIPTION: 131-INC 2-Fin-1		137-INC 2-Fin-2	143-INC 2-Fin-3
		SAMPLE TYPE: Solvant		Solvent	Solvent
		DATE SAMPLED: 2024-08-19		2024-08-20	2024-08-20
Surrogate	Unit	Acceptable Limits	6130597	6130602	6130621
13C-2,3,7,8-TCDF	%	30-140	81	79	77
13C-1,2,3,7,8-PeCDF	%	30-140	96	84	89
13C-2,3,4,7,8-PeCDF	%	30-140	95	92	90
13C-1,2,3,4,7,8-HxCDF	%	30-140	56	71	67
13C-1,2,3,6,7,8-HxCDF	%	30-140	64	84	84
13C-2,3,4,6,7,8-HxCDF	%	30-140	82	86	79
13C-1,2,3,7,8,9-HxCDF	%	30-140	91	102	79
13C-1,2,3,4,6,7,8-HpCDF	%	30-140	77	99	76
13C-1,2,3,4,7,8,9-HpCDF	%	30-140	92	99	81
13C-2,3,7,8-TCDD	%	30-140	88	81	83
13C-1,2,3,7,8-PeCDD	%	30-140	95	87	87
13C-1,2,3,4,7,8-HxCDD	%	30-140	82	84	78
13C-1,2,3,6,7,8-HxCDD	%	30-140	89	90	87
13C-1,2,3,4,6,7,8-HpCDD	%	30-140	102	109	89
13C-OCDD	%	30-140	97	106	84

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

6130538-6130621 The total pg result corresponds to the composite of each part of the sampling train. The results are corrected according to the recovery percentages. The analyzes were carried out by AGAT Montréal (except those marked with an *)

Analysis performed at AGAT Montréal (unless marked by *)

Certified By:



Robert Roch

Quality Assurance

CLIENT NAME: CONSULAIR GASTON BOULANGER INC

AGAT WORK ORDER: 24M194846

PROJECT: 24-8263-Agnico Eagle Meliadine

ATTENTION TO: Eric Trepanier

SAMPLED BY:

SAMPLING SITE: Meliadine, Qc

Ultra Trace Analysis

RPT Date: 2024-12-13			DUPLICATE			REFERENCE MATERIAL				METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measure d Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

Consulair - Dioxins and furans - Air (sampling train - OMS 1998)

2,3,7,8-Tetra CDD	1	MR	83.8	83.0	1.0%	< 0.1	NA	70%	130%	105%	70%	130%	NA	70%	130%
1,2,3,7,8-Penta CDD	1	MR	406	419	3.2%	< 0.1	NA	70%	130%	101%	70%	130%	NA	70%	130%
1,2,3,4,7,8-Hexa CDD	1	MR	389	403	3.5%	< 0.1	NA	70%	130%	97%	70%	130%	NA	70%	130%
1,2,3,6,7,8-Hexa CDD	1	MR	423	438	3.5%	< 0.1	NA	70%	130%	106%	70%	130%	NA	70%	130%
1,2,3,7,8,9-Hexa CDD	1	MR	462	439	5.1%	< 0.1	NA	70%	130%	115%	70%	130%	NA	70%	130%
1,2,3,4,6,7,8-Hepta CDD	1	MR	391	408	4.3%	0.5	NA	70%	130%	98%	70%	130%	NA	70%	130%
Octa CDD	1	MR	806	846	4.8%	1.3	NA	70%	130%	101%	70%	130%	NA	70%	130%
2,3,7,8-Tetra CDF	1	MR	81.3	82.4	1.3%	< 0.1	NA	70%	130%	102%	70%	130%	NA	70%	130%
1,2,3,7,8-Penta CDF	1	MR	400	392	2.0%	< 0.1	NA	70%	130%	100%	70%	130%	NA	70%	130%
2,3,4,7,8-Penta CDF	1	MR	426	422	0.9%	< 0.1	NA	70%	130%	106%	70%	130%	NA	70%	130%
1,2,3,4,7,8-Hexa CDF	1	MR	413	423	2.4%	< 0.1	NA	70%	130%	103%	70%	130%	NA	70%	130%
1,2,3,6,7,8-Hexa CDF	1	MR	431	439	1.8%	< 0.1	NA	70%	130%	108%	70%	130%	NA	70%	130%
2,3,4,6,7,8-Hexa CDF	1	MR	423	436	3.0%	< 0.1	NA	70%	130%	106%	70%	130%	NA	70%	130%
1,2,3,7,8,9-Hexa CDF	1	MR	434	439	1.1%	< 0.1	NA	70%	130%	108%	70%	130%	NA	70%	130%
1,2,3,4,6,7,8-Hepta CDF	1	MR	409	426	4.1%	< 0.1	NA	70%	130%	102%	70%	130%	NA	70%	130%
1,2,3,4,7,8,9-Hepta CDF	1	MR	457	456	0.2%	< 0.1	NA	70%	130%	114%	70%	130%	NA	70%	130%
Octa CDF	1	MR	766	821	6.9%	< 0.2	NA	70%	130%	96%	70%	130%	NA	70%	130%
13C-2,3,7,8-TCDF	1	MR	78%	77%	1.3%	84	NA	30%	140%	78%	30%	140%	NA	30%	140%
13C-1,2,3,7,8-PeCDF	1	MR	81%	84%	3.6%	86	NA	30%	140%	81%	30%	140%	NA	30%	140%
13C-2,3,4,7,8-PeCDF	1	MR	80%	81%	1.2%	85	NA	30%	140%	80%	30%	140%	NA	30%	140%
13C-1,2,3,4,7,8-HxCDF	1	MR	68%	75%	9.8%	77	NA	30%	140%	68%	30%	140%	NA	30%	140%
13C-1,2,3,6,7,8-HxCDF	1	MR	91%	88%	3.4%	89	NA	30%	140%	81%	30%	140%	NA	30%	140%
13C-2,3,4,6,7,8-HxCDF	1	MR	79%	84%	6.1%	85	NA	30%	140%	79%	30%	140%	NA	30%	140%
13C-1,2,3,7,8,9-HxCDF	1	MR	77%	80%	3.8%	79	NA	30%	140%	77%	30%	140%	NA	30%	140%
13C-1,2,3,4,6,7,8-HpCDF	1	MR	78%	79%	1.3%	82	NA	30%	140%	78%	30%	140%	NA	30%	140%
13C-1,2,3,4,7,8,9-HpCDF	1	MR	76%	83%	8.8%	82	NA	30%	140%	76%	30%	140%	NA	30%	140%
13C-2,3,7,8-TCDD	1	MR	74%	77%	4.0%	83	NA	30%	140%	74%	30%	140%	NA	30%	140%
13C-1,2,3,7,8-PeCDD	1	MR	76%	79%	3.9%	82	NA	30%	140%	76%	30%	140%	NA	30%	140%
13C-1,2,3,4,7,8-HxCDD	1	MR	75%	81%	7.7%	81	NA	30%	140%	75%	30%	140%	NA	30%	140%
13C-1,2,3,6,7,8-HxCDD	1	MR	85%	92%	7.9%	91	NA	30%	140%	85%	30%	140%	NA	30%	140%
13C-1,2,3,4,6,7,8-HpCDD	1	MR	85%	88%	3.5%	91	NA	30%	140%	85%	30%	140%	NA	30%	140%
13C-OCDD	1	MR	78%	85%	8.6%	85	NA	30%	140%	78%	30%	140%	NA	30%	140%

Comments: Presence of contamination in the method blank. The method blank was subtracted from the samples.

Certified By:



Robert Roch

Method Summary

CLIENT NAME: CONSULAIR GASTON BOULANGER INC
AGAT WORK ORDER: 24M194846
PROJECT: 24-8263-Agnico Eagle Meliadine
ATTENTION TO: Eric Trepanier
SAMPLED BY:
SAMPLING SITE: Meliadine, Qc

PARAMETER	DATE PREPARED	DATE ANALYZED	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Ultra Trace Analysis					
2,3,7,8-Tetra CDD	2024-10-04	2024-10-17	HR-151-5400F	CEAEQ MA.400-DF 1.0; USEPA 1613, 1311; EPSI/RM/19	APGC
1,2,3,7,8-Penta CDD	2024-10-04	2024-10-17	HR-151-5400F	CEAEQ MA.400-DF 1.0; USEPA 1613, 1311; EPSI/RM/19	APGC
1,2,3,4,7,8-Hexa CDD	2024-10-04	2024-10-17	HR-151-5400F	CEAEQ MA.400-DF 1.0; USEPA 1613, 1311; EPSI/RM/19	APGC
1,2,3,6,7,8-Hexa CDD	2024-10-04	2024-10-17	HR-151-5400F	CEAEQ MA.400-DF 1.0; USEPA 1613, 1311; EPSI/RM/19	APGC
1,2,3,7,8,9-Hexa CDD	2024-10-04	2024-10-17	HR-151-5400F	CEAEQ MA.400-DF 1.0; USEPA 1613, 1311; EPSI/RM/19	APGC
1,2,3,4,6,7,8-Hepta CDD	2024-10-04	2024-10-17	HR-151-5400F	CEAEQ MA.400-DF 1.0; USEPA 1613, 1311; EPSI/RM/19	APGC
Octa CDD	2024-10-04	2024-10-17	HR-151-5400F	CEAEQ MA.400-DF 1.0; USEPA 1613, 1311; EPSI/RM/19	APGC
2,3,7,8-Tetra CDF	2024-10-04	2024-10-17	HR-151-5400F	CEAEQ MA.400-DF 1.0; USEPA 1613, 1311; EPSI/RM/19	APGC
1,2,3,7,8-Penta CDF	2024-10-04	2024-10-17	HR-151-5400F	CEAEQ MA.400-DF 1.0; USEPA 1613, 1311; EPSI/RM/19	APGC
2,3,4,7,8-Penta CDF	2024-10-04	2024-10-17	HR-151-5400F	CEAEQ MA.400-DF 1.0; USEPA 1613, 1311; EPSI/RM/19	APGC
1,2,3,4,7,8-Hexa CDF	2024-10-04	2024-10-17	HR-151-5400F	CEAEQ MA.400-DF 1.0; USEPA 1613, 1311; EPSI/RM/19	APGC
1,2,3,6,7,8-Hexa CDF	2024-10-04	2024-10-17	HR-151-5400F	CEAEQ MA.400-DF 1.0; USEPA 1613, 1311; EPSI/RM/19	APGC
2,3,4,6,7,8-Hexa CDF	2024-10-04	2024-10-17	HR-151-5400F	CEAEQ MA.400-DF 1.0; USEPA 1613, 1311; EPSI/RM/19	APGC
1,2,3,7,8,9-Hexa CDF	2024-10-04	2024-10-17	HR-151-5400F	CEAEQ MA.400-DF 1.0; USEPA 1613, 1311; EPSI/RM/19	APGC
1,2,3,4,6,7,8-Hepta CDF	2024-10-04	2024-10-17	HR-151-5400F	CEAEQ MA.400-DF 1.0; USEPA 1613, 1311; EPSI/RM/19	APGC
1,2,3,4,7,8,9-Hepta CDF	2024-10-04	2024-10-17	HR-151-5400F	CEAEQ MA.400-DF 1.0; USEPA 1613, 1311; EPSI/RM/19	APGC
Octa CDF	2024-10-04	2024-10-17	HR-151-5400F	CEAEQ MA.400-DF 1.0; USEPA 1613, 1311; EPSI/RM/19	APGC
Summation of Tetra CDD	2024-10-04	2024-10-17	HR-151-5400F	CEAEQ MA.400-DF 1.0; USEPA 1613, 1311; EPSI/RM/19	APGC
Summation of Penta CDD	2024-10-04	2024-10-17	HR-151-5400F	CEAEQ MA.400-DF 1.0; USEPA 1613, 1311; EPSI/RM/19	APGC
Summation of Hexa CDD	2024-10-04	2024-10-17	HR-151-5400F	CEAEQ MA.400-DF 1.0; USEPA 1613, 1311; EPSI/RM/19	APGC

Method Summary

CLIENT NAME: CONSULAIR GASTON BOULANGER INC
AGAT WORK ORDER: 24M194846
PROJECT: 24-8263-Agnico Eagle Meliadine
ATTENTION TO: Eric Trepanier
SAMPLED BY:
SAMPLING SITE: Meliadine, Qc

PARAMETER	DATE PREPARED	DATE ANALYZED	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Summation of Hepta CDD	2024-10-04	2024-10-17	HR-151-5400F	CEAEQ MA.400-DF 1.0; USEPA 1613, 1311; EPSI/RM/19	APGC
Summation of PCDDs	2024-10-04	2024-10-17	HR-151-5400F	CEAEQ MA.400-DF 1.0; USEPA 1613, 1311; EPSI/RM/19	APGC
Summation of Tetra CDF	2024-10-04	2024-10-17	HR-151-5400F	CEAEQ MA.400-DF 1.0; USEPA 1613, 1311; EPSI/RM/19	APGC
Summation of Penta CDF	2024-10-04	2024-10-17	HR-151-5400F	CEAEQ MA.400-DF 1.0; USEPA 1613, 1311; EPSI/RM/19	APGC
Summation of Hexa CDF	2024-10-04	2024-10-17	HR-151-5400F	CEAEQ MA.400-DF 1.0; USEPA 1613, 1311; EPSI/RM/19	APGC
Summation of Hepta CDF	2024-10-04	2024-10-17	HR-151-5400F	CEAEQ MA.400-DF 1.0; USEPA 1613, 1311; EPSI/RM/19	APGC
Summation of PCDFs	2024-10-04	2024-10-17	HR-151-5400F	CEAEQ MA.400-DF 1.0; USEPA 1613, 1311; EPSI/RM/19	APGC
2,3,7,8-Tetra CDD (TEQ)	2024-10-04	2024-10-17	HR-151-5400F	CEAEQ MA.400-DF 1.0; USEPA 1613, 1311; EPSI/RM/19	APGC
1,2,3,7,8-Penta CDD (TEQ)	2024-10-04	2024-10-17	HR-151-5400F	CEAEQ MA.400-DF 1.0; USEPA 1613, 1311; EPSI/RM/19	APGC
1,2,3,4,7,8-Hexa CDD (TEQ)	2024-10-04	2024-10-17	HR-151-5400F	CEAEQ MA.400-DF 1.0; USEPA 1613, 1311; EPSI/RM/19	APGC
1,2,3,6,7,8-Hexa CDD (TEQ)	2024-10-04	2024-10-17	HR-151-5400F	CEAEQ MA.400-DF 1.0; USEPA 1613, 1311; EPSI/RM/19	APGC
1,2,3,7,8,9-Hexa CDD (TEQ)	2024-10-04	2024-10-17	HR-151-5400F	CEAEQ MA.400-DF 1.0; USEPA 1613, 1311; EPSI/RM/19	APGC
1,2,3,4,6,7,8-Hepta CDD (TEQ)	2024-10-04	2024-10-17	HR-151-5400F	CEAEQ MA.400-DF 1.0; USEPA 1613, 1311; EPSI/RM/19	APGC
Octa CDD (TEQ)	2024-10-04	2024-10-17	HR-151-5400F	CEAEQ MA.400-DF 1.0; USEPA 1613, 1311; EPSI/RM/19	APGC
2,3,7,8-Tetra CDF (TEQ)	2024-10-04	2024-10-17	HR-151-5400F	CEAEQ MA.400-DF 1.0; USEPA 1613, 1311; EPSI/RM/19	APGC
1,2,3,7,8-Penta CDF (TEQ)	2024-10-04	2024-10-17	HR-151-5400F	CEAEQ MA.400-DF 1.0; USEPA 1613, 1311; EPSI/RM/19	APGC
2,3,4,7,8-Penta CDF (TEQ)	2024-10-04	2024-10-17	HR-151-5400F	CEAEQ MA.400-DF 1.0; USEPA 1613, 1311; EPSI/RM/19	APGC
1,2,3,4,7,8-Hexa CDF (TEQ)	2024-10-04	2024-10-17	HR-151-5400F	CEAEQ MA.400-DF 1.0; USEPA 1613, 1311; EPSI/RM/19	APGC
1,2,3,6,7,8-Hexa CDF (TEQ)	2024-10-04	2024-10-17	HR-151-5400F	CEAEQ MA.400-DF 1.0; USEPA 1613, 1311; EPSI/RM/19	APGC
2,3,4,6,7,8-Hexa CDF (TEQ)	2024-10-04	2024-10-17	HR-151-5400F	CEAEQ MA.400-DF 1.0; USEPA 1613, 1311; EPSI/RM/19	APGC

Method Summary

CLIENT NAME: CONSULAIR GASTON BOULANGER INC
AGAT WORK ORDER: 24M194846
PROJECT: 24-8263-Agnico Eagle Meliadine
ATTENTION TO: Eric Trepanier
SAMPLED BY:
SAMPLING SITE: Meliadine, Qc

PARAMETER	DATE PREPARED	DATE ANALYZED	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
1,2,3,7,8,9-Hexa CDF (TEQ)	2024-10-04	2024-10-17	HR-151-5400F	CEAEQ MA.400-DF 1.0; USEPA 1613, 1311; EPSI/RM/19	APGC
1,2,3,4,6,7,8-Hepta CDF (TEQ)	2024-10-04	2024-10-17	HR-151-5400F	CEAEQ MA.400-DF 1.0; USEPA 1613, 1311; EPSI/RM/19	APGC
1,2,3,4,7,8,9-Hepta CDF (TEQ)	2024-10-04	2024-10-17	HR-151-5400F	CEAEQ MA.400-DF 1.0; USEPA 1613, 1311; EPSI/RM/19	APGC
Octa CDF (TEQ)	2024-10-04	2024-10-17	HR-151-5400F	CEAEQ MA.400-DF 1.0; USEPA 1613, 1311; EPSI/RM/19	APGC
Summation of PCDDs et PCDFs (TEQ)	2024-10-04	2024-10-17	HR-151-5400F	CEAEQ MA.400-DF 1.0; USEPA 1613, 1311; EPSI/RM/19	APGC
13C-2,3,7,8-TCDF	2024-10-04	2024-10-17	HR-151-5400F	CEAEQ MA.400 - DF 1.0; USEPA 1613	APGC
13C-1,2,3,7,8-PeCDF	2024-10-04	2024-10-17	HR-151-5400F	CEAEQ MA.400 - DF 1.0; USEPA 1613	APGC
13C-2,3,4,7,8-PeCDF	2024-10-04	2024-10-17	HR-151-5400F	CEAEQ MA.400 - DF 1.0; USEPA 1613	APGC
13C-1,2,3,4,7,8-HxCDF	2024-10-04	2024-10-17	HR-151-5400F	CEAEQ MA.400 - DF 1.0; USEPA 1613	APGC
13C-1,2,3,6,7,8-HxCDF	2024-10-04	2024-10-17	HR-151-5400F	CEAEQ MA.400 - DF 1.0; USEPA 1613	APGC
13C-2,3,4,6,7,8-HxCDF	2024-10-04	2024-10-17	HR-151-5400F	CEAEQ MA.400 - DF 1.0; USEPA 1613	APGC
13C-1,2,3,7,8,9-HxCDF	2024-10-04	2024-10-17	HR-151-5400F	CEAEQ MA.400 - DF 1.0; USEPA 1613	APGC
13C-1,2,3,4,6,7,8-HpCDF	2024-10-04	2024-10-17	HR-151-5400F	CEAEQ MA.400 - DF 1.0; USEPA 1613	APGC
13C-1,2,3,4,7,8,9-HpCDF	2024-10-04	2024-10-17	HR-151-5400F	CEAEQ MA.400 - DF 1.0; USEPA 1613	APGC
13C-2,3,7,8-TCDD	2024-10-04	2024-10-17	HR-151-5400F	CEAEQ MA.400 - DF 1.0; USEPA 1613	APGC
13C-1,2,3,7,8-PeCDD	2024-10-04	2024-10-17	HR-151-5400F	CEAEQ MA.400 - DF 1.0; USEPA 1613	APGC
13C-1,2,3,4,7,8-HxCDD	2024-10-04	2024-10-17	HR-151-5400F	CEAEQ MA.400 - DF 1.0; USEPA 1613	APGC
13C-1,2,3,6,7,8-HxCDD	2024-10-04	2024-10-17	HR-151-5400F	CEAEQ MA.400 - DF 1.0; USEPA 1613	APGC
13C-1,2,3,4,6,7,8-HpCDD	2024-10-04	2024-10-17	HR-151-5400F	CEAEQ MA.400 - DF 1.0; USEPA 1613	APGC
13C-OCDD	2024-10-04	2024-10-17	HR-151-5400F	CEAEQ MA.400 - DF 1.0; USEPA 1613	APGC



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Notes :

24M 194846

Tél.: 514.337.1000 • Sans frais: 1.866.417.5227 • Téléc.: 514.333.3046

Combiner les échantillons 101 à 106 pour un résultat

<u> </u> S Sol	<u> </u> B Boue	<u> </u> ES Eau de surface
<u> </u> SL Solide	<u> </u> EU Eaux usées	<u> </u> EF Effluent
<u> </u> SE Sédiment	<u> </u> ST Eau souterraine	<u> </u> AF Affluent
<u> </u> EP Eau potable (note pour réseau : veuillez fournir votre formulaire MDDEP)		

Délai régulier ☒ 5 à 7 jours ouvrables
 Date requise :

Délai rapide ☐ même journée (6-12 h)
 ☐ 24 heures
 ☐ 48 heures
 ☐ 72 heures

Les échantillons reçus après 16 h seront enregistrés comme étant reçus le jour ouvrable suivant.

☐ **Portrait :**
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RMD (mat. lixiviable) ☐ A ☐ B ☐ C ☐ D ☐ Reg. 87 CUM (art. 10) ☐

RDS (mat. lixiviable) ☐ Eau consommation ☐ Eau résurgente ☐ Reg. 87 CUM (art. 11) ☐

REIM art. ☐ *Reg. sur l'enfouissement des sols contaminés Autre (spécifier) _____

Identification de l'échantillon	Date de prélèvement	Matrice	Nombre de contenants	CSV : A	Composés	HAP	COV : HHV	Hydrocarb.	Huiles et graisses	BPC : CC	Pesticides	Métaux	6 métaux	Métaux	Cations	Mercurie	P total	Phénols (μg/l)	DBO5	Fluorures	Cyanures	Azote : ☐ NO ₃ ☐ NO ₂	Couleur	Solides	RDS ☐	Réglementaire	Microbiologie	PCDD/F		
101 - INC 1 - BS - 1	2024-08-16	Solvants	1																										✓	
102 - INC 1 - Filtre - 1	2024-08-16	Filtre	1																										✓	
103 - INC 1 - Trappe - 1	2024-08-16	XAD-2	1																										✓	
104 - INC 1 - AV.Tr. - 1	2024-08-16	Solvants	1																										✓	
105 - INC 1 - Eau - 1	2024-08-16	EAU	1																										✓	
106 - INC 1 - Fin - 1	2024-08-16	Solvants	1																										✓	
Échantillon remis par (nom en toutes lettres et signature)				Date/heure	Échantillon reçu par (nom en toutes lettres et signature)														Date/heure	Copies : Base Client Jaune - AGAT Blanche - AGAT				Page ____ de ____						
Échantillon remis par (nom en toutes lettres et signature)				Date/heure	Échantillon reçu par (nom en toutes lettres et signature)														Date/heure					N°:						



À l'usage exclusif du laboratoire

Température à l'arrivée : _____

No de travail AGAT :

Notes :

Chaîne de traçabilité ■ Environnement

Tél.: 514.337.1000 • Sans frais: 1.866.417.5227 • Téléc.: 514.333.3046

Information du client

Compagnie : Consulair

Adresse : 125-2022 rue L'Avoisier, Québec (Qc
G1N 4L5

Téléphone : +1 (418) 650-5960 Téléc. : _____

Projet client : 24-8263 - Agnico Eagle Meliadine

Bon de commande : _____ Soumission : _____

Lieu de prélèvement : Meliadine, Qc

Prélevé par : _____

Envoyer le rapport à :

Nom : Eric Trépanier
Courriel : eric.trepanier@consul-air.com

Commentaires :

Combiner les échantillons 107 à 112 pour un résultat

Matrice (légende) :

<u>S</u> Sol	<u>B</u> Boue	<u>ES</u> Eau de surface
<u>SL</u> Solide	<u>EU</u> Eaux usées	<u>EF</u> Effluent
<u>SE</u> Sédiment	<u>ST</u> Eau souterraine	<u>AF</u> Affluent
<u>EP</u> Eau potable (note pour réseau : veuillez fournir votre formulaire MDDEP)		

Délai d'analyse requis

Délai régulier ☒ 5 à 7 jours ouvrables
 Date requise : _____

Délai rapide ☐ même journée (6-12 h)
 ☐ 24 heures
 ☐ 48 heures
 ☐ 72 heures

Les échantillons reçus après 16 h seront enregistrés comme étant recus le jour ouvrable suivant.

Critères à respecter

RMD (mat. lixiviable) ☐ A ☐ B ☐ C ☐ D ☐ Reg. 87 CUM (art. 10) ☐

RDS (mat. lixiviable) ☐ Eau consommation ☐ Eau résurgente ☐ Reg. 87 CUM (art. 11) ☐

REIM art. _____ ☐ *Reg. sur l'enfouissement des sols contaminés Autre (spécifier) _____

Format de rapport

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St-Laurent, QC
H4S 1V9
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Notes:

Chaîne de traçabilité ■ Environnement

Tél.: 514.337.1000 • Sans frais: 1.866.417.5227 • Téléc.: 514.333.3046

Information du client

Compagnie :	Consulair	
Adresse :	125-2022 rue L'Avoisier, Québec (Qc	
	G1N 4L5	
Téléphone :	+1 (418) 650-5960	Télec. : _____
Projet client :	24-8263 - Agnic Eagle Meliadine	
Bon de commande :		Soumission : _____
Lieu de prélèvement :	Meliadine, Qc	
Prélevé par :	_____	

Envoyer le rapport à :

Nom : Eric Trépanier
Courriel : eric.trepanier@consul-air.com

Commentaires :

Combiner les échantillons 119 à 124 pour un résultat

Matrice (légende) :

<u>S</u> Sol	<u>B</u> Boue	<u>ES</u> Eau de surface
<u>SL</u> Solide	<u>FU</u> Eaux usées	<u>EF</u> Effluent
<u>SE</u> Sédiment	<u>ST</u> Eau souterraine	<u>AF</u> Affluent
<u>EP</u> Eau potable (note pour réseau : veuillez fournir votre formulaire MDDEP)		

Délai d'analyse requis

Délai régulier ☒ 5 à 7 jours ouvrables
 Date requise :

Délai rapide ☐ même journée (6-12 h)
 ☐ 24 heures
 ☐ 48 heures
 ☐ 72 heures

Les échantillons reçus après 16 h seront enregistrés comme étant reçus le jour ouvrable suivant.

Critères à respecter

RMD (mat. liviable) ☐ A ☐ B ☐ C ☐ D ☐ Reg. 87 CUM (art. 10) ☐

RDS (mat. liviable) ☐ Eau consommation ☐ Eau résurgente ☐ Reg. 87 CUM (art. 11) ☐

REIM art. _____ ☐ *Reg. sur l'enfouissement des sols contaminés Autre (spécifier) _____

Format de rapport

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plusieurs par page

	COSV : AGR	☐	Chlorobenzènes	☐	Phthalates	☐
	Composés phénoliques (GC-MS)	D130	☐	D131	☐	
	HAP					
	COV : HHT	☐	HMA	☐	BTEX	☐ THM ☐
	Hydrocarbures pétroliers C10-C50					
	Huiles et graisses minérales	☐	Totales	☐		
	BPC : Congénères	☐	Aroclor	☐		
	Pesticides (spécifier) :					
	Métaux (spécifier) :					
	6 métaux (Cd, Cr, Cu, Ni, Pb, Zn)					
	Métaux TC					
	Cations (Ca, K, Mg, Na)					
	Mercure (Hg)					
	P total	☐	P inor.	☐	o-phosphate	☐
	Phénol (colorimétrique)					
	DBO ₅	☐	DCO	☐		
	Fluorures	☐	Chlorures	☐	SO ₄	☐
	Cyanures : Totalx	☐	Disponibles	☐	Oxydables	☐
	Azote : TKN	☐	NH ₄	☐		
	NO _x	☐	NO _x +NO _y	☐	Turbidité	☐
	Couleur	☐	pH	☐	Alcalinité	☐
	Solides : Totalx	☐	Dissous	☐	MES	☐
	RDS	☐	RMD	☐	REIMR art.	☐
	Règlement 87 CUM : Article 10	☒	Article 11	☐		
	Microbiologie (spécifier) :					
	PCDD/DF	☐				

Échantillon remis par (nom en toutes lettres et signature)	Date/heure	Échantillon reçu par (nom en toutes lettres et signature)	Date/heure	Copies : Rose - Client Jaune - AGAT Blanche - AGAT	Page ____ de ____
Échantillon remis par (nom en toutes lettres et signature)	Date/heure	Échantillon reçu par (nom en toutes lettres et signature)	Date/heure		N°:



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St-Laurent, QC
H4S 1V9
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À l'usage exclusif du laboratoire

Condition à l'arrivée : Bonne ☐ Mauvaise (voir notes) ☐

Température à l'arrivée : _____

No de travail AGAT : _____

Notes :

Chaîne de traçabilité ■ Environnement

Tél.: 514.337.1000 • Sans frais: 1.866.417.5227 • Téléc.: 514.333.3046

Information du client

Compagnie : Consulair

Adresse : 125-2022 rue L'Avoisier, Québec (Qc
G1N 4L5

Téléphone : +1 (418) 650-5960 Téléc. : _____

Projet client : 24-8263 - Agnic Eagle Meliadine

Bon de commande : _____ Soumission : _____

Lieu de prélèvement : Meliadine, Qc

Prélevé par : _____

Envoyer le rapport à :

Nom : Eric Trépanier
Courriel : eric.trepanier@consul-air.com

Commentaires :

Combiner les échantillons 125 à 131 pour un résultat

Matrice (légende) :

<u>S</u> Sol	<u>B</u> Boue	<u>ES</u> Eau de surface
<u>SL</u> Solide	<u>EU</u> Eaux usées	<u>EF</u> Effluent
<u>SE</u> Sédiment	<u>ST</u> Eau souterraine	<u>AF</u> Affluent
<u>EP</u> Eau potable (note pour réseau : veuillez fournir votre formulaire MDDEP)		

Délai d'analyse requis

Délai régulier ☒ 5 à 7 jours ouvrables
 Date requise : _____

Délai rapide ☐ même journée (6-12 h)
 ☐ 24 heures
 ☐ 48 heures
 ☐ 72 heures

Les échantillons reçus après 16 h seront enregistrés comme étant recus le jour ouvrable suivant.

Critères à respecter

RMD (mat. liviable) ☐ A ☐ B ☐ C ☐ D ☐ Reg. 87 CUM (art. 10) ☐

RDS (mat. liviable) ☐ Eau consommation ☐ Eau résurgente ☐ Reg. 87 CUM (art. 11) ☐

REIM art. _____ ☐ *Reg. sur l'enfouissement des sols contaminés Autre (spécifier) _____

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Température à l'arrivée : _____

No de travail AGAT :

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Chaîne de traçabilité • Environnement

Tél.: 514.337.1000 • Sans frais: 1.866.417.5227 • Téléc.: 514.333.3046

Information du client

Compagnie :	Consular	
Adresse :	125-2022 rue L'Avoisier, Québec (Qc	
	G1N 4L5	
Téléphone :	+1 (418) 650-5960	Télec. : _____
Projet client :	24-8263 - Agnic Eagle Meliadine	
Bon de commande :		Soumission : _____
Lieu de prélèvement :	Meliadine, Qc	
Prélevé par :		

Envoyer le rapport à :

Nom : Eric Trépanier
Courriel : eric.trepanier@consul-air.com

Commentaires :

Combiner les échantillons 132 à 137 pour un résultat

Matrice (légende) :

<u>S</u> Sol	<u>B</u> Boue	<u>ES</u> Eau de surface
<u>SL</u> Solide	<u>FU</u> Eaux usées	<u>EF</u> Effluent
<u>SE</u> Sédiment	<u>ST</u> Eau souterraine	<u>AF</u> Affluent
<u>EP</u> Eau potable (note pour réseau : veuillez fournir votre formulaire MDDEP)		

Délai d'analyse requis

Délai régulier ☒ 5 à 7 jours ouvrables Date requise : _____

Délai rapide ☐ même journée (6-12 h) ☐ 24 heures ☐ 48 heures ☐ 72 heures

Les échantillons reçus après 16 h seront enregistrés comme étant reçus le jour ouvrable suivant.

Critères à respecter

RMD (mat. lixiviable) ☐ A ☐ B ☐ C ☐ D ☐ Reg. 87 CUM (art. 10) ☐

RDS (mat. lixiviable) ☐ Eau consommation ☐ Eau résurgente ☐ Reg. 87 CUM (art. 11) ☐

REIM art. _____ ☐ *Reg. sur l'enfouissement des sols contaminés Autre (spécifier) _____

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- ☐ **Paysage :**
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2022 Lavoisier, suite 125, Québec (QC) G1N 4L5
Tél.: (418) 650-5960, Fax : (418) 704-2221

Québec, le vendredi 30 août 2024

Karine Berger

Chargée de projets au service à la clientèle

9770 Route Transcanadienne, St-Laurent QC H4S 1V9

Ligne directe: 514.337.5967

Cellulaire: 514.242.0024



Objet : Explications de la demande d'analyses pour le projet de Agnico
Eagle(Meliadine).

Notre no de projet : 24-8263

Bonjour Karine,

Voici la demande d'analyses concernant le dossier mentionné précédemment. Les mesures ont été effectuées du 16 au 24 août 2024. Il y a une demande d'analyse pour les COSV.

DEMANDE D'ANALYSES #1 /COSV

Pour les COSV (PCDD/DF), il faut combiner les échantillons par essai (une page = 1 essai). Cela correspond à 3 essais réalisés sur 2 sources (INC 1 et INC 2) et un blanc.

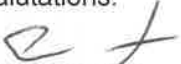
La liste détaillée des paramètres est jointe à ce document.

Il est important de conserver les échantillons. Même après l'analyse des échantillons. Ne rien jeter SVP sans m'avoir contacté avant.

Les résultats doivent être envoyés à Eric Trépanier (eric.trepanier@consul-air.com)

Pour des renseignements supplémentaires n'hésitez pas à communiquer avec nous.

Salutations.


Eric Trépanier

www.consul-air.com

Siège Social : 2022, Lavoisier, bureau 125, Québec (Québec) G1N 4L5 Téléphone : (418) 650-5960 1-866-6969-AIR Télécopieur : (418) 704-2221

Bureau de Montréal : 600, Leclerc, Repentigny (Québec) J6A 2E5 Téléphone : (450) 654-8000 Télécopieur : (450) 654-6730

DIOXINES ET FURANNES (pg)
ESSAI #
2,3,7,8 - Tetra CDD
1,2,3,7,8 - Penta CDD
1,2,3,4,7,8 - Hexa CDD
1,2,3,6,7,8 - Hexa CDD
1,2,3,7,8,9 - Hexa CDD
1,2,3,4,6,7,8 - Hepta CDD
1,2,3,4,6,7,8,9 - Octa CDD
2, 3, 7, 8 - Tetra CDF
1,2,3,7,8 - Penta CDF
2,3,4,7,8 - Penta CDF
1,2,3,4,7,8 - Hexa CDF
1,2,3,6,7,8 - Hexa CDF
2,3,4,6,7,8 - Hexa CDF
1,2,3,7,8,9 - Hexa CDF
1,2,3,4,6,7,8 - Hepta CDF
1,2,3,4,7,8,9 - Hepta CDF
1,2,3,4,6,7,8,9 - Octa CDF
Total Tetra CDD
Total Penta CDD
Total Hexa CDD
Total Hepta CDD
Octa CDD
Total Tetra CDF
Total Penta CDF
Total Hexa CDF
Total Hepta CDF
Octa CDF
ÉQUIVALENCE TOXIQUE MAXIMALE
ÉQUIVALENCE TOXIQUE
ÉQUIVALENCE TOXIQUE TOTALE

Your Project #: 24-8263
 Site Location: AEM MELIADINE
 Your C.O.C. #: n-a

Attention: Éric Trépanier

CONSULAIR INC.
 2022 Lavoisier
 Local 125
 Québec, QC
 Canada G1N 4L5

Report Date: 2024/12/06
 Report #: R3005947
 Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C450352

Received: 2024/09/04, 13:30

Sample Matrix: Filter
 # Samples Received: 3

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Extractable Metals (Filter 90-142mm)	3	2024/09/14	2024/09/16	STL SOP-00062	MA.200–Mét. 1.2 R7 m

Sample Matrix: Impinger Solution
 # Samples Received: 33

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Mercury by CVAA	7	2024/09/11	2024/09/11	STL SOP-00075	MA.200–Mét. 1.2 r 7m
Extractable Metals in Impinger	14	2024/09/12	2024/09/14	STL SOP-00075	MA.200–Mét. 1.2 R7 m
Extractable Metals in Impinger	6	2024/09/14	2024/09/15	STL SOP-00075	MA.200–Mét. 1.2 R7 m
Volume of Impinger Solution	6	N/A	2024/09/12		

Sample Matrix: Train
 # Samples Received: 7

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Extractable Metals (Impinger+filter)	7	2024/09/12	2024/09/19	STL SOP-00075	MA.200–Mét. 1.2 R7

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, EPA, APHA or the Quebec Ministry of Environment.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope



Your Project #: 24-8263
Site Location: AEM MELIADINE
Your C.O.C. #: n-a

Attention: Éric Trépanier

CONSULAIR INC.
2022 Lavoisier
Local 125
Québec, QC
Canada G1N 4L5

Report Date: 2024/12/06
Report #: R3005947
Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C450352

Received: 2024/09/04, 13:30

dilution methods.

Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

Note: RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

Note: All parameters included in the present certificate are accredited by the Québec Ministry of the Environment, unless stated otherwise.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to:

Argyro Frangoulis, Team Leader for Multisector customer Experience

Email: argyro.frangoulis@bureauveritas.com

Phone# (514)208-0388

=====

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Aglaia Yannakis, General Manager responsible for Quebec Environmental laboratory operations.

**METALS (FILTER)**

Bureau Veritas ID		NM4374	NM4376	NM4377		
Sampling Date		2024/08/19	2024/08/19	2024/08/20		
COC Number		n-a	n-a	n-a		
	Units	228-INC 2-FILTRE2-1	229-INC 2-FILTRE3-1	246-INC 2-FILTRE2-3	RDL	QC Batch

METALS						
Filter Lithium (Li) †	ug	3.5	5.0	<1.0	1.0	2567326
Filter Antimony (Sb)	ug	90	79	8.9	0.050	2567326
Filter Silver (Ag)	ug	1.6	1.2	0.50	0.050	2567326
Filter Arsenic (As)	ug	74	57	11	0.040	2567326
Filter Barium (Ba)	ug	1.9	12	0.82	0.050	2567326
Filter Beryllium (Be)	ug	<0.030	<0.030	<0.030	0.030	2567326
Filter Bismuth (Bi) †	ug	1.3	1.2	0.31	0.050	2567326
Filter Cadmium (Cd)	ug	0.63	0.77	0.15	0.050	2567326
Filter Calcium (Ca) †	ug	730	150	130	50	2567326
Filter Chromium (Cr)	ug	19	15	6.9	0.10	2567326
Filter Cobalt (Co) †	ug	1.2	0.049	0.041	0.030	2567326
Filter Copper (Cu)	ug	47	110	14	0.10	2567326
Filter Tin (Sn) †	ug	21	9.6	3.2	0.10	2567326
Filter Iron (Fe) †	ug	56	28	33	5.0	2567326
Filter Magnesium (Mg) †	ug	62	15	16	1.5	2567326
Filter Manganese (Mn) †	ug	2.6	1.1	1.9	0.10	2567326
Filter Mercury (Hg)	ug	<0.10	<0.10	<0.10	0.10	2567326
Filter Molybdenum (Mo) †	ug	3.7	1.9	1.1	0.20	2567326
Filter Nickel (Ni)	ug	<0.50	<0.50	<0.50	0.50	2567326
Filter Lead (Pb)	ug	52 (1)	24 (1)	25 (1)	0.42	2567326
Filter Potassium (K) †	ug	15000	14000	4100	10	2567326
Filter Selenium (Se) †	ug	<0.50	<0.50	<0.50	0.50	2567326
Filter Silicon (Si) †	ug	510 (1)	160 (1)	130 (1)	13	2567326
Filter Sodium (Na) †	ug	18000 (1)	44000 (1)	4100 (1)	43	2567326
Filter Strontium (Sr) †	ug	1.4 (1)	0.91 (1)	0.32 (1)	0.045	2567326
Filter Thallium (Tl)	ug	0.16	0.035	0.038	0.010	2567326
Filter Titanium (Ti) †	ug	17 (1)	2.9 (1)	4.3 (1)	2.0	2567326
Filter Vanadium (V)	ug	<0.20	<0.20	<0.20	0.20	2567326
Filter Zinc (Zn)	ug	930 (1)	520 (1)	54 (1)	2.2	2567326

RDL = Reportable Detection Limit

QC Batch = Quality Control Batch

† Parameter is not accreditable

(1) La limite de détection a été augmentée dû à l'instrumentation.



BUREAU
VERITAS

Bureau Veritas Job #: C450352

Report Date: 2024/12/06

CONSULAIR INC.

Client Project #: 24-8263

Site Location: AEM MELIADINE

METALS (IMPINGER SOLUTION)

Bureau Veritas ID		NL7302			NL7303		
Sampling Date		2024/08/16			2024/08/16		
COC Number		n-a			n-a		
	Units	204-INC-1-B12-1 VT:410ML	RDL	QC Batch	205-INC-1-B1234-1 VT:320ML	RDL	QC Batch

METALS							
Impinger solution Aluminum (Al) †	ug	18	4	2566648	11	3	2567354
Impinger solution Antimony (Sb) †	ug	<0.4	0.4	2566648	<0.3	0.3	2567354
Impinger solution Silver (Ag) †	ug	<2	2	2566648	<2	2	2567354
Impinger solution Arsenic (As) †	ug	2.3	0.4	2566648	<0.3	0.3	2567354
Impinger solution Barium (Ba) †	ug	0.4	0.2	2566648	0.5	0.2	2567354
Impinger solution Beryllium (Be) †	ug	<0.2	0.2	2566648	<0.2	0.2	2567354
Impinger solution Bismuth (Bi) †	ug	0.3	0.2	2566648	<0.2	0.2	2567354
Impinger solution Boron (B) †	ug	37.5	0.8	2566648	6.2	0.6	2567354
Impinger solution Cadmium (Cd) †	ug	<0.2	0.2	2566648	<0.2	0.2	2567354
Impinger solution Calcium (Ca) †	ug	62	20	2566648	46	20	2567354
Impinger solution Chromium (Cr) †	ug	<0.4	0.4	2566648	0.4	0.3	2567354
Impinger solution Cobalt (Co) †	ug	<0.4	0.4	2566648	<0.3	0.3	2567354
Impinger solution Copper (Cu) †	ug	1.3	0.4	2566648	0.9	0.3	2567354
Impinger solution Tin (Sn) †	ug	<2	2	2566648	16	2	2567354
Impinger solution Iron (Fe) †	ug	<20	20	2566648	25	20	2567354
Impinger solution Lithium (Li) †	ug	<4	4	2566648	<3	3	2567354
Impinger solution Magnesium (Mg) †	ug	<8	8	2566648	<6	6	2567354
Impinger solution Manganese (Mn) †	ug	4.7	0.4	2566648	2.6	0.3	2567354
Impinger solution Mercury (Hg) †	ug	<0.2	0.2	2566648	<0.2	0.2	2567354
Impinger solution Molybdenum (Mo) †	ug	<2	2	2566648	<2	2	2567354
Impinger solution Nickel (Ni) †	ug	0.4	0.4	2566648	0.4	0.3	2567354
Impinger solution Lead (Pb) †	ug	<2	2	2566648	<2	2	2567354
Impinger solution Potassium (K) †	ug	<40	40	2566648	<30	30	2567354
Impinger solution Selenium (Se) †	ug	3.1	0.4	2566648	<0.3	0.3	2567354
Impinger solution Silicon (Si) †	ug	77	20	2566648	224	20	2567354
Impinger solution Sodium (Na) †	ug	5590	20	2566648	6000	20	2567354
Impinger solution Strontium (Sr) †	ug	<0.4	0.4	2566648	<0.3	0.3	2567354
Impinger solution Thallium (Tl) †	ug	<0.4	0.4	2566648	<0.3	0.3	2567354
Impinger solution Titanium (Ti) †	ug	<4	4	2566648	<3	3	2567354
Impinger solution Vanadium (V) †	ug	<0.8	0.8	2566648	<0.6	0.6	2567354
Impinger solution Zinc (Zn) †	ug	58.3	0.4	2566648	3.0	0.3	2567354

RDL = Reportable Detection Limit

QC Batch = Quality Control Batch

† Parameter is not accreditable



METALS (IMPINGER SOLUTION)

Bureau Veritas ID		NL7304			NL7307		
Sampling Date		2024/08/16			2024/08/16		
COC Number		n-a			n-a		
	Units	206-INC-1-B5-1 VT:100ML	RDL	QC Batch	207+208-INC 1-B67-1 VT:625ML	RDL	QC Batch
METALS							
Mercury (Hg)	ug				<0.63	0.63	2565892
Impinger solution Mercury (Hg) †	ug	<0.05	0.05	2566648			
RDL = Reportable Detection Limit QC Batch = Quality Control Batch † Parameter is not accreditable							



BUREAU
VERITAS

Bureau Veritas Job #: C450352

Report Date: 2024/12/06

CONSULAIR INC.

Client Project #: 24-8263

Site Location: AEM MELIADINE

METALS (IMPINGER SOLUTION)

Bureau Veritas ID		NL7324			NL7325		
Sampling Date		2024/08/17			2024/08/17		
COC Number		n-a			n-a		
	Units	212-INC-1-B12-2 VT:410ML	RDL	QC Batch	213-INC-1-B1234-2 VT:300ML	RDL	QC Batch

METALS							
Impinger solution Aluminum (Al) †	ug	27	4	2566648	11	3	2567354
Impinger solution Antimony (Sb) †	ug	<0.4	0.4	2566648	<0.3	0.3	2567354
Impinger solution Silver (Ag) †	ug	<2	2	2566648	<2	2	2567354
Impinger solution Arsenic (As) †	ug	0.5	0.4	2566648	<0.3	0.3	2567354
Impinger solution Barium (Ba) †	ug	<0.2	0.2	2566648	0.5	0.2	2567354
Impinger solution Beryllium (Be) †	ug	<0.2	0.2	2566648	<0.2	0.2	2567354
Impinger solution Bismuth (Bi) †	ug	<0.2	0.2	2566648	<0.2	0.2	2567354
Impinger solution Boron (B) †	ug	98.9	0.8	2566648	6.9	0.6	2567354
Impinger solution Cadmium (Cd) †	ug	<0.2	0.2	2566648	<0.2	0.2	2567354
Impinger solution Calcium (Ca) †	ug	92	20	2566648	146	20	2567354
Impinger solution Chromium (Cr) †	ug	<0.4	0.4	2566648	0.5	0.3	2567354
Impinger solution Cobalt (Co) †	ug	<0.4	0.4	2566648	<0.3	0.3	2567354
Impinger solution Copper (Cu) †	ug	0.8	0.4	2566648	1.3	0.3	2567354
Impinger solution Tin (Sn) †	ug	<2	2	2566648	17	2	2567354
Impinger solution Iron (Fe) †	ug	<20	20	2566648	<20	20	2567354
Impinger solution Lithium (Li) †	ug	<4	4	2566648	<3	3	2567354
Impinger solution Magnesium (Mg) †	ug	33	8	2566648	37	6	2567354
Impinger solution Manganese (Mn) †	ug	0.5	0.4	2566648	0.6	0.3	2567354
Impinger solution Mercury (Hg) †	ug	<0.2	0.2	2566648	<0.2	0.2	2567354
Impinger solution Molybdenum (Mo) †	ug	<2	2	2566648	<2	2	2567354
Impinger solution Nickel (Ni) †	ug	<0.4	0.4	2566648	0.8	0.3	2567354
Impinger solution Lead (Pb) †	ug	<2	2	2566648	<2	2	2567354
Impinger solution Potassium (K) †	ug	<40	40	2566648	<30	30	2567354
Impinger solution Selenium (Se) †	ug	3.3	0.4	2566648	<0.3	0.3	2567354
Impinger solution Silicon (Si) †	ug	102	20	2566648	39	20	2567354
Impinger solution Sodium (Na) †	ug	5880	20	2566648	5330	20	2567354
Impinger solution Strontium (Sr) †	ug	<0.4	0.4	2566648	<0.3	0.3	2567354
Impinger solution Thallium (Tl) †	ug	<0.4	0.4	2566648	<0.3	0.3	2567354
Impinger solution Titanium (Ti) †	ug	<4	4	2566648	<3	3	2567354
Impinger solution Vanadium (V) †	ug	<0.8	0.8	2566648	<0.6	0.6	2567354
Impinger solution Zinc (Zn) †	ug	16.8	0.4	2566648	4.8	0.3	2567354

RDL = Reportable Detection Limit

QC Batch = Quality Control Batch

† Parameter is not accreditable



METALS (IMPINGER SOLUTION)

Bureau Veritas ID		NL7326			NL7327		
Sampling Date		2024/08/17			2024/08/17		
COC Number		n-a			n-a		
	Units	214-INC-1-B5-2 VT:100ML	RDL	QC Batch	215+216-INC 1-B67-2 VT:645ML	RDL	QC Batch

METALS

Mercury (Hg)	ug				<0.65	0.65	2565892
Impinger solution Mercury (Hg) †	ug	<0.05	0.05	2566648			

RDL = Reportable Detection Limit

QC Batch = Quality Control Batch

† Parameter is not accreditable



BUREAU
VERITAS

Bureau Veritas Job #: C450352

Report Date: 2024/12/06

CONSULAIR INC.

Client Project #: 24-8263

Site Location: AEM MELIADINE

METALS (IMPINGER SOLUTION)

Bureau Veritas ID		NL7328			NL7329		
Sampling Date		2024/08/18			2024/08/18		
COC Number		n-a			n-a		
	Units	220-INC-1-B12-3 VT:400ML	RDL	QC Batch	221-INC-1-B1234-3 VT:340ML	RDL	QC Batch

METALS							
Impinger solution Aluminum (Al) †	ug	13	4	2566648	11	3	2567354
Impinger solution Antimony (Sb) †	ug	<0.4	0.4	2566648	<0.3	0.3	2567354
Impinger solution Silver (Ag) †	ug	<2	2	2566648	<2	2	2567354
Impinger solution Arsenic (As) †	ug	0.8	0.4	2566648	<0.3	0.3	2567354
Impinger solution Barium (Ba) †	ug	<0.2	0.2	2566648	0.5	0.2	2567354
Impinger solution Beryllium (Be) †	ug	<0.2	0.2	2566648	<0.2	0.2	2567354
Impinger solution Bismuth (Bi) †	ug	0.3	0.2	2566648	<0.2	0.2	2567354
Impinger solution Boron (B) †	ug	54.9	0.8	2566648	4.2	0.7	2567354
Impinger solution Cadmium (Cd) †	ug	<0.2	0.2	2566648	<0.2	0.2	2567354
Impinger solution Calcium (Ca) †	ug	30	20	2566648	72	20	2567354
Impinger solution Chromium (Cr) †	ug	<0.4	0.4	2566648	<0.3	0.3	2567354
Impinger solution Cobalt (Co) †	ug	<0.4	0.4	2566648	<0.3	0.3	2567354
Impinger solution Copper (Cu) †	ug	<0.4	0.4	2566648	0.9	0.3	2567354
Impinger solution Tin (Sn) †	ug	<2	2	2566648	15	2	2567354
Impinger solution Iron (Fe) †	ug	<20	20	2566648	36	20	2567354
Impinger solution Lithium (Li) †	ug	<4	4	2566648	<3	3	2567354
Impinger solution Magnesium (Mg) †	ug	<8	8	2566648	11	7	2567354
Impinger solution Manganese (Mn) †	ug	0.5	0.4	2566648	0.6	0.3	2567354
Impinger solution Mercury (Hg) †	ug	<0.2	0.2	2566648	<0.2	0.2	2567354
Impinger solution Molybdenum (Mo) †	ug	<2	2	2566648	<2	2	2567354
Impinger solution Nickel (Ni) †	ug	<0.4	0.4	2566648	0.3	0.3	2567354
Impinger solution Lead (Pb) †	ug	<2	2	2566648	<2	2	2567354
Impinger solution Potassium (K) †	ug	<40	40	2566648	<30	30	2567354
Impinger solution Selenium (Se) †	ug	1.9	0.4	2566648	<0.3	0.3	2567354
Impinger solution Silicon (Si) †	ug	51	20	2566648	191	20	2567354
Impinger solution Sodium (Na) †	ug	6180	20	2566648	6310	20	2567354
Impinger solution Strontium (Sr) †	ug	<0.4	0.4	2566648	<0.3	0.3	2567354
Impinger solution Thallium (Tl) †	ug	<0.4	0.4	2566648	<0.3	0.3	2567354
Impinger solution Titanium (Ti) †	ug	<4	4	2566648	<3	3	2567354
Impinger solution Vanadium (V) †	ug	<0.8	0.8	2566648	<0.7	0.7	2567354
Impinger solution Zinc (Zn) †	ug	15.3	0.4	2566648	2.6	0.3	2567354

RDL = Reportable Detection Limit

QC Batch = Quality Control Batch

† Parameter is not accreditable



METALS (IMPINGER SOLUTION)

Bureau Veritas ID		NL7337			NL7338		
Sampling Date		2024/08/18			2024/08/18		
COC Number		n-a			n-a		
	Units	222-INC-1-B5-3 VT:100ML	RDL	QC Batch	223+224-INC 1-B67-3 VT:625ML	RDL	QC Batch

METALS

Mercury (Hg)	ug				<0.63	0.63	2565892
Impinger solution Mercury (Hg) †	ug	<0.05	0.05	2566648			

RDL = Reportable Detection Limit

QC Batch = Quality Control Batch

† Parameter is not accreditable



BUREAU
VERITAS

Bureau Veritas Job #: C450352

Report Date: 2024/12/06

CONSULAIR INC.

Client Project #: 24-8263

Site Location: AEM MELIADINE

METALS (IMPINGER SOLUTION)

Bureau Veritas ID		NL7340		NL7341		
Sampling Date		2024/08/19		2024/08/19		
COC Number		n-a		n-a		
	Units	230-INC-2-B12-1 VT:350ML	QC Batch	231-INC 2-B1234-1 VT:360ML	RDL	QC Batch

METALS						
Impinger solution Aluminum (Al) †	ug	44	2566648	15	4	2567354
Impinger solution Antimony (Sb) †	ug	1.4	2566648	1.1	0.4	2567354
Impinger solution Silver (Ag) †	ug	<2	2566648	<2	2	2567354
Impinger solution Arsenic (As) †	ug	3.0	2566648	1.2	0.4	2567354
Impinger solution Barium (Ba) †	ug	0.7	2566648	0.6	0.2	2567354
Impinger solution Beryllium (Be) †	ug	<0.2	2566648	<0.2	0.2	2567354
Impinger solution Bismuth (Bi) †	ug	<0.2	2566648	<0.2	0.2	2567354
Impinger solution Boron (B) †	ug	51.3	2566648	6.1	0.7	2567354
Impinger solution Cadmium (Cd) †	ug	<0.2	2566648	<0.2	0.2	2567354
Impinger solution Calcium (Ca) †	ug	191	2566648	99	20	2567354
Impinger solution Chromium (Cr) †	ug	<0.4	2566648	<0.4	0.4	2567354
Impinger solution Cobalt (Co) †	ug	<0.4	2566648	<0.4	0.4	2567354
Impinger solution Copper (Cu) †	ug	3.7	2566648	3.4	0.4	2567354
Impinger solution Tin (Sn) †	ug	<2	2566648	16	2	2567354
Impinger solution Iron (Fe) †	ug	59	2566648	24	20	2567354
Impinger solution Lithium (Li) †	ug	<4	2566648	<4	4	2567354
Impinger solution Magnesium (Mg) †	ug	58	2566648	25	7	2567354
Impinger solution Manganese (Mn) †	ug	2.8	2566648	1.4	0.4	2567354
Impinger solution Mercury (Hg) †	ug	<0.2	2566648	<0.2	0.2	2567354
Impinger solution Molybdenum (Mo) †	ug	<2	2566648	<2	2	2567354
Impinger solution Nickel (Ni) †	ug	<0.4	2566648	0.4	0.4	2567354
Impinger solution Lead (Pb) †	ug	<2	2566648	<2	2	2567354
Impinger solution Potassium (K) †	ug	386	2566648	246	40	2567354
Impinger solution Selenium (Se) †	ug	2.0	2566648	<0.4	0.4	2567354
Impinger solution Silicon (Si) †	ug	76	2566648	40	20	2567354
Impinger solution Sodium (Na) †	ug	8340	2566648	7670	20	2567354
Impinger solution Strontium (Sr) †	ug	<0.4	2566648	<0.4	0.4	2567354
Impinger solution Thallium (Tl) †	ug	<0.4	2566648	<0.4	0.4	2567354
Impinger solution Titanium (Ti) †	ug	<4	2566648	<4	4	2567354
Impinger solution Vanadium (V) †	ug	<0.7	2566648	<0.7	0.7	2567354
Impinger solution Zinc (Zn) †	ug	182	2566648	20.4	0.4	2567354

RDL = Reportable Detection Limit

QC Batch = Quality Control Batch

† Parameter is not accreditable



METALS (IMPINGER SOLUTION)

Bureau Veritas ID		NL7342			NL7343		
Sampling Date		2024/08/19			2024/08/19		
COC Number		n-a			n-a		
	Units	232-INC 2-B5-1 VT:100ML	RDL	QC Batch	233+234-INC 2-B67-1 VT:635ML	RDL	QC Batch
METALS							
Mercury (Hg)	ug				<0.64	0.64	2565892
Impinger solution Mercury (Hg) †	ug	<0.05	0.05	2566648			
RDL = Reportable Detection Limit QC Batch = Quality Control Batch † Parameter is not accreditable							



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Bureau Veritas Job #: C450352

Report Date: 2024/12/06

CONSULAIR INC.

Client Project #: 24-8263

Site Location: AEM MELIADINE

METALS (IMPINGER SOLUTION)

Bureau Veritas ID		NL7344		NL7346		
Sampling Date		2024/08/20		2024/08/20		
COC Number		n-a		n-a		
	Units	238-INC 2-B12-2 VT:320ML	QC Batch	239-INC2-B1234-2 VT:300ML	RDL	QC Batch
METALS						
Impinger solution Aluminum (Al) †	ug	12	2566648	14	3	2567354
Impinger solution Antimony (Sb) †	ug	<0.3	2566648	<0.3	0.3	2567354
Impinger solution Silver (Ag) †	ug	<2	2566648	<2	2	2567354
Impinger solution Arsenic (As) †	ug	<0.3	2566648	0.5	0.3	2567354
Impinger solution Barium (Ba) †	ug	<0.2	2566648	<0.2	0.2	2567354
Impinger solution Beryllium (Be) †	ug	<0.2	2566648	<0.2	0.2	2567354
Impinger solution Bismuth (Bi) †	ug	<0.2	2566648	<0.2	0.2	2567354
Impinger solution Boron (B) †	ug	29.9	2566648	5.5	0.6	2567354
Impinger solution Cadmium (Cd) †	ug	<0.2	2566648	<0.2	0.2	2567354
Impinger solution Calcium (Ca) †	ug	62	2566648	51	20	2567354
Impinger solution Chromium (Cr) †	ug	<0.3	2566648	<0.3	0.3	2567354
Impinger solution Cobalt (Co) †	ug	<0.3	2566648	<0.3	0.3	2567354
Impinger solution Copper (Cu) †	ug	0.8	2566648	0.3	0.3	2567354
Impinger solution Tin (Sn) †	ug	<2	2566648	15	2	2567354
Impinger solution Iron (Fe) †	ug	<20	2566648	24	20	2567354
Impinger solution Lithium (Li) †	ug	<3	2566648	<3	3	2567354
Impinger solution Magnesium (Mg) †	ug	13	2566648	12	6	2567354
Impinger solution Manganese (Mn) †	ug	0.7	2566648	0.6	0.3	2567354
Impinger solution Mercury (Hg) †	ug	<0.2	2566648	<0.2	0.2	2567354
Impinger solution Molybdenum (Mo) †	ug	<2	2566648	<2	2	2567354
Impinger solution Nickel (Ni) †	ug	<0.3	2566648	<0.3	0.3	2567354
Impinger solution Lead (Pb) †	ug	<2	2566648	<2	2	2567354
Impinger solution Potassium (K) †	ug	<30	2566648	<30	30	2567354
Impinger solution Selenium (Se) †	ug	0.4	2566648	<0.3	0.3	2567354
Impinger solution Silicon (Si) †	ug	25	2566648	<20	20	2567354
Impinger solution Sodium (Na) †	ug	4890	2566648	4820	20	2567354
Impinger solution Strontium (Sr) †	ug	<0.3	2566648	<0.3	0.3	2567354
Impinger solution Thallium (Tl) †	ug	<0.3	2566648	<0.3	0.3	2567354
Impinger solution Titanium (Ti) †	ug	<3	2566648	<3	3	2567354
Impinger solution Vanadium (V) †	ug	<0.6	2566648	<0.6	0.6	2567354
Impinger solution Zinc (Zn) †	ug	18.5	2566648	4.3	0.3	2567354
RDL = Reportable Detection Limit						
QC Batch = Quality Control Batch						
† Parameter is not accreditable						



METALS (IMPINGER SOLUTION)

Bureau Veritas ID		NL7347			NL7348		
Sampling Date		2024/08/20			2024/08/20		
COC Number		n-a			n-a		
	Units	240-INC 2-B5-2 VT:100ML	RDL	QC Batch	241+242-INC 2-B67-2 VT:625ML	RDL	QC Batch
METALS							
Mercury (Hg)	ug				<0.63	0.63	2565892
Impinger solution Mercury (Hg) †	ug	<0.05	0.05	2566648			
RDL = Reportable Detection Limit QC Batch = Quality Control Batch † Parameter is not accreditable							

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Bureau Veritas Job #: C450352

Report Date: 2024/12/06

CONSULAIR INC.

Client Project #: 24-8263

Site Location: AEM MELIADINE

METALS (IMPINGER SOLUTION)

Bureau Veritas ID		NL7349		NL7350		
Sampling Date		2024/08/20		2024/08/20		
COC Number		n-a		n-a		
	Units	247-INC 2-B12-3 VT:310ML	QC Batch	248-INC 2-B1234-3 VT:320ML	RDL	QC Batch

METALS						
Impinger solution Aluminum (Al) †	ug	37	2566648	26	3	2567354
Impinger solution Antimony (Sb) †	ug	0.3	2566648	<0.3	0.3	2567354
Impinger solution Silver (Ag) †	ug	<2	2566648	<2	2	2567354
Impinger solution Arsenic (As) †	ug	0.5	2566648	1.3	0.3	2567354
Impinger solution Barium (Ba) †	ug	4.0	2566648	0.8	0.2	2567354
Impinger solution Beryllium (Be) †	ug	<0.2	2566648	<0.2	0.2	2567354
Impinger solution Bismuth (Bi) †	ug	<0.2	2566648	<0.2	0.2	2567354
Impinger solution Boron (B) †	ug	31.5	2566648	2.5	0.6	2567354
Impinger solution Cadmium (Cd) †	ug	<0.2	2566648	<0.2	0.2	2567354
Impinger solution Calcium (Ca) †	ug	183	2566648	120	20	2567354
Impinger solution Chromium (Cr) †	ug	0.4	2566648	<0.3	0.3	2567354
Impinger solution Cobalt (Co) †	ug	<0.3	2566648	<0.3	0.3	2567354
Impinger solution Copper (Cu) †	ug	7.3	2566648	2.1	0.3	2567354
Impinger solution Tin (Sn) †	ug	8	2566648	32	2	2567354
Impinger solution Iron (Fe) †	ug	71	2566648	48	20	2567354
Impinger solution Lithium (Li) †	ug	<3	2566648	<3	3	2567354
Impinger solution Magnesium (Mg) †	ug	34	2566648	26	6	2567354
Impinger solution Manganese (Mn) †	ug	1.0	2566648	1.0	0.3	2567354
Impinger solution Mercury (Hg) †	ug	<0.2	2566648	<0.2	0.2	2567354
Impinger solution Molybdenum (Mo) †	ug	<2	2566648	<2	2	2567354
Impinger solution Nickel (Ni) †	ug	<0.3	2566648	0.4	0.3	2567354
Impinger solution Lead (Pb) †	ug	<2	2566648	<2	2	2567354
Impinger solution Potassium (K) †	ug	45	2566648	<30	30	2567354
Impinger solution Selenium (Se) †	ug	1.4	2566648	<0.3	0.3	2567354
Impinger solution Silicon (Si) †	ug	254	2566648	118	20	2567354
Impinger solution Sodium (Na) †	ug	5810	2566648	6190	20	2567354
Impinger solution Strontium (Sr) †	ug	0.5	2566648	0.3	0.3	2567354
Impinger solution Thallium (Tl) †	ug	<0.3	2566648	<0.3	0.3	2567354
Impinger solution Titanium (Ti) †	ug	3	2566648	<3	3	2567354
Impinger solution Vanadium (V) †	ug	<0.6	2566648	<0.6	0.6	2567354
Impinger solution Zinc (Zn) †	ug	29.2	2566648	7.3	0.3	2567354

RDL = Reportable Detection Limit

QC Batch = Quality Control Batch

† Parameter is not accreditable



METALS (IMPINGER SOLUTION)

Bureau Veritas ID		NL7351			NL7352		
Sampling Date		2024/08/20			2024/08/20		
COC Number		n-a			n-a		
	Units	249-INC 2-B5-3 VT:100ML	RDL	QC Batch	250+251-INC 2-B67-3 VT:625ML	RDL	QC Batch
METALS							
Mercury (Hg)	ug				<0.63	0.63	2565892
Impinger solution Mercury (Hg) †	ug	<0.05	0.05	2566648			
RDL = Reportable Detection Limit QC Batch = Quality Control Batch † Parameter is not accreditable							

**METALS (IMPINGER SOLUTION)**

Bureau Veritas ID		NL7387		NL7388		
Sampling Date		2024/08/19		2024/08/19		
COC Number		n-a		n-a		
	Units	255-BL-B12-BLT VT:100ML	RDL	256-BL-B1234-BLT VT:200ML	RDL	QC Batch

METALS						
Impinger solution Aluminum (Al) †	ug	4	1	6	2	2566648
Impinger solution Antimony (Sb) †	ug	<0.1	0.1	<0.2	0.2	2566648
Impinger solution Silver (Ag) †	ug	<0.5	0.5	<1	1	2566648
Impinger solution Arsenic (As) †	ug	<0.1	0.1	<0.2	0.2	2566648
Impinger solution Barium (Ba) †	ug	<0.05	0.05	<0.1	0.1	2566648
Impinger solution Beryllium (Be) †	ug	<0.05	0.05	<0.1	0.1	2566648
Impinger solution Bismuth (Bi) †	ug	<0.05	0.05	<0.1	0.1	2566648
Impinger solution Boron (B) †	ug	0.9	0.2	1.0	0.4	2566648
Impinger solution Cadmium (Cd) †	ug	<0.05	0.05	<0.1	0.1	2566648
Impinger solution Calcium (Ca) †	ug	<5	5	18	10	2566648
Impinger solution Chromium (Cr) †	ug	<0.1	0.1	0.4	0.2	2566648
Impinger solution Cobalt (Co) †	ug	<0.1	0.1	<0.2	0.2	2566648
Impinger solution Copper (Cu) †	ug	0.2	0.1	0.4	0.2	2566648
Impinger solution Tin (Sn) †	ug	<0.5	0.5	16	1	2566648
Impinger solution Iron (Fe) †	ug	<5	5	<10	10	2566648
Impinger solution Lithium (Li) †	ug	<1	1	<2	2	2566648
Impinger solution Magnesium (Mg) †	ug	<2	2	<4	4	2566648
Impinger solution Manganese (Mn) †	ug	<0.1	0.1	0.3	0.2	2566648
Impinger solution Mercury (Hg) †	ug	<0.05	0.05	<0.1	0.1	2566648
Impinger solution Molybdenum (Mo) †	ug	<0.5	0.5	<1	1	2566648
Impinger solution Nickel (Ni) †	ug	<0.1	0.1	0.3	0.2	2566648
Impinger solution Lead (Pb) †	ug	<0.5	0.5	<1	1	2566648
Impinger solution Potassium (K) †	ug	<10	10	<20	20	2566648
Impinger solution Selenium (Se) †	ug	<0.1	0.1	<0.2	0.2	2566648
Impinger solution Silicon (Si) †	ug	5	5	<10	10	2566648
Impinger solution Sodium (Na) †	ug	3120	5	3710	10	2566648
Impinger solution Strontium (Sr) †	ug	<0.1	0.1	<0.2	0.2	2566648
Impinger solution Thallium (Tl) †	ug	<0.1	0.1	<0.2	0.2	2566648
Impinger solution Titanium (Ti) †	ug	<1	1	<2	2	2566648
Impinger solution Vanadium (V) †	ug	<0.2	0.2	<0.4	0.4	2566648
Impinger solution Zinc (Zn) †	ug	<0.1	0.1	0.3	0.2	2566648

RDL = Reportable Detection Limit

QC Batch = Quality Control Batch

† Parameter is not accreditable



METALS (IMPINGER SOLUTION)

Bureau Veritas ID		NL8413		
Sampling Date		2024/08/19		
COC Number		n-a		
	Units	258+259-BL-B67-BLT VT:325ML	RDL	QC Batch
METALS				
Mercury (Hg)	ug	<0.33	0.33	2565892
RDL = Reportable Detection Limit QC Batch = Quality Control Batch				



CONVENTIONAL PARAMETERS (IMPINGER SOLUTION)

Bureau Veritas ID		NM4163	NM4270	NM4271	NM4272	
Sampling Date		2024/08/16	2024/08/17	2024/08/18	2024/08/19	
COC Number		n-a	n-a	n-a	n-a	
	Units	202-INC 1-BS-HNO3-1	210-INC 1-BS-HNO3-2	218-INC 1-BS-HNO3-3	226-INC 2-BS-HNO3-1	QC Batch

CONVENTIONALS

Final volume †	ml	140	140	80	220	2566440
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QC Batch = Quality Control Batch

† Parameter is not accreditable

Bureau Veritas ID		NM4273	NM4274	
Sampling Date		2024/08/20	2024/08/20	
COC Number		n-a	n-a	
	Units	236-INC 2-BS-HNO3-2	244-INC 2-BS-HNO3-3	QC Batch

CONVENTIONALS

Final volume †	ml	130	95	2566440
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QC Batch = Quality Control Batch

† Parameter is not accreditable



BUREAU
VERITAS

Bureau Veritas Job #: C450352

Report Date: 2024/12/06

CONSULAIR INC.

Client Project #: 24-8263

Site Location: AEM MELIADINE

METALS (TRAIN)

Bureau Veritas ID		NM4163	NM4270		NM4271		
Sampling Date		2024/08/16	2024/08/17		2024/08/18		
COC Number		n-a	n-a		n-a		
	Units	201+202+203-INC 1-1	209+210+211-INC 1-2	RDL	217+218+219-INC 1-3	RDL	QC Batch

METALS							
Impinger Solution Aluminum (Al) †	ug	28	24	2	817	2	2566301
Impinger Solution Antimony (Sb) †	ug	111	608	0.1	527	0.1	2566301
Impinger Solution Silver (Ag) †	ug	1.6	2.0	0.7	3.0	0.5	2566301
Impinger Solution Arsenic (As) †	ug	117	240	0.1	585	0.1	2566301
Impinger Solution Barium (Ba) †	ug	2.81	2.12	0.07	13.6	0.05	2566301
Impinger Solution Beryllium (Be) †	ug	<0.07	<0.07	0.07	0.20	0.05	2566301
Impinger Solution Bismuth (Bi) †	ug	2.67	7.74	0.07	6.01	0.05	2566301
Impinger Solution Cadmium (Cd) †	ug	4.98	9.56	0.07	21.9	0.05	2566301
Impinger Solution Calcium (Ca) †	ug	430	184	50	6250	50	2566301
Impinger Solution Chromium (Cr) †	ug	14.8	57.7	0.1	58.0	0.1	2566301
Impinger Solution Cobalt (Co) †	ug	<0.1	0.1	0.1	0.3	0.1	2566301
Impinger Solution Copper (Cu) †	ug	158	165	0.1	317	0.1	2566301
Impinger Solution Tin (Sn) †	ug	27.2	43.0	0.7	61.4	0.5	2566301
Impinger Solution Iron (Fe) †	ug	26	54	7	527	5	2566301
Impinger Solution Lithium (Li) †	ug	4	19	1	34	1	2566301
Impinger Solution Magnesium (Mg) †	ug	42	21	3	352	2	2566301
Impinger Solution Manganese (Mn) †	ug	2.0	2.5	0.1	14.7	0.1	2566301
Impinger Solution Mercury (Hg) †	ug	<0.1	<0.1	0.1	<0.1	0.1	2566301
Impinger Solution Molybdenum (Mo) †	ug	6.6	39.8	0.7	43.3	0.5	2566301
Impinger Solution Nickel (Ni) †	ug	<0.5	2.8	0.5	3.2	0.5	2566301
Impinger Solution Lead (Pb) †	ug	293	390	0.7	557	0.5	2566301
Impinger Solution Potassium (K) †	ug	16200	19000	10	36700	10	2566301
Impinger Solution Selenium (Se) †	ug	0.5	<0.5	0.5	0.5	0.5	2566301
Impinger Solution Silicon (Si) †	ug	179	254	7	2070	5	2566301
Impinger Solution Sodium (Na) †	ug	11900	14700	10	25300	10	2566301
Impinger Solution Strontium (Sr) †	ug	1.2	0.6	0.1	11.0	0.1	2566301
Impinger Solution Thallium (Tl) †	ug	<0.1	0.2	0.1	0.3	0.1	2566301
Impinger Solution Titanium (Ti) †	ug	5	2	1	85	1	2566301
Impinger Solution Vanadium (V) †	ug	0.6	1.5	0.3	3.5	0.2	2566301
Impinger Solution Zinc (Zn) †	ug	724	1010	1	2070	1	2566301

RDL = Reportable Detection Limit

QC Batch = Quality Control Batch

† Parameter is not accreditable



BUREAU
VERITAS

Bureau Veritas Job #: C450352

Report Date: 2024/12/06

CONSULAIR INC.

Client Project #: 24-8263

Site Location: AEM MELIADINE

METALS (TRAIN)

Bureau Veritas ID		NM4272		NM4273		NM4274		
Sampling Date		2024/08/19		2024/08/20		2024/08/20		
COC Number		n-a		n-a		n-a		
	Units	225+226+227-INC 2-1	RDL	235+236+237-INC 2-2	RDL	243+244+245-INC 2-3	RDL	QC Batch

METALS

Impinger Solution Aluminum (Al) †	ug	120	2	48	2	195	2	2566301
Impinger Solution Antimony (Sb) †	ug	101	0.2	22.8	0.1	123	0.1	2566301
Impinger Solution Silver (Ag) †	ug	2	1	1.9	0.7	2.4	0.5	2566301
Impinger Solution Arsenic (As) †	ug	81.9	0.2	36.4	0.1	69.0	0.1	2566301
Impinger Solution Barium (Ba) †	ug	7.6	0.1	0.92	0.07	12.2	0.05	2566301
Impinger Solution Beryllium (Be) †	ug	<0.1	0.1	<0.07	0.07	<0.05	0.05	2566301
Impinger Solution Bismuth (Bi) †	ug	3.1	0.1	0.53	0.07	3.01	0.05	2566301
Impinger Solution Cadmium (Cd) †	ug	2.1	0.1	1.25	0.07	1.39	0.05	2566301
Impinger Solution Calcium (Ca) †	ug	546	50	168	50	884	50	2566301
Impinger Solution Chromium (Cr) †	ug	20.2	0.2	49.2	0.1	23.6	0.1	2566301
Impinger Solution Cobalt (Co) †	ug	<0.2	0.2	<0.1	0.1	0.6	0.1	2566301
Impinger Solution Copper (Cu) †	ug	203	0.2	48.1	0.1	167	0.1	2566301
Impinger Solution Tin (Sn) †	ug	13	1	<0.7	0.7	12.4	0.5	2566301
Impinger Solution Iron (Fe) †	ug	145	10	40	7	94	5	2566301
Impinger Solution Lithium (Li) †	ug	6	2	3	1	7	1	2566301
Impinger Solution Magnesium (Mg) †	ug	61	4	19	3	81	2	2566301
Impinger Solution Manganese (Mn) †	ug	5.8	0.2	1.0	0.1	4.0	0.1	2566301
Impinger Solution Mercury (Hg) †	ug	<0.1	0.1	<0.1	0.1	<0.1	0.1	2566301
Impinger Solution Molybdenum (Mo) †	ug	2	1	21.1	0.7	15.3	0.5	2566301
Impinger Solution Nickel (Ni) †	ug	1.4	0.5	<0.5	0.5	0.8	0.5	2566301
Impinger Solution Lead (Pb) †	ug	76	1	69.3	0.7	51.6	0.5	2566301
Impinger Solution Potassium (K) †	ug	18400	20	11000	10	15800	10	2566301
Impinger Solution Selenium (Se) †	ug	<0.5	0.5	<0.5	0.5	<0.5	0.5	2566301
Impinger Solution Silicon (Si) †	ug	474	10	105	10	651	10	2566301
Impinger Solution Sodium (Na) †	ug	67900	10	29300	40	54500	40	2566301
Impinger Solution Strontium (Sr) †	ug	1.6	0.2	0.3	0.1	2.0	0.1	2566301
Impinger Solution Thallium (Tl) †	ug	<0.2	0.2	<0.1	0.1	<0.1	0.1	2566301
Impinger Solution Titanium (Ti) †	ug	8	2	3	2	13	2	2566301
Impinger Solution Vanadium (V) †	ug	<0.4	0.4	<0.3	0.3	<0.2	0.2	2566301
Impinger Solution Zinc (Zn) †	ug	843	1	263	2	777	2	2566301

RDL = Reportable Detection Limit

QC Batch = Quality Control Batch

† Parameter is not accreditable



METALS (TRAIN)

Bureau Veritas ID		NM4275		
Sampling Date		2024/08/19		
COC Number		n-a		
	Units	252+253+254-BL-BLT	RDL	QC Batch

METALS				
Impinger Solution Aluminum (Al) †	ug	21	3	2566301
Impinger Solution Antimony (Sb) †	ug	<0.3	0.3	2566301
Impinger Solution Silver (Ag) †	ug	<2	2	2566301
Impinger Solution Arsenic (As) †	ug	<0.3	0.3	2566301
Impinger Solution Barium (Ba) †	ug	<0.2	0.2	2566301
Impinger Solution Beryllium (Be) †	ug	<0.2	0.2	2566301
Impinger Solution Bismuth (Bi) †	ug	<0.2	0.2	2566301
Impinger Solution Cadmium (Cd) †	ug	<0.2	0.2	2566301
Impinger Solution Calcium (Ca) †	ug	<50	50	2566301
Impinger Solution Chromium (Cr) †	ug	<0.3	0.3	2566301
Impinger Solution Cobalt (Co) †	ug	<0.3	0.3	2566301
Impinger Solution Copper (Cu) †	ug	0.6	0.3	2566301
Impinger Solution Tin (Sn) †	ug	<2	2	2566301
Impinger Solution Iron (Fe) †	ug	<20	20	2566301
Impinger Solution Lithium (Li) †	ug	<3	3	2566301
Impinger Solution Magnesium (Mg) †	ug	<6	6	2566301
Impinger Solution Manganese (Mn) †	ug	12.7	0.3	2566301
Impinger Solution Mercury (Hg) †	ug	<0.2	0.2	2566301
Impinger Solution Molybdenum (Mo) †	ug	<2	2	2566301
Impinger Solution Nickel (Ni) †	ug	<0.5	0.5	2566301
Impinger Solution Lead (Pb) †	ug	<2	2	2566301
Impinger Solution Potassium (K) †	ug	<30	30	2566301
Impinger Solution Selenium (Se) †	ug	<0.5	0.5	2566301
Impinger Solution Silicon (Si) †	ug	40	20	2566301
Impinger Solution Sodium (Na) †	ug	9090	40	2566301
Impinger Solution Strontium (Sr) †	ug	<0.3	0.3	2566301
Impinger Solution Thallium (Tl) †	ug	<0.3	0.3	2566301
Impinger Solution Titanium (Ti) †	ug	<3	3	2566301
Impinger Solution Vanadium (V) †	ug	<0.6	0.6	2566301
Impinger Solution Zinc (Zn) †	ug	<2	2	2566301
RDL = Reportable Detection Limit				
QC Batch = Quality Control Batch				
† Parameter is not accreditable				



GENERAL COMMENTS

Extractable Metals in Impinger: Arrived unpreserved, preserved upon reception at the laboratory.: NL7326, NL7337, NL7387

Revised report to be provided in English.

METALS (FILTER)

Reported detection limits are multiplied by dilution factors used for sample analysis.

METALS (IMPINGER SOLUTION)

Reported detection limits are modified according to the volume of sample received.

Mercury : Analysis done past holding time for NL7303 and NL7325.

Results relate only to the items tested.



BUREAU
VERITAS

Bureau Veritas Job #: C450352

Report Date: 2024/12/06

CONSULAIR INC.

Client Project #: 24-8263

Site Location: AEM MELIADINE

QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	Units
2565892	ANB	Spiked Blank	Mercury (Hg)	2024/09/11		92	%
2565892	ANB	Method Blank	Mercury (Hg)	2024/09/11	<0.10		ug
2566648	DPA	Spiked Blank	Impinger solution Aluminum (Al)	2024/09/14		99	%
			Impinger solution Antimony (Sb)	2024/09/14		105	%
			Impinger solution Silver (Ag)	2024/09/14		98	%
			Impinger solution Arsenic (As)	2024/09/14		100	%
			Impinger solution Barium (Ba)	2024/09/14		95	%
			Impinger solution Beryllium (Be)	2024/09/14		99	%
			Impinger solution Bismuth (Bi)	2024/09/14		102	%
			Impinger solution Boron (B)	2024/09/14		106	%
			Impinger solution Cadmium (Cd)	2024/09/14		98	%
			Impinger solution Calcium (Ca)	2024/09/14		99	%
			Impinger solution Chromium (Cr)	2024/09/14		97	%
			Impinger solution Cobalt (Co)	2024/09/14		96	%
			Impinger solution Copper (Cu)	2024/09/14		94	%
			Impinger solution Tin (Sn)	2024/09/14		102	%
			Impinger solution Iron (Fe)	2024/09/14		101	%
			Impinger solution Lithium (Li)	2024/09/14		91	%
			Impinger solution Magnesium (Mg)	2024/09/14		101	%
			Impinger solution Manganese (Mn)	2024/09/14		98	%
			Impinger solution Mercury (Hg)	2024/09/14		102	%
			Impinger solution Molybdenum (Mo)	2024/09/14		102	%
			Impinger solution Nickel (Ni)	2024/09/14		96	%
			Impinger solution Lead (Pb)	2024/09/14		101	%
			Impinger solution Potassium (K)	2024/09/14		99	%
			Impinger solution Selenium (Se)	2024/09/14		98	%
			Impinger solution Silicon (Si)	2024/09/14		94	%
			Impinger solution Sodium (Na)	2024/09/14		98	%
			Impinger solution Strontium (Sr)	2024/09/14		100	%
			Impinger solution Thallium (Tl)	2024/09/14		98	%
			Impinger solution Titanium (Ti)	2024/09/14		103	%
			Impinger solution Vanadium (V)	2024/09/14		98	%
			Impinger solution Zinc (Zn)	2024/09/14		95	%
2566648	DPA	Method Blank	Impinger solution Aluminum (Al)	2024/09/14	<1		ug
			Impinger solution Antimony (Sb)	2024/09/14	<0.1		ug
			Impinger solution Silver (Ag)	2024/09/14	<0.5		ug
			Impinger solution Arsenic (As)	2024/09/14	<0.1		ug
			Impinger solution Barium (Ba)	2024/09/14	<0.05		ug
			Impinger solution Beryllium (Be)	2024/09/14	<0.05		ug
			Impinger solution Bismuth (Bi)	2024/09/14	<0.05		ug
			Impinger solution Boron (B)	2024/09/14	<0.2		ug
			Impinger solution Cadmium (Cd)	2024/09/14	<0.05		ug
			Impinger solution Calcium (Ca)	2024/09/14	<5		ug
			Impinger solution Chromium (Cr)	2024/09/14	<0.1		ug
			Impinger solution Cobalt (Co)	2024/09/14	<0.1		ug
			Impinger solution Copper (Cu)	2024/09/14	<0.1		ug
			Impinger solution Tin (Sn)	2024/09/14	<0.5		ug
			Impinger solution Iron (Fe)	2024/09/14	<5		ug
			Impinger solution Lithium (Li)	2024/09/14	<1		ug
			Impinger solution Magnesium (Mg)	2024/09/14	<2		ug
			Impinger solution Manganese (Mn)	2024/09/14	<0.1		ug
			Impinger solution Mercury (Hg)	2024/09/14	<0.05		ug



BUREAU
VERITAS

Bureau Veritas Job #: C450352
Report Date: 2024/12/06

CONSULAIR INC.
Client Project #: 24-8263
Site Location: AEM MELIADINE

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	Units
2567326	DPA	Spiked Blank	Impinger solution Molybdenum (Mo)	2024/09/14	<0.5		ug
			Impinger solution Nickel (Ni)	2024/09/14	<0.1		ug
			Impinger solution Lead (Pb)	2024/09/14	<0.5		ug
			Impinger solution Potassium (K)	2024/09/14	<10		ug
			Impinger solution Selenium (Se)	2024/09/14	<0.1		ug
			Impinger solution Silicon (Si)	2024/09/14	<5		ug
			Impinger solution Sodium (Na)	2024/09/14	<5		ug
			Impinger solution Strontium (Sr)	2024/09/14	<0.1		ug
			Impinger solution Thallium (Tl)	2024/09/14	<0.1		ug
			Impinger solution Titanium (Ti)	2024/09/14	<1		ug
			Impinger solution Vanadium (V)	2024/09/14	<0.2		ug
			Impinger solution Zinc (Zn)	2024/09/14	<0.1		ug
			Filter Lithium (Li)	2024/09/16		100	%
			Filter Antimony (Sb)	2024/09/16		104	%
			Filter Silver (Ag)	2024/09/16		95	%
			Filter Arsenic (As)	2024/09/16		103	%
			Filter Barium (Ba)	2024/09/16		97	%
			Filter Beryllium (Be)	2024/09/16		96	%
			Filter Bismuth (Bi)	2024/09/16		100	%
			Filter Cadmium (Cd)	2024/09/16		95	%
			Filter Calcium (Ca)	2024/09/16		107	%
			Filter Chromium (Cr)	2024/09/16		100	%
			Filter Cobalt (Co)	2024/09/16		100	%
			Filter Copper (Cu)	2024/09/16		99	%
			Filter Tin (Sn)	2024/09/16		100	%
			Filter Iron (Fe)	2024/09/16		101	%
			Filter Magnesium (Mg)	2024/09/16		94	%
			Filter Manganese (Mn)	2024/09/16		103	%
			Filter Mercury (Hg)	2024/09/16		97	%
			Filter Molybdenum (Mo)	2024/09/16		98	%
			Filter Nickel (Ni)	2024/09/16		99	%
			Filter Lead (Pb)	2024/09/16		98	%
			Filter Potassium (K)	2024/09/16		97	%
			Filter Selenium (Se)	2024/09/16		94	%
			Filter Silicon (Si)	2024/09/16		98	%
			Filter Sodium (Na)	2024/09/16		117	%
			Filter Strontium (Sr)	2024/09/16		99	%
			Filter Thallium (Tl)	2024/09/16		93	%
			Filter Titanium (Ti)	2024/09/16		106	%
			Filter Vanadium (V)	2024/09/16		100	%
			Filter Zinc (Zn)	2024/09/16		104	%
2567326	DPA	Method Blank	Filter Lithium (Li)	2024/09/16	<1.0		ug
			Filter Antimony (Sb)	2024/09/16	0.15, RDL=0.050		ug
			Filter Silver (Ag)	2024/09/16	<0.050		ug
			Filter Arsenic (As)	2024/09/16	<0.040		ug
			Filter Barium (Ba)	2024/09/16	<0.050		ug
			Filter Beryllium (Be)	2024/09/16	<0.030		ug
			Filter Bismuth (Bi)	2024/09/16	<0.050		ug
			Filter Cadmium (Cd)	2024/09/16	<0.050		ug
			Filter Calcium (Ca)	2024/09/16	<50		ug
			Filter Chromium (Cr)	2024/09/16	<0.10		ug



BUREAU
VERITAS

Bureau Veritas Job #: C450352

Report Date: 2024/12/06

CONSULAIR INC.

Client Project #: 24-8263

Site Location: AEM MELIADINE

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	Units
2567354	NET	Spiked Blank	Filter Cobalt (Co)	2024/09/16	<0.030		ug
			Filter Copper (Cu)	2024/09/16	<0.10		ug
			Filter Tin (Sn)	2024/09/16	<0.10		ug
			Filter Iron (Fe)	2024/09/16	<5.0		ug
			Filter Magnesium (Mg)	2024/09/16	<1.5		ug
			Filter Manganese (Mn)	2024/09/16	<0.10		ug
			Filter Mercury (Hg)	2024/09/16	<0.10		ug
			Filter Molybdenum (Mo)	2024/09/16	<0.20		ug
			Filter Nickel (Ni)	2024/09/16	<0.50		ug
			Filter Lead (Pb)	2024/09/16	<0.42		ug
			Filter Potassium (K)	2024/09/16	<10		ug
			Filter Selenium (Se)	2024/09/16	<0.50		ug
			Filter Silicon (Si)	2024/09/16	<13		ug
			Filter Sodium (Na)	2024/09/16	<43		ug
			Filter Strontium (Sr)	2024/09/16	<0.045		ug
			Filter Thallium (Tl)	2024/09/16	<0.010		ug
			Filter Titanium (Ti)	2024/09/16	<2.0		ug
			Filter Vanadium (V)	2024/09/16	<0.20		ug
			Filter Zinc (Zn)	2024/09/16	<2.2		ug
			Impinger solution Aluminum (Al)	2024/09/15		92	%
			Impinger solution Antimony (Sb)	2024/09/15		109	%
			Impinger solution Silver (Ag)	2024/09/15		95	%
			Impinger solution Arsenic (As)	2024/09/15		97	%
			Impinger solution Barium (Ba)	2024/09/15		94	%
			Impinger solution Beryllium (Be)	2024/09/15		96	%
			Impinger solution Bismuth (Bi)	2024/09/15		99	%
			Impinger solution Boron (B)	2024/09/15		99	%
			Impinger solution Cadmium (Cd)	2024/09/15		96	%
			Impinger solution Calcium (Ca)	2024/09/15		97	%
			Impinger solution Chromium (Cr)	2024/09/15		93	%
			Impinger solution Cobalt (Co)	2024/09/15		93	%
			Impinger solution Copper (Cu)	2024/09/15		93	%
			Impinger solution Tin (Sn)	2024/09/15		104	%
			Impinger solution Iron (Fe)	2024/09/15		98	%
			Impinger solution Lithium (Li)	2024/09/15		89	%
			Impinger solution Magnesium (Mg)	2024/09/15		94	%
			Impinger solution Manganese (Mn)	2024/09/15		94	%
			Impinger solution Mercury (Hg)	2024/09/15		104	%
			Impinger solution Molybdenum (Mo)	2024/09/15		100	%
			Impinger solution Nickel (Ni)	2024/09/15		93	%
			Impinger solution Lead (Pb)	2024/09/15		98	%
			Impinger solution Potassium (K)	2024/09/15		95	%
			Impinger solution Selenium (Se)	2024/09/15		98	%
			Impinger solution Silicon (Si)	2024/09/15		88	%
			Impinger solution Sodium (Na)	2024/09/15		90	%
			Impinger solution Strontium (Sr)	2024/09/15		101	%
			Impinger solution Thallium (Tl)	2024/09/15		95	%
			Impinger solution Titanium (Ti)	2024/09/15		96	%
			Impinger solution Vanadium (V)	2024/09/15		94	%
			Impinger solution Zinc (Zn)	2024/09/15		91	%
2567354	NET	Method Blank	Impinger solution Aluminum (Al)	2024/09/15	<1		ug
			Impinger solution Antimony (Sb)	2024/09/15	<0.1		ug



BUREAU
VERITAS

Bureau Veritas Job #: C450352

Report Date: 2024/12/06

CONSULAIR INC.

Client Project #: 24-8263

Site Location: AEM MELIADINE

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	Units
			Impinger solution Silver (Ag)	2024/09/15	<0.5		ug
			Impinger solution Arsenic (As)	2024/09/15	<0.1		ug
			Impinger solution Barium (Ba)	2024/09/15	<0.05		ug
			Impinger solution Beryllium (Be)	2024/09/15	<0.05		ug
			Impinger solution Bismuth (Bi)	2024/09/15	<0.05		ug
			Impinger solution Boron (B)	2024/09/15	<0.2		ug
			Impinger solution Cadmium (Cd)	2024/09/15	<0.05		ug
			Impinger solution Calcium (Ca)	2024/09/15	<5		ug
			Impinger solution Chromium (Cr)	2024/09/15	<0.1		ug
			Impinger solution Cobalt (Co)	2024/09/15	<0.1		ug
			Impinger solution Copper (Cu)	2024/09/15	<0.1		ug
			Impinger solution Tin (Sn)	2024/09/15	<0.5		ug
			Impinger solution Iron (Fe)	2024/09/15	<5		ug
			Impinger solution Lithium (Li)	2024/09/15	<1		ug
			Impinger solution Magnesium (Mg)	2024/09/15	<2		ug
			Impinger solution Manganese (Mn)	2024/09/15	<0.1		ug
			Impinger solution Mercury (Hg)	2024/09/15	<0.05		ug
			Impinger solution Molybdenum (Mo)	2024/09/15	<0.5		ug
			Impinger solution Nickel (Ni)	2024/09/15	<0.1		ug
			Impinger solution Lead (Pb)	2024/09/15	<0.5		ug
			Impinger solution Potassium (K)	2024/09/15	<10		ug
			Impinger solution Selenium (Se)	2024/09/15	<0.1		ug
			Impinger solution Silicon (Si)	2024/09/15	<5		ug
			Impinger solution Sodium (Na)	2024/09/15	<5		ug
			Impinger solution Strontium (Sr)	2024/09/15	<0.1		ug
			Impinger solution Thallium (Tl)	2024/09/15	<0.1		ug
			Impinger solution Titanium (Ti)	2024/09/15	<1		ug
			Impinger solution Vanadium (V)	2024/09/15	<0.2		ug
			Impinger solution Zinc (Zn)	2024/09/15	<0.1		ug

RDL = Reportable Detection Limit

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

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



BUREAU
VERITAS

Bureau Veritas Job #: C450352

Report Date: 2024/12/06

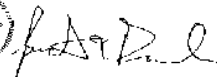
CONSULAIR INC.

Client Project #: 24-8263

Site Location: AEM MELIADINE

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:




Jonathan Fauvel, B.Sc., Chemist, Montreal, Scientific Specialist




Mira El Masri, M.Sc. Chemist, Montréal, Analyst II



Zineb El Ouali

Membre OCQ#2021-051

Zineb El Ouali, M.Sc., Chemist, Montreal, Analyst II

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Québec, le vendredi 30 août 2024

Argyro Frangoulis

Chef d'équipe de l'expérience client

Multi-secteurs- pétrolier, qualité de l'air et eau potable

Laboratoires Bureau Veritas

889, Montée de Liesse, Saint-Laurent, Qc. H4T 1P5

Tél. : 514 448 9001, poste 7066229 Cellulaire : 514 208 0388 Téléc. : 514 448 9199

argyro.frangoulis@bvlabs.com

Objet : Explications de la demande d'analyses pour le projet de Agnico Eagle (Meliadine).

Notre no de projet : #24-8263

Bonjour Argyro,

Voici la demande d'analyse concernant le dossier mentionné précédemment. Les mesures ont été effectuées du 16 au 20 août 2024. Il y a une demande d'analyse pour les métaux.

DEMANDE D'ANALYSES #1 / MÉTAUX

Cela correspond à 3 essais sur 2 sources (INC 1 et INC2) et les blancs.

Les fractions filtres et buse-sonde acétone vous seront envoyées un peu plus tard afin de faire l'analyse pour les métaux particuliers. Pour chacun des essais, nous voulons un résultat combiné des 2 fractions Buse-Sonde (Acétone et HNO₃) et le Filtre() (donc **3 échantillons à combiner, sauf certain essai qu'il y a plus qu'un filtres**). Aussi, pour le Mercure d'un même essai, les fractions de KmnO₄ (BB67) et de HCl 8N (BB67-HCL) doivent être combinées. Il est important de respecter ces combinaisons exigées.

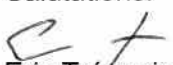
Les métaux à analyser sont les suivants : Al, Sb, Ag, As, Ba, Be, Bi, B, Cd, Ca, Cr, Co, Cu, Sn, Fe, Li, Mg, Mn, Mo, Ni, Pb, K, Se, Na, Ti, V, Zn, Sr, Tl, Si (Silicium soluble), Hg.

Il est important de ne pas jeter les échantillons et de nous les retourner après l'analyse.

Pour des renseignements supplémentaires n'hésitez pas à communiquer avec nous.

Envoyer les résultats à eric.trepanier@consul-air.com.

Salutations.


Eric Trépanier



NOVA-2024-US 389

www.consul-air.com

2022-125, rue Lavoiser
Québec (Qc) G1N 4L5
Tél.: (418) 650-5960
Fax : (418) 704-2221
www.consul-air.com

Travaux effectués à : AEM MELIADINE

LABORATOIRE RESPONSABLE DES ANALYSES :
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St-Laurent (Qc) H4T 1P5
Téléphone : (514) 448-9001
Télécopieur : (514) 448-5922

Projet #: 24-8263
Chargé de Projet : Eric Trépanier

ÉCHANTILLON	Matrice	Fraction	Qte	Date	Paramètres	Unité	Remarque
201 - INC 1 - BS-Acétone - 1	Acétone	BS-Acétone	1	2024-08-16	Métaux, Hg	mg	Combiner les échantillons 201 à 203 pour les métaux particuliers de la source INC 1 - Essai #1
202 - INC 1 - BS-HNO3 - 1	HNO3	BS-HNO3	1	2024-08-16	Métaux, Hg	mg	Combiner avec les échantillons 201 et 203 pour les métaux particuliers de la source INC 1 - Essai #1
203 - INC 1 - Filtre - 1	Filtre	Poids avant : 0,5269 gr	1	2024-08-16	Métaux, Hg	mg	Combiner les échantillons 201 à 203 pour les métaux particuliers de la source INC 1 - Essai #1
204 - INC 1 - B12 - 1	H2O	B12 - Vt: 410 mL	1	2024-08-16	Métaux, Hg	mg	
205 - INC 1 - B1234 - 1	H2O2 10% / HNO3 5%	B1234 - Vt: 320 mL	1	2024-08-16	Métaux, Hg	mg	
206 - INC 1 - B5 - 1	HNO3 5%	B5 - Vt: 100 mL	1	2024-08-16	Hg	mg	

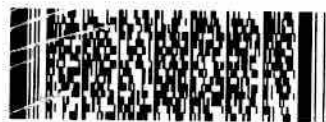
04-Sep-24 13:30

Argyro Frangoulis



C450352

MMY



C450352_COC

REMIS PAR:

REÇU PAR:

Fidaouss Rahmouni
Drira, Serluo, Iceyes

WT508 10, 11, 9
8, 9, 8

HEURE:

DATE: 2024/09/04

HEURE: 13:30

*FRA 2024/09/04

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Travaux effectués à :

AEM MELIADINE

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Projet #:

Chargé de Projet :

ÉCHANTILLON	Matrice	Fraction	Qte	Date	Paramètres	Unité	Remarque
207 - INC 1 - B67 - 1	KMNO4 4%/H2SO4 10%	B67 - Vt: 400 mL	1	2024-08-16	Hg	mg	Combiner les échantillons 207 et 208 pour le Hg de la source INC 1 - Essai #1
208 - INC 1 - B67-HCl - 1	HCl	B67-HCl - Vt: 225 mL	1	2024-08-16	Hg	mg	Combiner les échantillons 207 et 208 pour le Hg de la source INC 1 - Essai #1
209 - INC 1 - BS-Acétone - 2	Acétone	BS-Acétone	1	2024-08-17	Métaux, Hg	mg	Combiner les échantillons 209 à 211 pour les métaux particuliers de la source INC 1 - Essai #2
210 - INC 1 - BS-HNO3 - 2	HNO3	BS-HNO3	1	2024-08-17	Métaux, Hg	mg	Combiner avec les échantillons 209 et 211 pour les métaux particuliers de la source INC 1 - Essai #2
211 - INC 1 - Filtre - 2	Filtre	Poids avant : 0,5294 gr	1	2024-08-17	Métaux, Hg	mg	Combiner les échantillons 209 à 211 pour les métaux particuliers de la source INC 1 - Essai #2
212 - INC 1 - B12 - 2	H2O	B12 - Vt: 410 mL	1	2024-08-17	Métaux, Hg	mg	

REMIS PAR:

REÇU PAR:

Ferdinand Rahmouni
Driver, Seal no, Ice yes, wt 508 10, 11, 9
8, 9, 8

DATE:

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DATE: 2024/09/04 HEURE: 13:30

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Projet #:

Chargé de Projet :

ÉCHANTILLON	Matrice	Fraction	Qte	Date	Paramètres	Unité	Remarque
213 - INC 1 - B1234 - 2	H2O2 10% / HNO3 5%	B1234 - Vt: 300 mL	1	2024-08-17	Métaux, Hg	mg	
214 - INC 1 - B5 - 2	HNO3 5%	B5 - Vt: 100 mL	1	2024-08-17	Hg	mg	
215 - INC 1 - B67 - 2	KMNO4 4%/H2SO4 10%	B67 - Vt: 420 mL	1	2024-08-17	Hg	mg	Combiner les échantillons 215 et 216 pour le Hg de la source INC 1 - Essai #2
216 - INC 1 - B67-HCl - 2	HCl	B67-HCl - Vt: 225 mL	1	2024-08-17	Hg	mg	Combiner les échantillons 215 et 216 pour le Hg de la source INC 1 - Essai #2
217 - INC 1 - BS-Acétone - 3	Acétone	BS-Acétone	1	2024-08-18	Métaux, Hg	mg	Combiner les échantillons 217 à 219 pour les métaux particuliers de la source INC 1 - Essai #3
218 - INC 1 - BS-HNO3 - 3	HNO3	BS-HNO3	1	2024-08-18	Métaux, Hg	mg	Combiner avec les échantillons 217 et 219 pour les métaux particuliers de la source INC 1 - Essai #3

REMIS PAR:

REÇU PAR:

Ferdinand Rahmouni
Drira, Scialo, Ice yes, WTS 10, 11, 9
8, 9, 8

DATE:

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DATE: 2024/09/04 HEURE: 13:30

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Projet #:

Chargé de Projet :

ÉCHANTILLON	Matrice	Fraction	Qte	Date	Paramètres	Unité	Remarque
219 - INC 1 - Filtre - 3	Filtre	Poids avant: 0,5241 gr	1	2024-08-18	Métaux, Hg	mg	Combiner les échantillons 217 à 219 pour les métaux particuliers de la source INC 1 - Essai #3
220 - INC 1 - B12 - 3	H2O	B12 - Vt: 400 mL	1	2024-08-18	Métaux, Hg	mg	
221 - INC 1 - B1234 - 3	H2O2 10% / HNO3 5%	B1234 - Vt: 340 mL	1	2024-08-18	Métaux, Hg	mg	
222 - INC 1 - B5 - 3	HNO3 5%	B5 - Vt: 100 mL	1	2024-08-18	Hg	mg	
223 - INC 1 - B67 - 3	KMNO4 4%/H2SO4 10%	B67 - Vt: 400 mL	1	2024-08-18	Hg	mg	Combiner les échantillons 223 et 224 pour le Hg de la source INC 1 - Essai #3
224 - INC 1 - B67-HCl - 3	HCl	B67-HCl - Vt: 225 mL	1	2024-08-18	Hg	mg	Combiner les échantillons 223 et 224 pour le Hg de la source INC 1 - Essai #3

REMIS PAR:

REÇU PAR:

Fachrouh Rahmani
Driver, Seal no, Iveyes W508 10, 11, 9
8, 9, 8

DATE:

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DATE: 2024/09/14 HEURE: 13:30

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Travaux effectués à : AEM MELIADINE

Projet #: _____

Chargé de Projet : _____

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ÉCHANTILLON	Matrice	Fraction	Qte	Date	Paramètres	Unité	Remarque
225 - INC 2 - BS-Acétone - 1	Acétone	BS-Acétone	1	2024-08-19	Métaux, Hg	mg	Combiner les échantillons 225 à 229 pour les métaux particuliers de la source INC 2 - Essai #1
226 - INC 2 - BS-HNO3 - 1	HNO3	BS-HNO3	1	2024-08-19	Métaux, Hg	mg	Combiner les échantillons 225 à 229 pour les métaux particuliers de la source INC 2 - Essai #1
227 - INC 2 - Filtre1 - 1	Filtre	Poids avant : 0,5128 gr	1	2024-08-19	Métaux, Hg	mg	Combiner les échantillons 225 à 229 pour les métaux particuliers de la source INC 2 - Essai #1
228 - INC 2 - Filtre2 - 1	Filtre	Poids avant : 0,5205 gr	1	2024-08-19	Métaux, Hg	mg	Combiner les échantillons 225 à 229 pour les métaux particuliers de la source INC 2 - Essai #1
229 - INC 2 - Filtre3 - 1	Filtre	Poids avant : 0,5174 gr	1	2024-08-19	Métaux, Hg	mg	Combiner les échantillons 225 à 229 pour les métaux particuliers de la source INC 2 - Essai #1
230 - INC 2 - B12 - 1	H2O	B12 - Vt: 350 mL	1	2024-08-19	Métaux, Hg	mg	

REMIS PAR:

REÇU PAR:

Fachrouz Rahmani
Dira, Sealno, Ie yes, WTS88

10, 11, 9
8, 9, 8

DATE:

HEURE:

DATE: 2024/09/04 HEURE: 13:30

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Travaux effectués à : AEM MELIADINE
Projet # : _____
Chargé de Projet : _____

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ÉCHANTILLON	Matrice	Fraction	Qte	Date	Paramètres	Unité	Remarque
231 - INC 2 - B1234 - 1	H2O2 10% / HNO3 5%	B1234 - Vt: 360 mL	1	2024-08-19	Métaux, Hg	mg	
232 - INC 2 - B5 - 1	HNO3 5%	B5 - Vt: 100 mL	1	2024-08-19	Hg	mg	
233 - INC 2 - B67 - 1	KMNO4 4%/H2SO4 10%	B67 - Vt: 410 mL	1	2024-08-19	Hg	mg	Combiner les échantillons 233 et 234 pour le Hg de la source INC 2 - Essai #1
234 - INC 2 - B67-HCl - 1	HCl	B67-HCl - Vt: 225 mL	1	2024-08-19	Hg	mg	Combiner les échantillons 233 et 234 pour le Hg de la source INC 2 - Essai #1
235 - INC 2 - BS-Acétone - 2	Acétone	BS-Acétone	1	2024-08-20	Métaux, Hg	mg	Combiner les échantillons 235 à 237 pour les métaux particuliers de la source INC 2 - Essai #2
236 - INC 2 - BS-HNO3 - 2	HNO3	BS-HNO3	1	2024-08-20	Métaux, Hg	mg	Combiner les échantillons 235 à 237 pour les métaux particuliers de la source INC 2 - Essai #2

REMIS PAR:

REÇU PAR:

Fedouus Rahmouni
Driver, Sealco, Ice yes, WTS08 10, 11, 9
8, 9, 8

DATE:

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DATE: 2024/09/04 HEURE: 13:30

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Travaux effectués à :

AEM MELIADINE

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Projet #:

Chargé de Projet :

ÉCHANTILLON	Matrice	Fraction	Qte	Date	Paramètres	Unité	Remarque
237 - INC 2 - Filtre - 2	Filtre	Poids avant : 0,4926 gr	1	2024-08-20	Métaux, Hg	mg	Combiner les échantillons 235 à 237 pour les métaux particuliers de la source INC 2 - Essai #2
238 - INC 2 - B12 - 2	H2O	B12 - Vt: 320 mL	1	2024-08-20	Métaux, Hg	mg	
239 - INC 2 - B1234 - 2	H2O2 10% / HNO3 5%	B1234 - Vt: 300 mL	1	2024-08-20	Métaux, Hg	mg	
240 - INC 2 - B5 - 2	HNO3 5%	B5 - Vt: 100 mL	1	2024-08-20	Hg	mg	
241 - INC 2 - B67 - 2	KMNO4 4%/H2SO4 10%	B67 - Vt: 400 mL	1	2024-08-20	Hg	mg	Combiner les échantillons 241 et 242 pour le Hg de la source INC 2 - Essai #2
242 - INC 2 - B67-HCl - 2	HCl	B67-HCl - Vt: 225 mL	1	2024-08-20	Hg	mg	

REMIS PAR:

REÇU PAR:

Ferdinand Palmouni
Driver, Salvo, Leves, WT508

10, 11, 9
8, 9, 8

DATE:

HEURE:

DATE: 2024/09/04

HEURE: 13:30

2022-125, rue Lavoiser
Québec (Qc) G1N 4L5
Tél.: (418) 650-5960
Fax : (418) 704-2221
www.consul-air.com

Travaux effectués à :

AEM MELIADINE

LABORATOIRE RESPONSABLE DES ANALYSES :
Bureau Véritas
889 Montée de Liesse
St-Laurent (Qc) H4T 1P5
Téléphone : (514) 448-9001
Télécopieur : (514) 448-5922

Projet #:

Chargé de Projet :

ÉCHANTILLON	Matrice	Fraction	Qte	Date	Paramètres	Unité	Remarque
243 - INC 2 - BS-Acétone - 3	Acétone	BS-Acétone	1	2024-08-20	Métaux, Hg	mg	Combiner les échantillons 243 à 246 pour les métaux particuliers de la source INC 2 - Essai #3
244 - INC 2 - BS-HNO3 - 3	HNO3	BS-HNO3	1	2024-08-20	Métaux, Hg	mg	Combiner les échantillons 243 à 246 pour les métaux particuliers de la source INC 2 - Essai #3
245 - INC 2 - Filtre1 - 3	Filtre	Filtre1	1	2024-08-20	Métaux, Hg	mg	Combiner les échantillons 243 à 246 pour les métaux particuliers de la source INC 2 - Essai #3
246 - INC 2 - Filtre2 - 3	Filtre	Poids avant : 0,5205 gr	1	2024-08-20	Métaux, Hg	mg	Combiner les échantillons 243 à 246 pour les métaux particuliers de la source INC 2 - Essai #3
247 - INC 2 - B12 - 3	H2O	B12 - Vt: 310 mL	1	2024-08-20	Métaux, Hg	mg	
248 - INC 2 - B1234 - 3	H2O2 10% / HNO3 5%	B1234 - Vt: 320 mL	1	2024-08-20	Métaux, Hg	mg	

REMIS PAR:

REÇU PAR:

Fidaoun Dalmon
Driver, sealuo, Ice yes, WITOB 10, 11, 9 8, 9, 8

DATE:

HEURE:

DATE: 2024/09/04 HEURE: 13:30

2022-125, rue Lavoiser
Québec (Qc) G1N 4L5
Tél.: (418) 650-5960
Fax : (418) 704-2221
www.consul-air.com

Travaux effectués à : AEM MELIADINE

Projet #: _____

Chargé de Projet : _____

LABORATOIRE RESPONSABLE DES ANALYSES :
Bureau Véritas
889 Montée de Liesse
St-Laurent (Qc) H4T 1P5
Téléphone : (514) 448-9001
Télécopieur : (514) 448-5922

ÉCHANTILLON	Matrice	Fraction	Qte	Date	Paramètres	Unité	Remarque
249 - INC 2 - B5 - 3	HNO3 5%	B5 - Vt: 100 mL	1	2024-08-20	Hg	mg	
250 - INC 2 - B67 - 3	KMNO4 4%/H2SO4 10%	B67 - Vt: 400 mL	1	2024-08-20	Hg	mg	Combiner les échantillons 250 et 251 pour le Hg de la source INC 2 - Essai #3
251 - INC 2 - B67-HCl - 3	HCl	B67-HCl - Vt: 225 mL	1	2024-08-20	Hg	mg	Combiner les échantillons 250 et 251 pour le Hg de la source INC 2 - Essai #3
252 - BL - BS-Acétone - Blt	Acétone	BS-Acétone - Vt: 100 mL	1	2024-08-19	Métaux, Hg	mg	Combiner les échantillons 252 à 254 pour les métaux particuliers de la source BL - Essai #Blt
253 - BL - BS-HNO3 - Blt	HNO3	BS-HNO3 - Vt: 300 mL	1	2024-08-19	Métaux, Hg	mg	Combiner les échantillons 252 à 254 pour les métaux particuliers de la source BL - Essai #Blt
254 - BL - Filtre - Blt	Filtre	Poids avant : 0,5248 gr	1	2024-08-19	Métaux, Hg	mg	Combiner les échantillons 252 à 254 pour les métaux particuliers de la source BL - Essai #Blt

REMIS PAR:

REÇU PAR:

Firdaous Palmouri
Driver, Sealine, Luges, WTR08 10, 11, 9
8, 9, 8

DATE:

HEURE:

DATE: 2024/09/04 HEURE: 13:30

2022-125, rue Lavoiser
Québec (Qc) G1N 4L5
Tél.: (418) 650-5960
Fax : (418) 704-2221
www.consul-air.com

Travaux effectués à : AEM MELIADINE
Projet #: _____
Chargé de Projet : _____

LABORATOIRE RESPONSABLE DES ANALYSES :
Bureau Véritas
889 Montée de Liesse
St-Laurent (Qc) H4T 1P5
Téléphone : (514) 448-9001
Télécopieur : (514) 448-5922

ÉCHANTILLON	Matrice	Fraction	Qte	Date	Paramètres	Unité	Remarque
255 - BL - B12 - Blt	H2O	B12 - Vt: 100 mL	1	2024-08-19	Métaux, Hg	mg	
256 - BL - B1234 - Blt	H2O2 10% / HNO3 5%	B1234 - Vt: 200 mL	1	2024-08-19	Métaux, Hg	mg	
258 - BL - B67 - Blt	KMNO4 4%/H2SO4 10%	B67 - Vt: 100 mL	1	2024-08-19	Hg	mg	Combiner les échantillons 258 et 259 pour le Hg de la source BL - Essai #Blt
259 - BL - B67-HCl - Blt	HCl	B67-HCl - Vt: 225 mL	1	2024-08-19	Hg	mg	Combiner les échantillons 258 et 259 pour le Hg de la source BL - Essai #Blt

REMIS PAR:

RECU PAR:

Fachoua Rahmouni
Drive, Sealus, Iceyes - WTT 08 10/11/9 81908

DATE:

HEURE:

DATE: 2024/09/04 HEURE: 13:30



TEST REPORT

Date : 12 september 2024

Ref : P3644-1

Customer

Customer #: C1

Name : Jackson Carl

Telephone : (418) 650-5960 #2204

Email : carl.jakson@consul-air.com

Address :

Consulair Quebec

125-2022 Lavoisier Street,

Quebec City, Qc

G1N 4L5 Canada

Projet Summary

Nb. of objects : 23

Customer project #: 24-8263

Lab. Project # : P3644

Site : Agnico Eagle Meliadine

Tests Summary

Accredited Parameter

SC	Parameter	Q.	Principle (Method)	Matrix
	Particulate matter (PM-A)	7	Gravimetry (LPT1)	Acetone
	Particulate matter (PM-F)	9	Gravimetry (LPT2)	Filter

SC : Subcontracted parameter

Non-accredited Parameters(s)

SC	Parameter	Q.	Principle (Method)	Matrix
	Chlorides	7	Spectrometry	Water

SC : Subcontracted parameter

Tests results

SC	Param.	Sample (s)		Dates			Result(s)		RDL
		# Lab	# Customer	Sample	Receipt.	Test	Value	Unit	
PM-A		030924-1	201 - INC 1 - BS-Acétone - 1	16-08-24	03-09-24	04-09-24	0,1	mg	1,0
		030924-2	209 - INC 1 - BS-Acétone - 2	17-08-24	03-09-24	04-09-24	1,8	mg	1,0
		030924-3	217 - INC 1 - BS-Acétone - 3	18-08-24	03-09-24	04-09-24	12,9	mg	1,0
		030924-4	225 - INC 2 - BS-Acétone - 1	19-08-24	03-09-24	04-09-24	37,4	mg	1,0
		030924-5	235 - INC 2 - BS-Acétone - 2	20-08-24	03-09-24	04-09-24	6,1	mg	1,0
		030924-6	243 - INC 2 - BS-Acétone - 3	20-08-24	03-09-24	04-09-24	18,0	mg	1,0
		030924-7	252 - BL - BS-Acétone - Blt	19-08-24	03-09-24	04-09-24	<LDR	mg	1,0
PM-F		030924-8	203 - INC 1 - Filtre - 1	16-08-24	03-09-24	05-09-24	58,4	mg	0,1
		030924-9	211 - INC 1 - Filtre - 2	17-08-24	03-09-24	05-09-24	83,0	mg	0,1
		030924-10	219 - INC 1 - Filtre - 3	18-08-24	03-09-24	05-09-24	56,3	mg	0,1
		030924-11	227 - INC 2 - Filtre1 - 1	19-08-24	03-09-24	05-09-24	138,4	mg	0,1
		030924-12	228 - INC 2 - Filtre2 - 1	19-08-24	03-09-24	05-09-24	188,3	mg	0,1
		030924-13	229 - INC 2 - Filtre3 - 1	19-08-24	03-09-24	05-09-24	161,9	mg	0,1
		030924-14	237 - INC 2 - Filtre - 2	20-08-24	03-09-24	05-09-24	91,3	mg	0,1
		030924-15	245 - INC 2 - Filtre1 - 3	20-08-24	03-09-24	05-09-24	81,1	mg	0,1
		030924-16	246 - INC 2 - Filtre1 - 3	20-08-24	03-09-24	05-09-24	17,1	mg	0,1
Cl-		030924-17	301 - INC 1 - BB12 - 1	16-08-24	03-09-24	06-09-24	262,24	mg	6,56
		030924-18	302 - INC 1 - BB12 - 2	17-08-24	03-09-24	06-09-24	358,50	mg	6,56
		030924-19	303 - INC 1 - BB12 - 3	18-08-24	03-09-24	06-09-24	275,52	mg	6,40
		030924-20	304 - INC 2 - BB12 - 1	19-08-24	03-09-24	06-09-24	424,38	mg	7,00
		030924-21	305 - INC 2 - BB12 - 2	20-08-24	03-09-24	06-09-24	89,22	mg	2,56
		030924-22	306 - INC 2 - BB12 - 3	20-08-24	03-09-24	06-09-24	117,43	mg	2,48
		030924-23	307 - BI - BB12 - BL	19-08-24	03-09-24	06-09-24	<LDR	mg	0,04

SC : Subcontracted test
RDL : Reported Detection Limit

Comment(s)

1. LPT1 & LPT2: Method MA.100-Part 1.0 (Field 400 of Air Chemistry). $95\% \leq MR \leq 105\%$.
2. Sample volume 030924-7, V= 96ml.
3. Samples from 030924-1 à 030924-16: Subcontracted for further analysis.
4. Chlorides (Cl-): $90\% \leq MR \leq 110\%$, $90\% \leq AD \leq 110\%$ & $|DP| \leq 10\%$

Quality Control

ST	Param.	Date	# Ref.	Type	Result(s)		RDL
					Value	Unit	
	PM-A	04-09-24	BL1110	BL	<LDR	mg	1,0
			MR1110	RM	100,0	% Recovery	-
	PM-F	05-09-24	AP-02 Compliant	-	-	mg	0,1
	CI-	06-09-24	BL0609	BL	<LDR	mg/L	0,40
			MR0609	RM	103,1	% Recovery	-
			AD030924-17	SP	99,4	% Recovery	-
			DP030924-18	DP	0,2	% Variance	-
			DP030924-19	DP	1,4	% Variance	-
			DP030924-20	DP	2,1	% Variance	-
			AD030924-21	SP	102,1	% Recovery	-
			DP030924-22	DP	4,1	% Variance	-
			AD030924-23	SP	103,0	% Recovery	-

SC : Subcontracted quality control

Ref : Quality control reference in the laboratory monitoring system

BL : Blank

RM : Reference Material

DP : Duplicate

RP : Replicate

DL : Dilution

SP : Spike

AS : Analogous Standard

EC: Extraction Control

RDL : Reported Detection Limit

Signature

The results only refer to the tested objects.

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This test report is certified by the person(s) listed below.

For any question about this certificate of analysis, you can refer to:




Ismahane Kerrouche

APPENDIX 4

FIELD FORMS



AGNICO EAGLE

ÉTALONNAGE DES ANALYSEURS - MÉTHODE 7E / 10 / 6C / 3A

Compagnie : **AEM - Meliadine**

de projet : **24-8263**

Date : **13-08-2024**

Source : **Inc 1**

Identification des analyseurs (# Consulair)

O₂ : **2308** CO₂ : **2308** CO : **2308** SO₂ : **2308** NO : **2308** AUTRE : **-**

Identification des bombonnes (# Bombonne)

Azote : **QL23-056** O₂/CO₂/CO : **CYL23-050** SO₂ : **CYL23-056** NO : **CYL23-059** AUTRE : **-**
Air zéro : O₂/CO₂/CO : **CYL23-057** SO₂ : **A5759495** NO : **QL23-029** AUTRE : **-**

Vérification du système de prélèvement/conditionnement

Test de fuite (O/N) : **✓** Temp. Refroidisseur : **✓** Temp. cordon : **250** Temp. pompe : **-**
Pression analyseurs : **✓** Débit principal (# 2) : **5** Débit excès (# 7) : **35** Temps de réponse syst. : **-**

AGENDA DE L'ÉTALONNAGE

ANALYSEURS / ÉCHELLES PHYSIQUES

Prendre en notes
les valeurs d'écart

GAZ	Conc. de vérification	Dilution (O/N)	Vérif. Analyseur (*)	Vérif. Sonde	Heure	O2	CO2	CO	SO2	NO		
						SQUIRELL / CONCENTRATIONS					% err.	OK?
N ₂	0	✓	✓		15:39	0,0	0,0	0	0	0		
O ₂	22,51	✓	✓		15:45	22,53						
CO ₂	12,51	✓	✓		15:45		12,72					
CO	931,5	✓	✓		15:45			936				
SO ₂	924,6	✓	✓		16:08				917			
NO _x	903,3	✓	✓		16:47					895		
O ₂	12,59	✓	✓		16:54	12,57						
CO ₂	10,08	✓	✓		16:54		10,01					
CO	487,9	✓	✓		16:54			502				
SO ₂	499,3	✓	✓		16:54				490			
NO _x	529,1	✓	✓		16:56					520,2		
14-08-2024												
N ₂	0	✓		✓	8:36	0,38	0,04	0,0	1	0,0		
O ₂	14,59	✓		✓	8:38	14,7						
CO ₂	12,08	✓		✓	8:38		9,9					
CO	487,9	✓		✓	8:38			486				
SO ₂	499,3	✓		✓	8:50				485			
NO _x	529,1	✓		✓	8:43					523		
Mesure répétée												
14-08-2024												
N ₂	0	✓		✓	6:42	0,3	0,0	0,0	0,0	0,0		
O ₂	14,59	✓		✓	6:44	14,7						
CO ₂	12,08	✓		✓	6:44		9,9					
CO	487,9	✓		✓	6:44			489				
SO ₂	499,3	✓		✓	6:48				486			
NO _x	529,1	✓		✓	6:54					523		
Mesure répétée												

Technicien : **AB**

(*) Noter la valeur de l'analyseur, puis sur la ligne du dessous, la valeur de l'acquisition de données

ÉTALONNAGE DES ANALYSEURS - MÉTHODE 7E / 10 / 6C / 3A

 Compagnie : **AGM**

 # de projet : **20-8265**

Date :

Source :

Identification des analyseurs (# Consulair)

 O₂ : CO₂ : CO : SO₂ : NO : AUTRE :

Identification des bombonnes (# Bombonne)

 Azote : O₂/CO₂/CO : SO₂ : NO : AUTRE :

 Air zéro : O₂/CO₂/CO : SO₂ : NO : AUTRE :

Vérification du système de prélèvement/conditionnement

Test de fuite (O/N) : Temp. Refroidisseur : Temp. cordon : Temp. pompe :

Pression analyseurs : Débit principal (# 2) : Débit excès (# 7) : Temps de réponse syst. :

AGENDA DE L'ÉTALONNAGE
ANALYSEURS / ÉCHELLES PHYSIQUES

 Prendre en notes
les valeurs d'écart

GAZ	Conc. de vérification	Dilution (O/N)	Vérif. Analyseur (*)	Vérif. Sonde	Heure	O2	CO2	CO	SO2	NO			% err.	OK?			
						SQUIRRELL / CONCENTRATIONS											
Fin 18-08-2024						0,3	0,1	1	2	1							
N2	0	~	✓	✓	18:12	14,6											
O2	12,59	~	✓	✓	18:14		10,1										
CO2	10,03	~	✓	✓	18:15			495									
CO	487,9	~	✓	✓	18:16				484								
SO2	495,3	~	✓	✓	18:17					521							
NOx	129,1	~	✓	✓	18:18												
19-08-2024																	
N2	0	~	✓	✓	19:12	0,24	0,05	0	1	0							
O2	12,59	~	✓	✓	19:14	14,6											
CO2	10,03	~	✓	✓	19:15		19,1										
CO	487,9	~	✓	✓	19:16			495									
SO2	495,3	~	✓	✓	19:17				474								
NOx	129,1	~	✓	✓	19:18					128							
Debut da 12h42																	
Fin a 16h26																	
N2	0	~	✓	✓	16:42	0,2	0,2	1,0	1	1							
O2	12,59	~	✓	✓	16:44	14,6											
CO2	10,03	~	✓	✓	16:45		10,0										
CO	487,9	~	✓	✓	16:46			501									
SO2	495,3	~	✓	✓	16:47				487								
NOx	129,1	~	✓	✓	16:48					127							
20-08-2024																	
N2	0	~	✓	✓	21:00	0,3	0,0	0,0	1	0							
O2	12,59	~	✓	✓	21:01	14,6											
CO2	10,03	~	✓	✓	21:02		9,9										
CO	487,9	~	✓	✓	21:03			490									
SO2	495,3	~	✓	✓	21:04				491								
NOx	129,1	~	✓	✓	21:12					617							

Technicien :

AE

(*) Noter la valeur de l'analyseur, puis sur la ligne du dessous, la valeur de l'acquisition de données

Document : F ECH 03

Révision N° : 6

Page : 1 de 1

INFORMATIONS DE BASE

Compagnie :	Agrico Eagle Mine LTD	Source :	Incinerator 1	# Projet :	24-8263
Ville :	Meliadine	Date :	13-08-2024		

VÉRIFICATION DES MODULES AVEC ORIFICES CRITIQUES

# POMPE :	Rose-3-ps	Gamma (K _C)	1,001	PRESSION BAROMÉTRIQUE (in Hg) :	INITIAL	30,0		
# KIT CALIB	4				FINAL	30,0		
# MODULE	25	C / NC						

#ORIFICE	#ESSAI	K' FACTEUR (moy)	TEST VACUUM (in Hg)	COMPTEUR VOLUME (pi³)			TEMPÉRATURES °F						DURÉE (min)	DGM ΔH (in H ₂ O)
				INITIAL	FINAL	NET (V _m)	AMBIANT INITIAL	COMPTEUR IN INITIAL FINAL		COMPTEUR OUT INITIAL FINAL		AMBIANT FINAL		
4-2	1	95040	-16	46,40	52,75	6,35	66	70	70	69	69	66	10,00	1,15
4-4	2	9,8870	-14,5	53,60	60,17	6,57	66	70	70	70	70	66	6,00	3,55
	3													

Commentaires :

Respect de l'écart de 5 % du K_C :

(4,1) oui

Technicien :

RJ

INFORMATIONS DE BASE

Compagnie :	Agrico Eagle Time LTD	Source :	Incinerator 1	# Projet :	24-8263
Ville :	Meliadine	Date :	13-08-2024		

VÉRIFICATION DES MODULES AVEC ORIFICES CRITIQUES

# POMPE :	W-1-PDC	Gamma (K _C)	0.9990	PRESSION BAROMÉTRIQUE (in Hg) :	INITIAL	30.9		
# KIT CALIB	4				FINAL	30.0		
# MODULE	23		C / NC					

#ORIFICE	#ESSAI	K' FACTEUR (moy)	TEST VACUUM (in Hg)	COMPTEUR VOLUME (pi ³)			TEMPÉRATURES °F						DURÉE (min)	DGM ΔH (in H ₂ O)
				INITIAL	FINAL	NET (V _m)	AMBIANT INITIAL	COMPTEUR IN INITIAL FINAL		COMPTEUR OUT INITIAL FINAL		AMBIANT FINAL		
4-2	1	0.5040	-14	4.30	9.3	7.0	66	64	68	64	66	66	10.00	0.67
4-4	2	0.8820	-14	10.60	16.82	6.22	66	66	67	68	67	66	6.00	1.7
	3													

Commentaires :

Respect de l'écart de 5 % du K_C :

oui

Technicien :

R.J

Document : F ECH 09

Révision N° : 10

Page : 1 de 1

Usine : AEM	Date : 18-08-2024	P. Bar (po Hg) : 30,0	# Cold box :
Ville : Meliandine	ID point d'émission : Inc 1	P. Stat. (po H ₂ O) : -0,10	
Diamètre ou dimensions : 33,52	Sonde N° : 03-08-Q-500	Module N° : 2X C / (NC)	K' : 43,79
Distance avant : 1,05	Cp : 0,741	Kc : 1,001	Niveau du manomètre : ✓
Distance après : 2,00	Buse N° : 308-107	Ko : 0,740	Zéro du manomètre : ✓
	Coef : 0,5093	Distance P-T-B : ✓	

Heure	Trav.	Point	Temps prélèv. (min)	ΔP (po H ₂ O)	ΔH (po H ₂ O)	Cheminée	Températures (°F)			Volume Prélevé (pi ³)	Masse molaire			Vaccum po. Hg	Température			
							Compteur	Orifice	O ₂ (%v)		CO ₂ (%v)	CO (ppmv)	Sonde (°F)		Filtre (°F)	Sortie (°F)	Trappe/Filtre (°F)	
																		Entrée
14h00	1	1	5	0,08	0,97	1411	60	60	60	80,05	11,3	7,0	5,0	→	250	248	10	45
		2		0,07	0,85	1414	60	60	60	82,86						249	10	45
		3		0,06	0,73	1416	60	60	60	85,10						248	10	45
		4		0,06	0,73	1418	60	60	60	90,70						248	10	45
		5		0,06	0,73	1418	60	60	60	92,85						247	10	45
		6		0,06	0,73	1420	60	60	60	95,15						247	10	45
		7		0,07	0,85	1421	60	60	60	97,27						247	10	45
		8		0,07	0,85	1421	60	60	60	100,37						247	10	45
		9		0,05	1,09	1421	60	60	60	103,35						247	12	59
		10		0,10	1,21	1422	60	60	60	106,10						247	12	59
		11		0,07	1,25	1423	60	60	60	109,13						247	12	59
		12		0,09	1,09	1424	60	60	60	112,10	11,8	7,0	5,0			247	12	59
		13		0,10	1,21	1425	61	61	61	115,25						249	12	53
		14		0,09	1,09	1425	61	61	61	118,23						249	12	53
		15		0,05	1,09	1426	61	61	61	121,17						249	12	53
		16		0,10	1,21	1428	61	61	61	124,93						249	12	53
		17		0,10	1,21	1428	61	61	61	127,10						249	12	53
		18		0,10	1,21	1429	61	61	61	130,64						249	12	53
		19		0,10	1,21	1430	61	61	61	133,79						249	12	53
		20		0,10	1,21	1430	61	61	61	136,90						249	12	53

TDF Initial Débit (pi³/min): 0,02	Pression (inhg) : -15	Volume ini (pi³) : 80,00	Volume fin (pi³) : 80,00	Volume (pi³) : 207	Fuite Pitot (ΔP) :
TDF Final Débit (pi³/min):	Pression (inhg) :	Volume ini (pi³) :	Volume fin (pi³) :	Volume (pi³) :	✓
REMARQUES : O ₂ /CO ₂ - Utiliser le formulaire de gaz en continu pour calibration des appareils.					

TECHNICIEN : **AE**

TECHNICIEN : AL

Usine : <u>Agnico Eagle Mine</u>		Date : <u>16.08.2024</u>		P. Bar (po Hg) : <u>20,0</u>		# Cold box : <u>-</u>	
Ville : <u>Meliadine</u>		ID point d'émission : <u>mineur 1</u>		P. Stat. (po H ₂ O) : <u>-0,12</u>			
Diamètre ou dimensions : <u>33,52</u>		Sonde N° : <u>03-06 Q 500</u>		Module N° : <u>23</u> C / NC		K' : <u>25,71</u>	
Distance avant : <u>50</u>		Cp : <u>0,779</u>		Kc : <u>0,990</u>		Niveau du manomètre : <u>✓</u>	
Distance après : <u>20</u>		Buse N° : <u>38504</u>		Ko : <u>0,989</u>		Zéro du manomètre : <u>✓</u>	
		Coef : <u>0,5023</u>		Distance P-T°-B : <u>✓</u>			

Heure	Trav.	Point	Temps prélév. (min)	ΔP (po H ₂ O)	ΔH (po H ₂ O)	Températures (°F)			Volume Prélevé (pi ³)	Masse molaire			Vaccum po. Hg	Température			
						Cheminée	Compteur			Orifice	O ₂ (%v)	CO ₂ (%v)		CO (ppmv)	Sonde (°F)	Filtre (°F)	Sortie (°F)
Entrée	Sortie																
08h50	1	1	5	0,07	0,43	1691	54	54	54	24,70				-2	256	248	50
		2		0,07	0,43	1690	54	54	54	27,86	10,3	8,0	11	-2	250	249	50
		3		0,07	0,43	1685	53	53	53	30,34				-2	250	247	50
		4		0,07	0,43	1700	57	57	57	32,87				-2	250	254	50
		5		0,05	0,51	1680	56	56	56	35,07				-2		252	50
		6		0,06	0,37	1677	56	56	56	37,39				-2		250	50
		7		0,07	0,44	1676	57	57	57	39,97				-2		254	50
		8		0,07	0,44	1675	57	57	57	42,52				-2		249	50
		9		0,06	0,37	1672	58	58	58	44,88				-2		252	50
		10		0,07	0,44	1668	58	58	58	47,46				-2		257	50
		11		0,07	0,44	1666	57	57	57	50,04				-2		253	50
		12		0,07	0,44	1665	59	59	59	52,61	10,5	7,8	7,0	-2		251	50
		13		0,08	0,50	1663	59	59	59	55,26				-2		256	51
		14		0,07	0,44	1664	59	59	59	57,96				-3		255	51
		15		0,07	0,44	1663	59	59	59	60,55	10,5	7,9	7,0	-3		249	51
		16		0,06	0,38	1664	59	59	59	62,89				-3		251	51
		17		0,06	0,38	1666	62	62	62	65,31				-3		248	51
		18		0,06	0,38	1657	63	63	63	67,71				-3		249	51
		19		0,07	0,45	1658	64	64	64	70,35	10,7	7,8	6,0	-3		250	52
		20		0,08	0,51	1660	62	62	62	73,15				-4		249	52
	2	1		0,11	0,70	1652	61	61	61	26,44				-4		257	52
		2		0,10	0,63	1651	61	61	61	29,61				-4		249	52
		3		0,11	0,70	1649	61	61	61	82,85				-4		248	52
		4		0,11	0,70	1647	61	61	61	86,11				-4		251	52
		5		0,11	0,70	1645	62	62	62	89,50				-4		252	52
		6		0,10	0,64	1645	62	62	62	92,45				-4		254	52
		7		0,11	0,70	1644	62	62	62	95,24	10,8	7,6	6,0	-4		255	52

TDF Initial Débit (pi ³ /min): <u>0,02</u>	Pression (inhg): <u>-15</u>	Volume ini (pi ³): <u>-</u>	Volume fin (pi ³): <u>-</u>	Volume (pi ³): <u>-</u>	Fuite Pitot (ΔP): <u>✓</u>
TDF Final Débit (pi ³ /min): <u>-</u>	Pression (inhg): <u>-</u>	Volume ini (pi ³): <u>-</u>	Volume fin (pi ³): <u>-</u>	Volume (pi ³): <u>-</u>	

REMARQUES : O₂/CO₂ - Utiliser le formulaire de gaz en continu pour calibration des appareils.

Usine : <u>Agnico Eagle Mine</u>	Date : <u>16.08.2024</u>	P. Bar (po Hg) :	# Cold box :
Ville : <u>Melidaine</u>	ID point d'émission : <u>Incinerator</u>	P. Stat. (po H ₂ O) :	
Diamètre ou dimensions :	Sonde N° :	Module N° : <u>C / NC</u>	K' : <u>25,71</u>
Distance avant : <u>voir 1/1</u>	Cp :	Kc : <u>voir 1/1</u>	Niveau du manomètre :
Distance après :	Buse N° :	Ko : <u>voir 1/1</u>	Zéro du manomètre :
	Coef :	Distance P-T-B :	

Heure	Trav.	Point	Temps prélèv. (min)	ΔP (po H ₂ O)	ΔH (po H ₂ O)	Températures (°F)				Volume Prélevé (pi ³)	Masse molaire			Vaccum po. Hg	Température			
						Cheminée	Compteur		Orifice		O ₂ (%v)	CO ₂ (%v)	CO (ppmv)		Sonde (°F)	Filtre (°F)	Sortie (°F)	Trappe/Filtre (°F)
							Entrée	Sortie										
		8	0,15	0,10	0,64	1644	62	62	62	98,85	10,8	2,6	6,0	-4	250	250	52	
		9	5	0,12	0,76	1645	61	61	61	102,25				-4		242	52	
		10		0,11	0,70	1644	61	61	61	105,52				-4		248	52	
		11		0,108	0,51	1648	62	62	62	108,21				-4		248	53	
		12		0,108	0,51	1644	62	62	62	111,01				-4		256	53	
		13		0,108	0,51	1646	62	62	62	113,70				-4		255	53	
		14		0,108	0,51	1640	62	62	62	116,42				-4		255	53	
		15		0,107	0,45	1639	63	63	63	119,02				-4		247	53	
		16		0,107	0,45	1639	63	63	63	121,54				-4		251	53	
		17		0,108	0,51	1638	63	63	63	124,37				-4		249	53	
		18		0,108	0,51	1637	62	62	62	127,17			5,0	-4		252	53	
12h10		19		0,104	0,45	1640	63	63	63	129,82	10,8	2,6	5,0	-4		252	53	
		20	↓	0,108	0,51	1640	63	63	63	132,63				-4	↓	254	53	

TDF Initial Débit (pi ³ /min): <u>0,02</u>	Pression (inhg) : <u>-15</u>	Volume ini (pi ³) : <u>—</u>	Volume fin (pi ³) : <u>—</u>	Volume (pi ³) : <u>—</u>	Fuite Pitot (ΔP) : <u>✓</u>
TDF Final Débit (pi ³ /min): <u>0,02</u>	Pression (inhg) : <u>-15</u>	Volume ini (pi ³) : <u>—</u>	Volume fin (pi ³) : <u>—</u>	Volume (pi ³) : <u>—</u>	
REMARQUES : <u>O₂/CO₂ - Utiliser le formulaire de gaz en continu pour calibration des appareils.</u>					

TECHNICIEN :

RJ

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Usine : Agmco Eagle Mine	Date : 12.08.2024	P. Bar (po Hg) : 30,0	# Cold box : ME-E
Ville :	ID point d'émission : Incinerator 1	P. Stat. (po H ₂ O) : -0,12	
Diamètre ou dimensions : 33,52	Sonde N° : 03-06 Q 500	Module N° : 23 C / NC	K' : 25,71
	Cp : 0,779	Kc : 0,990	
Distance avant : 50	Buse N° : 30 504	Ko : 0,989	Niveau du manomètre : ✓
Distance après : 25	Coef : 0,5023	Distance P-T°-B : ✓	Zéro du manomètre : ✓

Heure	Trav.	Point	Temps prélèv. (min)	ΔP (po H ₂ O)	ΔH (po H ₂ O)	Températures (°F)				Volume Prélevé (pi ³)	Masse molaire			Vaccum po. Hg	Température			
						Cheminée	Compteur		Orifice		O ₂ (%v)	CO ₂ (%v)	CO (ppmv)		Sonde (°F)	Filtre (°F)	Sortie (°F)	Trappe/Filtre (°F)
							Entrée	Sortie										
15h40	1	1	5	0,111	0,62	1882	56	56	56	33,21								
		2		0,111	0,62	1884	56	56	56	36,23	7,15	10,5	5,0	-3	250	246	48	
		3		0,111	0,62	1889	57	57	57	39,14				-3		251	48	
		4		0,111	0,62	1897	56	56	56	42,19				-3		245	48	
		5		0,110	0,56	1894	57	57	57	45,26	7,39	10,4	5,0	-3		249	48	
		6		0,110	0,56	1891	57	57	57	48,13				-3		253	48	
		7		0,110	0,56	1908	56	56	56	51,00				-4		256	48	
		8		0,110	0,56	1912	58	58	58	52,81	7,41	10,39	5,0	-4		256	48	
		9		0,112	0,67	1908	58	58	58	56,60				-4		259	48	
		10		0,112	0,68	1902	58	58	58	59,75				-4		252	49	
		11		0,109	0,51	1900	57	57	57	62,94	8,55	9,56	5,0	-5		257	49	
		12		0,108	0,45	1889	57	57	57	65,75				-6		254	49	
		13		0,108	0,45	1885	59	59	59	68,35				-5		253	49	
		14		0,107	0,40	1865	60	60	60	70,91	8,90	9,21	5,0	-5		250	49	
		15		0,107	0,40	1857	60	60	60	73,37				-5		250	50	
		16		0,107	0,41	1846	61	61	61	75,83				-5		252	50	
		17		0,108	0,47	1840	62	62	62	78,26	9,51	8,72	5,0	-5		251	50	
		18		0,108	0,47	1834	62	62	62	80,89				-5		241	50	
		19		0,108	0,47	1819	62	62	62	83,50				-5		247	50	
		20	↓	0,107	0,41	1807	62	62	62	86,15				-5	↓	249	50	
										88,54								

TDF Initial Débit (pi ³ /min): 0,0102	Pression (inhg) : -75	Volume ini (pi ³) : -	Volume fin (pi ³) : -	Volume (pi ³) : -	Fuite Pitot (ΔP) : ✓
TDF Final Débit (pi ³ /min):	Pression (inhg) :	Volume ini (pi ³) :	Volume fin (pi ³) :	Volume (pi ³) :	

REMARQUES : O₂/CO₂ - Utiliser le formulaire de gaz en continu pour calibration des appareils.

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Cold box :

Cold box :

K'

K'

Niveau du manomètre :	
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Zéro du manomètre :

TECHNICIEN :	

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24-8263

INC1-Me-E3

Usine : <u>Agnico Eagle Mine</u>	Date : <u>18.08.2024</u>	P. Bar (po Hg) : <u>2010</u>	# Cold box : <u>Me-E1</u>
Ville : <u>Mechadine</u>	ID point d'émission : <u>Incinerateur</u>	P. Stat. (po H ₂ O) : <u>-0,12</u>	K' : <u>25,66</u>
Diamètre ou dimensions : <u>33,52</u>	Sonde N° : <u>03-062 500</u>	Module N° : <u>23</u> C / NC	Niveau du manomètre : <u>✓</u>
Distance avant : <u>50</u>	Cp : <u>0,779</u>	Kc : <u>0,990</u>	Zéro du manomètre : <u>✓</u>
Distance après : <u>20</u>	Buse N° : <u>309 504</u>	Ko : <u>0,989</u>	
	Coef : <u>0,5023</u>	Distance P-T-B : <u>✓</u>	

Heure	Trav.	Point	Temps prélèv. (min)	ΔP (po H ₂ O)	ΔH (po H ₂ O)	Températures (°F)				Volume Prélevé (pi ³)	Masse molaire			Vaccum po. Hg	Température			
						Cheminée	Compteur		Orifice		O ₂ (%v)	CO ₂ (%v)	CO (ppmv)		Sonde (°F)	Filtre (°F)	Sortie (°F)	Trappe/Filtre (°F)
Entrée	Sortie																	
14h00	1	1	5	0,07	0,49	1419	55	55	55	39,92								
		2		0,07	0,49	1430	56	56	56	42,58	11,5	7,3	5,0	-2	250	245	50	
		3		0,08	0,56	1434	56	56	56	45,21				-2		248	50	
		4		0,06	0,42	1430	57	57	57	48,12				-2		253	50	
		5		0,07	0,49	1428	57	57	57	50,65				-2		247	50	
		6		0,07	0,49	1426	57	57	57	53,31				-2		256	50	
		7		0,05	0,35	1450	58	58	58	56,00				-2		254	50	
		8		0,06	0,42	1453	58	58	58	58,36	11,4	7,2	5,0	-2		250	50	
		9		0,07	0,49	1455	58	58	58	60,92				-2		254	50	
		10		0,07	0,49	1450	59	59	59	63,62				-2		249	50	
		11		0,07	0,49	1454	59	59	59	66,41				-2		248	51	
		12		0,09	0,63	1449	62	62	62	69,18				-2		247	51	
		13		0,08	0,56	1450	62	62	62	72,25				-2		252	51	
		14		0,07	0,49	1447	63	63	63	75,18				-2		253	51	
		15		0,06	0,42	1454	64	64	64	77,94	11,8	6,9	5,0	-3		253	51	
		16		0,05	0,35	1447	65	65	65	80,47				-3		252	51	
		17		0,06	0,42	1450	65	65	65	82,71				-2		250	52	
		18		0,08	0,56	1451	65	65	65	85,18				-2		250	52	
		19		0,07	0,49	1448	66	66	66	88,00				-2		254	52	
		20	↓	0,07	0,49	1448	66	66	66	90,70				-3		256	52	
				0,06	0,43	1445	67	67	67	93,21				-3	↓	242	52	

TDF Initial Débit (pi ³ /min): <u>20102</u>	Pression (inhg) : <u>-15</u>	Volume ini (pi ³) : <u>—</u>	Volume fin (pi ³) : <u>—</u>	Volume (pi ³) : <u>—</u>	Fuite Pitot (ΔP) : <u>✓</u>
TDF Final Débit (pi ³ /min):	Pression (inhg) :	Volume ini (pi ³) :	Volume fin (pi ³) :	Volume (pi ³) :	
REMARQUES : <u>O₂/CO₂ - Utiliser le formulaire de gaz en continu pour calibration des appareils.</u>					

TECHNICIEN :

R.J

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Cold box:

K': 25,66

Niveau du manomètre :

Zéro du manomètre :

Vaccum	
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TECHNICIEN :

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Zéro du manomètre :

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INC 2 - C0SV - E1

Usine : <i>ATEM</i>	Date : <i>19-03-2024</i>	P. Bar (po Hg) : <i>70,0</i>	# Cold box :
Ville : <i>Mekhadine</i>	ID point d'émission : <i>INC 2</i>	P. Stat. (po H ₂ O) : <i>0,08</i>	
Diamètre ou dimensions : <i>18</i>	Sonde N° : <i>03-03 Q-100</i>	Module N° : <i>25</i> C / NC	K' : <i>43,87</i>
Distance avant : <i>6,70</i>	Cp : <i>0,741</i>	Kc : <i>1,001</i>	Niveau du manomètre : <i>✓</i>
Distance après : <i>1,40</i>	Buse N° : <i>3Q-507</i>	Ko : <i>0,74</i>	Zéro du manomètre : <i>✓</i>
	Coef : <i>0,5093</i>	Distance P-T-B : <i>✓</i>	

Heure	Trav.	Point	Temps prélèv. (min)	ΔP (po H ₂ O)	ΔH (po H ₂ O)	Températures (°F)				Volume Prélevé (pi ³)	Masse molaire			Vaccum po. Hg	Température			
						Cheminée	Compteur		Orifice		O ₂ (%v)	CO ₂ (%v)	CO (ppmv)		Sonde (°F)	Filtre (°F)	Sortie (°F)	Trappe/Filtre (°F)
							Entrée	Sortie										
12h42	1	1	✓	20,5	2,76	1660	63	63	63	27,36				4	210	249	50	52
		2		20,7	2,75	1675	63	63	63	28,80	6,0	M	5	4		249	50	52
		3		20,8	2,85	1695	63	63	63	102,27				4		249	50	52
		4		20,9	2,95	1720	64	64	64	104,86				4		249	50	52
		5		20,9	2,95	1730	64	64	64	107,60				6		249	50	52
		6		20,9	2,94	1732	64	64	64	107,37				6		252	50	52
		7		2,10	1,04	1738	64	64	64	113,12				8		252	50	52
		8		2,10	1,04	1741	64	64	64	116,00				8		252	50	52
		9		2,10	1,15	1745	64	64	64	118,87				10		257	49	53
		10		2,11	1,15	1745	64	64	64	121,88				10		257	49	53
		11		2,11	1,14	1750	64	64	64	124,92				12		257	49	53
		12		2,11	1,14	1762	64	64	64	130,85				13		257	49	53
		13		2,11	1,13	1773	64	64	64	133,76				14		257	49	53
		14		2,11	1,13	1780	64	64	64	136,64				15		257	49	53
		15		2,11	1,13	1782	64	64	64	139,48				15		257	49	53
		16		2,11	1,13	1787	65	65	65	142,30				15		257	49	53
14h12		17	✓	2,11	1,13	1787	65	65	65	145,10				13		253	49	53
		18		2,11	1,13	1782	65	65	65	147,88				15		253	49	53

TDF Initial Débit (pi ³ /min): <i>50,02</i>	Pression (inhg) : <i>-M</i>	Volume ini (pi ³) : <i>—</i>	Volume fin (pi ³) : <i>—</i>	Volume (pi ³) : <i>—</i>	Fuite Pitot (ΔP) : <i>✓</i>
TDF Final Débit (pi ³ /min):	Pression (inhg) :	Volume ini (pi ³) :	Volume fin (pi ³) :	Volume (pi ³) :	

REMARQUES : *O₂/CO₂ - Utiliser le formulaire de gaz en continu pour calibration des appareils.*

- Colmatage du filtre à la fin du test traversé, changement du filtre.

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Usine :	Date :	P. Bar (po Hg) :	# Cold box :
Ville :	ID point d'émission :	P. Stat. (po H ₂ O) :	
Diamètre ou dimensions :	Sonde N° :	Module N° : C / NC	K' :
	Cp :	Kc :	
Distance avant :	Buse N° :	Ko :	Niveau du manomètre :
Distance après :	Coef :	Distance P-T-B :	Zéro du manomètre :

Heure	Trav.	Point	Temps prélèv. (min)	ΔP (po H ₂ O)	ΔH (po H ₂ O)	Cheminée	Températures (°F)			Volume Prélevé (pi ³)	Masse molaire			Vaccum po. Hg	Température			
							Compteur	Orifice	O ₂ (%v)		CO ₂ (%v)	CO (ppmv)	Sonde (°F)		Filtre (°F)	Sortie (°F)	Trappe/Filtre (°F)	
																		Entrée
14h56	2	1	↖	0,10	1,03	1765	65	65	65	148,12				-4	250	235	53	50
		2	↓	0,10	1,03	1763	65	65	65	151,00	2,0	11,0	5	-4		255	53	50
		3	↓	0,10	1,03	1765	65	65	65	153,90				-4		253	53	50
		4	↓	0,10	1,03	1760	65	65	65	156,79				-5		253	53	50
		5	↓	0,09	0,93	1758	65	65	65	162,44				-5		253	53	50
		6	↓	0,09	0,93	1758	65	65	65	165,18				-6		253	53	50
		7	↓	0,09	0,93	1755	65	65	65	167,94				-7		259	53	50
		8	↓	0,10	1,04	1751	65	65	65	170,80				-8		249	53	50
		9	↓	0,11	1,12	1749	65	65	65	173,84				-8		249	53	50
		10	↓	0,11	1,14	1753	65	65	65	176,85				-10		249	53	50
		11	↓	0,11	1,14	1755	66	66	66	179,80				-10		247	53	50
		12	↓	0,11	1,14	1755	66	66	66	182,75				-12		247	50	54
		13	↓	0,11	1,14	1759	66	66	66	185,70				-13		247	50	54
		14	↓	0,11	1,16	1762	66	66	66	188,63				-14		247	50	54
		15	↓	0,11	1,16	1764	66	66	66	191,55				-15		245	50	54
		16	↓	0,11	1,16	1768	66	66	66	194,42				-17		245	50	54
		17	↓	0,12	1,24	1771	66	66	66	197,50				-18		245	50	54
16h26		18	↓	0,12	1,24	1771	66	66	66	200,70				-18	↓	245	50	54

TDF Initial Débit (pi ³ /min):	Pression (inhg) :	Volume ini (pi ³) :	Volume fin (pi ³) :	Volume (pi ³) :	Fuite Pitot (ΔP) :
TDF Final Débit (pi ³ /min): <i>1,02</i>	Pression (inhg) : <i>15</i>	Volume ini (pi ³) :	Volume fin (pi ³) :	Volume (pi ³) :	☒

REMARQUES : O₂/CO₂ - Utiliser le formulaire de gaz en continu pour calibration des appareils.

TECHNICIEN : *AK*

24-8263

INC 2 - COSV-E

1/2

Usine : AEM	Date : 20.08.2024	P. Bar (po Hg) : 3010	# Cold box :
Ville : Meliadine	ID point d'émission : INC 2	P. Stat. (po H ₂ O) : -0,08	
Diamètre ou dimensions : 18,00	Sonde N° : 03-08 2-500	Module N° : 25 C / NC	K' : 43,83
	Cp : 0,741	Kc : 1,001	
Distance avant : 6,70	Buse N° : 30-507	Ko : 0,740	Niveau du manomètre : ☒
Distance après : 1,40	Coef : 0,5093	Distance P-T°-B : ☒	Zéro du manomètre : ☒

Heure	Trav.	Point	Temps prélèv. (min)	ΔP (po H ₂ O)	ΔH (po H ₂ O)	Températures (°F)				Volume Prélevé (pi ³)	Masse molaire			Vaccum po. Hg	Température			
						Cheminée	Compteur		Orifice		O ₂ (%v)	CO ₂ (%v)	CO (ppmv)		Sonde (°F)	Filtre (°F)	Sortie (°F)	Trappe/Filtre (°F)
							Entrée	Sortie										
08h02	1	1	5	0,08	0,86	1654	57	57	57	1,11	8,10	9,5	5	-2	250	253	48	51
		2		0,07	0,75	1662	57	57	57	3,81				-2		251	48	51
		3		0,09	0,95	1686	57	57	57	6,31				-2		254	48	51
		4		0,09	0,95	1685	57	57	57	8,89				-3		255	48	51
		5		0,09	0,95	1698	58	58	58	11,67				-4		253	48	51
		6		0,10	1,04	1714	58	58	58	14,47				-5		252	49	52
		7		0,10	1,05	1700	58	58	58	17,42				-5		254	49	52
		8		0,10	1,03	1746	58	58	58	20,37				-5		254	49	52
		9		0,11	1,16	1692	58	58	58	23,24				-5		257	49	52
		10		0,11	1,16	1694	58	58	58	26,21				-5		257	49	52
		11		0,11	1,14	1728	59	59	59	29,28				-5		256	49	52
		12		0,11	1,14	1739	59	59	59	32,24				-5		254	50	52
		13		0,11	1,13	1749	59	59	59	35,20				-5		249	50	53
		14		0,11	1,13	1755	59	59	59	38,19				-5		247	50	53
		15		0,11	1,13	1756	59	59	59	41,27				-5		248	50	53
		16		0,11	1,13	1762	59	59	59	44,25				-6		250	50	53
		17		0,11	1,13	1766	60	60	60	47,24				-6		250	49	51
		18	↓	0,11	1,12	1777	60	60	60	50,29				-6	↓	250	49	51
										53,40								

TDF Initial Débit (pi ³ /min): 0,02	Pression (inHg) : -15	Volume ini (pi ³) : —	Volume fin (pi ³) : —	Volume (pi ³) : —	Fuite Pitot (ΔP) : ✓
TDF Final Débit (pi ³ /min):	Pression (inHg) :	Volume ini (pi ³) :	Volume fin (pi ³) :	Volume (pi ³) :	
REMARQUES : O ₂ /CO ₂ - Utiliser le formulaire de gaz en continu pour calibration des appareils.					

TECHNICIEN :

R.J

Formulaire
« Données de prélèvement manuel »

Code d'essai :

24-8263
INC 2 - COSV

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Usine : AEM	Date : 20.08.2024	P. Bar (po Hg) :	# Cold box :
Ville : Stelradine	ID point d'émission :	P. Stat. (po H ₂ O) :	
Diamètre ou dimensions :	Sonde N° :	Module N° : C / NC	K' : 43,83
Distance avant : voir 1/2	Cp :	Kc : voir 1/2	Niveau du manomètre : Zéro du manomètre :
Distance après :	Buse N° :	Ko : voir 1/2	
	Coef :	Distance P-T°-B :	

Heure	Trav.	Point	Temps prélèv. (min)	ΔP (po H ₂ O)	ΔH (po H ₂ O)	Températures (°F)				Volume Prélevé (pi ³)	Masse molaire			Vaccurn po. Hg	Température			
						Cheminée	Compteur		Orifice		O ₂ (%v)	CO ₂ (%v)	CO (ppmv)		Sonde (°F)	Filtre (°F)	Sortie (°F)	Trappe/Filtre (°F)
							Entrée	Sortie										
										53,40								
	2	1	5	0,10	1,02	1780	60	60	60	53,40	8,0	9,5	5	250	26	258	49	51
		12		0,10	1,01	1786	60	60	60	56,26					-6	254	49	51
		3		0,10	1,02	1781	60	60	60	59,07					-6	255	49	51
		4		0,10	1,02	1783	60	60	60	61,90					-6	255	49	51
		5		0,09	0,91	1785	61	61	61	64,80					-6	252	49	51
		6		0,09	0,91	1788	61	61	61	67,48					-6	249	49	51
		7		0,09	0,91	1788	61	61	61	70,21					-6	248	51	53
		8		0,10	1,02	1798	61	61	61	72,90					-6	249	51	53
		9		0,11	1,11	1802	61	61	61	75,70					-6	257	51	53
		10		0,11	1,11	1806	62	62	62	78,62					-7	257	51	53
		11		0,11	1,11	1806	62	62	62	81,60					-7	255	51	53
		12		0,11	1,11	1807	62	62	62	84,53					-8	255	51	54
		13		0,11	1,11	1810	62	62	62	87,48					-8	254	52	56
		14		0,11	1,11	1811	62	62	62	90,36					-8	253	52	58
		15		0,11	1,11	1815	62	62	62	93,30					-8	252	52	58
		16		0,10	1,00	1819	62	62	62	96,22					-8	252	52	58
		17		0,11	1,11	1750	62	62	62	99,12					-8	252	52	58
M ⁶ 2		18		0,10	1,05	1723	62	62	62	102,12					-8	251	54	59
										105,00								

TDF Initial Débit (pi ³ /min):	Pression (inhg) :	Volume ini (pi ³) :	Volume fin (pi ³) :	Volume (pi ³) :	Fuite Pitot (ΔP) :
TDF Final Débit (pi ³ /min): 10102	Pression (inhg) : -15	Volume ini (pi ³) :	Volume fin (pi ³) :	Volume (pi ³) :	

REMARQUES : O₂/CO₂ - Utiliser le formulaire de gaz en continu pour calibration des appareils.

TECHNICIEN : **25**

$$\pm NC \pm \cos \nu - E_2$$

Vaccum	Ter
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TECHNICIEN :

				Formulaire « Données de prélèvement manuel »										Code d'essai : 24-8263 INC L-WSV-E3				
Document : F ECH 09				Révision N° : 10				Page : 1 de 1										
Usine : AEM				Date : 20.08.2024				P. Bar (po Hg) :				# Cold box :						
Ville :				ID point d'émission :				P. Stat. (po H ₂ O) :										
Diamètre ou dimensions :				Sonde N° :				Module N° : C / NC				K' :						
				Cp :				Kc :										
Distance avant :				Buse N° :				Ko :				Niveau du manomètre :						
Distance après :				Coef :				Distance P-T°-B :				Zéro du manomètre :						
Heure	Trav.	Point	Temps prélèv. (min)	ΔP (po H ₂ O)	ΔH (po H ₂ O)	Températures (°F)			Volume Prélevé (pi³)	Masse molaire			Vaccum po. Hg	Température				
						Cheminée	Compteur			Orifice	O ₂ (%v)	CO ₂ (%v)		CO (ppmv)	Sonde (°F)	Filtre (°F)	Sortie (°F)	Trappe/Filtre (°F)
	2	1	5	0,10	1,06	1689	65	65	65	57,56	8,15	10,11	9	-5	250	252	55	55
		2		0,10	1,08	1659	65	65	65	63,57				-5		254	55	55
		3		0,10	1,07	1674	65	65	65	66,52				-5		256	55	55
		4		0,10	1,06	1689	65	65	65	69,47				-5		250	55	55
		5		0,09	0,98	1649	65	65	65	72,28				-5		254	55	55
		6		0,09	0,96	1681	65	65	65	75,11				-5		256	55	55
		7		0,09	0,96	1675	64	64	64	78,00				-5		256	55	55
		8		0,10	1,08	1657	64	64	64	80,88				-5		255	56	58
		9		0,11	1,19	1648	64	64	64	83,97				-6		255	56	58
		10		0,11	1,18	1671	64	64	64	87,03				-6		254	56	58
		11		0,11	1,17	1680	64	64	64	90,08				-6		249	56	58
		12		0,11	1,17	1680	64	64	64	93,08				-6		249	56	58
		13		0,11	1,17	1681	64	64	64	96,12				-6		244	54	54
		14		0,11	1,17	1684	65	65	65	99,25				-6		248	54	54
		15		0,11	1,19	1649	65	65	65	102,36				-7		249	54	54
		16		0,11	1,20	1645	65	65	65	105,44				-9		245	54	54
15h21		17		0,12	1,20	1660	65	65	65	108,72				-9		253	54	54
		18		0,12	1,29	1675	65	65	65	111,93				-9		257	54	54
TDF Initial Débit (pi³/min): Pression (inhg) : Volume ini (pi³) : Volume fin (pi³) : Volume (pi³) : Fuite Pitot (ΔP) :																		
TDF Final Débit (pi³/min): 1002 Pression (inhg) : -15 Volume ini (pi³) : Volume fin (pi³) : Volume (pi³) :																		
REMARQUES : O ₂ /CO ₂ - Utiliser le formulaire de gaz en continu pour calibration des appareils.																		
TECHNICIEN : R.J.																		

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Usine : Agnico Eagle Mine	Date : 19.08.2024	P. Bar (po Hg) : 30,0	# Cold box : -
Ville : Meliadine	ID point d'émission : Iminerator 2	P. Stat (po H ₂ O) : -28.8	
Diamètre ou dimensions : 18,00	Sonde N° : 03-06 Q 500	Module N° : 23 C / (NC)	K' : 25,73
	Cp : 0,779	Kc : 0,990	
Distance avant : 140	Buse N° : 30-504	Ko : 0,989	Niveau du manomètre : ✓
Distance après : 6,70	Coef : 0,5023	Distance P-T-B : ✓	Zéro du manomètre : ✓

Distance après :			Coef :			Températures (°F)				Masse molaire			Vaccum	Température				
Heure	Trav.	Point	Temps prélév. (min)	ΔP (po H ₂ O)	ΔH (po H ₂ O)	Cheminée	Compteur		Orifice	Volume Prélevé (pi ³)	O ₂	CO ₂	CO	Vaccum po. Hg	Sonde (°F)	Filtre (°F)	Sortie (°F)	Trappe/Filtre (°F)
							Entrée	Sortie			(%v)	(%v)	(ppmv)					
										58,90								
13h41	1	1	5	0,06	0,72	1700	58	58	58	61,32	5,0	12,1	4,0	-2	250	255	49	
12h41		2		0,07	0,44	1679	58	58	58	63,81				-4		249	49	
		3		0,07	0,44	1673	58	58	58	66,41	8,5	10,0	4	-6		253	49	
		4		0,09	0,54	1730	59	59	59	69,21				-8		253	49	
		5		0,10	0,60	1760	60	60	60	72,09				-8		256	49	
13h11		6		0,10	0,60	1764	60	60	60	74,95	4,5	12,0	4	-10		252	49	
13h12		7		0,11	0,66	1781	61	61	61	78,15				-2		252	49	
		8		0,11	0,66	1788	63	63	63	81,21				-6		253	49	
		9		0,11	0,66	1795	63	63	63	84,41	8,7	9,5	4	-8		253	49	
		10		0,11	0,66	1788	63	65	63	87,46				-12		249	51	
		11		0,11	0,66	1790	63	63	63	90,34	4,1	12,0	4	-13		250	51	
13h44		12		0,11	0,66	1792	63	63	63	93,19				-14		251	51	
14h50		13		0,11	0,65	1814	63	63	63	96,23	8,5	10,0	4	-3		248	51	
		14		0,11	0,67	1848	64	64	64	99,32				-6		248	51	
		15		0,11	0,65	1811	64	64	64	102,49				-9		247	51	
		16		0,11	0,69	1883	65	65	65	105,66				-10		253	51	
		17		0,11	0,68	1825	65	65	65	108,78	4,1	12,0	4	-12		252	52	
		18		0,11	0,68	1814	65	65	65	111,85				-14		256	52	
15h25	2	1	5	0,11	0,70	1860	65	65	65	114,75				-14	250	254	52	

TDF Initial Débit (pi³/min) : **10,02** Pression (inhg) : **-15** Volume ini (pi³) : **-** Volume fin (pi³) : **-** Volume (pi³) : **-** Fuite Pitot (ΔP) : **✓**

TDF Final Débit (pi³/min) : **-** Pression (inhg) : **-** Volume ini (pi³) : **-** Volume fin (pi³) : **-** Volume (pi³) : **-**

REMARQUES : O₂/CO₂ - Utiliser le formulaire de gaz en continu pour calibration des appareils.

13h11 → 13h12 } Changements filtres à cause du colmatage.
13h44 → 14h50 }

TECHNICIEN : **R.J.**

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24-8263
INC 2-Me-E₂

Usine : <i>Agmco Eagle Mine</i>	Date : <i>20.08.2024</i>	P. Bar (po Hg) : <i>20,0</i>	# Cold box : <i>-</i>
Ville : <i>Meliandine</i>	ID point d'émission : <i>incinerator 2</i>	P. Stat. (po H ₂ O) : <i>-0,28</i>	
Diamètre ou dimensions : <i>18,00</i>	Sonde N° : <i>03-06 Q 500</i>	Module N° : <i>23</i> C / (NC)	K' : <i>25,73</i>
	Cp : <i>0,779</i>	Kc : <i>0,990</i>	
Distance avant : <i>1,407</i>	Buse N° : <i>30-504</i>	Ko : <i>0,989</i>	Niveau du manomètre : <i>✓</i>
Distance après : <i>6,702</i>	Coef : <i>0,5023</i>	Distance P-T°-B : <i>✓</i>	Zéro du manomètre : <i>✓</i>

Heure	Trav.	Point	Temps prélèv. (min)	ΔP (po H ₂ O)	ΔH (po H ₂ O)	Températures (°F)				Volume Prélevé (pi ³)	Masse molaire			Vaccum po. Hg	Température			
						Cheminée	Compteur		Orifice		O ₂ (%v)	CO ₂ (%v)	CO (ppmv)		Sonde (°F)	Filtre (°F)	Sortie (°F)	Trappe/Filtre (°F)
							Entrée	Sortie										
08h03	1	1	5	0,05	0,30	1737	52	52	52	16,10	8,10	9,5	5	-2	250	254	53	
		2		0,06	0,36	1730	52	52	52	18,24				-3		256	53	
		3		0,08	0,48	1753	52	52	52	20,61				-3		257	53	
		4		0,09	0,55	1698	53	53	53	23,17				-3		254	53	
		5		0,11	0,67	1698	53	53	53	26,07				-5		254	53	
		6		0,10	0,60	1755	53	53	53	29,19				-6		252	54	
		7		0,10	0,60	1727	53	53	53	32,19				-6		253	54	
		8		0,10	0,59	1783	53	53	53	35,08				-7		249	54	
		9		0,11	0,66	1739	55	55	55	38,10				-8		248	54	
		10		0,11	0,65	1766	55	55	55	41,20				-9		247	54	
		11		0,11	0,65	1726	55	55	55	44,31				-9		253	54	
		12		0,11	0,65	1781	56	56	56	47,42				-9		253	55	
		13		0,11	0,65	1782	56	56	56	50,52				-9		256	55	
		14		0,11	0,65	1782	56	56	56	53,61				-9		254	55	
		15		0,11	0,65	1793	58	58	58	56,60				-9		254	55	
		16		0,11	0,65	1803	58	58	58	59,67				-9		236	55	
		17		0,11	0,65	1802	59	59	59	62,75				-10		257	55	
		18	↓	0,11	0,65	1807	59	59	59	65,81				-10	↓	253	52	
										68,86								

TDF Initial Débit (pi ³ /min): <i>0,02</i>	Pression (inhg) : <i>-15</i>	Volume ini (pi ³) : <i>-</i>	Volume fin (pi ³) : <i>-</i>	Volume (pi ³) : <i>-</i>	Fuite Pitot (ΔP) : <i>✓</i>
TDF Final Débit (pi ³ /min):	Pression (inhg) :	Volume ini (pi ³) :	Volume fin (pi ³) :	Volume (pi ³) :	
REMARQUES : <i>O₂/CO₂ - Utiliser le formulaire de gaz en continu pour calibration des appareils.</i>					

TECHNICIEN :

R.S

« Données de prélèvement manuel »

Code d'essai :

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Cold box :

Cold box :

K':

K':

Niveau du manomètre :

Zéro du manomètre :

[illegible]Fuite Pitot (ΔP) :

Volume (πr^3) :	
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O₂/CO₂ - Utiliser le formulaire de gaz en continu pour calibration des appareils.

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Formulaire
« Données de prélèvement manuel »

Code d'essai :

24-8263
INC 2-MR-E3

1/2

Document : F ECH 09

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Usine : AEM Agnès-Eagle

Date : 20.08.2024

P. Bar (po Hg) : 20,0

Cold box :

Ville : Meliandre

ID point d'émission : 03-06 2500

P. Stat. (po H₂O) : -90

Diamètre ou dimensions : 18,00

Sonde N° : INC 2

Module N° : 23 C / NC

K' :

21,67

Distance avant : 6,20

Cp : 0,779

Kc : 0,990

Niveau du manomètre :

Distance après : 11,40

Buse N° : 30-511

Ko : 0,989

Zéro du manomètre :

Coef : 0,4811

Distance P-T-B : ✓

Heure	Trav.	Point	Temps prélèv. (min)	ΔP (po H ₂ O)	ΔH (po H ₂ O)	Températures (°F)				Volume Prélevé (pi ³)	Masse molaire			Vaccum po. Hg	Température					
						Cheminée	Compteur		Orifice		O ₂	CO ₂	CO		Sonde (°F)	Filtre (°F)	Sortie (°F)	Trappe/Filtre (°F)		
12h22	1	1	5	0,06	0,30	1766	61	61	61	22,02	8,5	10,1	9	-2	250	250	52	1		
		2	0,06	0,31	1742	61	61	61	24,12	-2									253	52
		3	0,07	0,36	1757	61	61	61	26,23	-3									253	52
		4	0,09	0,46	1743	61	61	61	28,49	-3									253	52
		5	0,09	0,47	1723	61	61	61	31,07	-3									254	52
		6	0,10	0,52	1705	61	61	61	33,66	-5									256	52
		7	0,10	0,52	1712	62	62	62	36,43	-6									256	52
		8	0,10	0,52	1714	62	62	62	39,21	-6									257	52
		9	0,10	0,52	1699	62	62	62	41,92	-8									248	53
		10	0,11	0,52	1688	63	63	63	44,68	-9									245	53
		11	0,11	0,57	1714	63	63	63	47,55	-9									244	53
		12	0,11	0,58	1693	64	64	64	50,32	-10									248	53
		13	0,11	0,57	1715	64	64	64	53,36	-10									249	53
		14	0,11	0,58	1689	64	64	64	56,28	-11									254	54
		15	0,11	0,57	1712	64	64	64	59,18	-12									253	54
		16	0,11	0,57	1717	64	64	64	62,00	-13									252	54
		17	0,11	0,58	1675	64	64	64	64,89	-13									252	54
		18	✓	0,11	0,58	1710	64	64	64	67,77									-13	253

TDF Initial Débit (pi³/min): 20,02 Pression (inhg) : -15 Volume ini (pi³) : — Volume fin (pi³) : — Volume (pi³) : — Fuite Pitot (ΔP) : ✓

TDF Final Débit (pi³/min): Pression (inhg) : Volume ini (pi³) : Volume fin (pi³) : Volume (pi³) :

REMARQUES O₂/CO₂ - Utiliser le formulaire de gaz en continu pour calibration des appareils.

TECHNICIEN :

R.J

CONSULAIR GESTION GLOBALE AIR ET ENVIRONNEMENT				Formulaire « Données de prélèvement manuel »										Code d'essai : 24-8263 INC2-ME-E3				
Document : F ECH 09				Révision N° : 10				Page : 1 de 1										
Usine : AEM				Date : 20.08.2024				P. Bar (po Hg) :				# Cold box :						
Ville :				ID point d'émission :				P. Stat. (po H ₂ O) :										
Diamètre ou dimensions :				Sonde N° :				Module N° :				C / NC						
				Cp :				Kc :				K' : 21,67						
Distance avant :				Buse N° :				Ko :				Niveau du manomètre :						
Distance après :				Coef :				Distance P-T-B :				Zéro du manomètre :						
Heure	Trav.	Point	Temps prélèv. (min)	ΔP (po H ₂ O)	ΔH (po H ₂ O)	Températures (°F)			Volume Prélevé (pi ³)	Masse molaire			Vaccum po. Hg	Température				
						Cheminée	Compteur			Orifice	O ₂ (%v)	CO ₂ (%v)		CO (ppmv)	Sonde (°F)	Filtre (°F)	Sortie (°F)	Trappe/Filtre (°F)
Entrée	Sortie																	
	1	1	5	0,11	0,58	1682	65	65	65	70,62				-14	250	253	55	
		2		0,11	0,58	1700	65	65	65	73,57	8,5	10,1	9	-14		253	55	
		3		0,11	0,58	1706	65	65	65	76,47				-14		253	55	
		4		0,11	0,59	1670	65	65	65	79,37				-14		253	55	
		5		0,11	0,59	1673	65	65	65	82,15				-14		253	55	
14h02		6		0,11	0,59	1676	65	65	65	84,86				-14		256	53	
14h29		7		0,11	0,58	1700	64	64	64	87,55				-14		256	53	
		8		0,11	0,59	1673	64	64	64	90,52				-14		256	53	
		9		0,11	0,58	1694	64	64	64	93,39				-3		256	53	
		10		0,11	0,59	1667	64	64	64	96,40				-3		257	53	
		11		0,11	0,58	1694	64	64	64	99,38				-4		253	53	
		12		0,10	0,53	1694	64	64	64	102,25				-4		250	52	
		13		0,10	0,53	1709	66	66	66	105,00				-5		250	52	
		14		0,10	0,54	1667	66	66	66	107,79				-5		252	52	
		15		0,09	0,48	1670	66	66	66	110,57				-5		251	52	
		16		0,08	0,43	1657	66	66	66	113,27				-5		252	54	
		17		0,09	0,48	1654	66	66	66	115,84				-5		252	54	
15h29		18		0,08	0,43	1654	66	66	66	118,47				-5		253	54	
		19								120,93				-5		249	54	

TDF Initial Débit (pi ³ /min):	Pression (inhg) :	Volume ini (pi ³) :	Volume fin (pi ³) :	Volume (pi ³) :	Fuite Pitot (ΔP) :
TDF Final Débit (pi ³ /min): 20,02	Pression (inhg) : 15	Volume ini (pi ³) :	Volume fin (pi ³) :	Volume (pi ³) :	
REMARQUES : O ₂ /CO ₂ - Utiliser le formulaire de gaz en continu pour calibration des appareils.					
14h22 : calmatage filtre, changement filtre.					
TECHNICIEN : RJ					

	Formulaire « Détermination des métaux »	CODE D'ESSAI : Inc 2 - ME - E1
Document : F ECH 12	Révision N° : 12	Page : 1 de 2

Décontamination avant essai et détermination de l'humidité recueillie - USEPA 29

Compagnie : AEM - Meliadine	Projet : 24-8263	# du filtre:
Source : Inc 2	Essai : 1	# Cold Box : ME - A
Échantillonnée le : 19-08-2024	Date de l'assemblage : 18-08-2024	Heure :

Décontamination avant essai de la buse et de la sonde

Item	Remarques	Brosser acétone	Rincer 3x HNO ₃ 10 %	Rincer 3x eau démin.	Rincer 3x Acétone
Buse et liner de verre	-	✓	✓	✓	✓
Vérification de la buse et sondes d'échantillonnage à conserver :				(OUI)	NON

Décontamination avant essai du train

Item	Remarques	Brosser acétone (si nécessaire)	Rincer 3x HNO ₃ 10 %	Rincer 3x eau démin.	Rincer 3x Acétone
du by-pass au barboteur 6	-	✓	✓	✓	✓
Vérification du train d'échantillonnage à conserver :				(OUI)	NON

Remarques :

Volume d'eau recueilli (g)

ITEM #	PIÈCES	CONTENU	POIDS		
			APRÈS	AVANT	TOTAL
1	Barboteur 1 - GS mod	VIDE (optionnel) OU CMM H ₂ O déminéralisée (100 ml)	755,06	663,56	(H ₂ O) p _{air}
2	Barboteur 2 - GS mod	HNO ₃ 5% / H ₂ O ₂ 10% (100 ml)	641,42	611,55	vide
3	Barboteur 3 - GS	HNO ₃ 5% / H ₂ O ₂ 10% (100 ml)	649,44	625,07	HNO ₃
4	Barboteur 4 - GS mod	VIDE (normalement) <i>Si présence de liquide, ajouter aux BB1,2 et 3</i>	692,90	630,74	HNO ₃
5	Barboteur 5 - GS mod	KMnO ₄ 4% / H ₂ SO ₄ 10% (100 ml) recouvert d'aluminium	583,64	534,41	vide
6	Barboteur 6 - GS mod	KMnO ₄ 4% / H ₂ SO ₄ 10% (100 ml) recouvert d'aluminium	706,46	705,24	KMnO ₄
7	Contenant de dessiccant	GEL DE SILICE	700,87	703,58	KMnO ₄
TOTAL :			2094,94	2070,46	u.s

Particules totales (g)

# FILTRE QUARTZ	POIDS (g)	REMARQUES

Lots des produits utilisés

Produits	# LOT
Acétone ACS	
Solution d'acide nitrique (HNO ₃) 10%	
Solution d'acide nitrique (HNO ₃) 0.1N	
Solution d'acide sulfurique (H ₂ SO ₄) 10%	
Solution d'acide chlorhydrique (HCl) 8N	
Permanganate de potassium (KMnO ₄)	
Solution H ₂ O ₂ 10% / HNO ₃ 5%	

Remarques : utilisation de 3 filtre :

QZB - 87-22 = 0,5168
QZB - 87-24 = 0,5205
QZB - 87-25 = 0,5124

Technicien : AE

	Formulaire « Détermination des métaux »	CODE D'ESSAI : <i>INC & ME - FA</i>
Document : F ECH 12	Révision N° : 12	Page : 2 de 2

Récupération finale du dispositif de prélèvement MÉTAUX USEPA 29

Date de récupération : <i>19-08-2024</i>	Heure de récupération :
Pesée des barboteurs pour l'humidité : ☒	Nettoyage de l'extérieur des différentes pièces : ☒
Conditionnement des contenants de récupération : ☒	

Contenant 1 - Récupération du filtre (Séparateur principal)

Mettre le filtre dans un pétri propre et scellé (pince en polyéthylène ou teflon)	☒
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Contenants 2 et 3 - Récupération de la buse et de la sonde

Items	Remarques	Brosser 100 ml Acétone	Rincer 100 ml HNO ₃ 0,1N	Niveau
de la buse à la partie avant du porte-filtre	—	☒	☒	☒

Contenant 4 - Récupération de la partie arrière du porte-filtre aux barboteurs métaux (Barb. 1, 2, 3)

Items	Remarques	Rincer 100 ml HNO ₃ 0,1N	Niveau	Volume (mL)
de la partie arrière du porte-filtre aux barboteurs métaux (Barb. 1, 2, 3)	—	☒	☒	<i>360</i>

Contenant 5 - Récupération barboteurs 4 seul. Si présence de liquide, ajouter aux barboteurs 1, 2, 3

Items	Remarques	Rincer 100 ml HNO ₃ 0,1N	Niveau	Volume (mL)
barboteur 4	—	☒	☒	<i>100</i>

Contenant 6 - Récupération barboteurs 5 et 6 (KMnO₄)

Items	Remarques	Rincer 100 ml KMnO ₄ /H ₂ SO ₄	Rincer 100 ml eau	Niveau	Volume (mL)
du barboteur 5 au barboteur 6 (pot de verre ambré)	—	☒	☒	☒	<i>410</i>

Contenant 7 - Récupération barboteurs 5 et 6 (KMnO₄) avec HCl 8N

Items	Remarques	200 mL H ₂ O dans bouteille récup. Rincer 25 mL HCl 8N	Niveau	Volume (mL)
du barboteur 5 au barboteur 6	—	☒	☒	<i>225</i>

Remarques :

*B12 = ~~400~~ ml (pour total) et ME
350*
BB1234 = 360 ml

Blancs :

100 mL Acétone	
300 mL HNO ₃ 0.1N	
100 mL H ₂ O	
200 mL Solution H ₂ O ₂ 10% / HNO ₃ 5%	
100 mL KMnO ₄ 4% / H ₂ SO ₄ 10%	
200 mL H ₂ O + 25 mL HCl 8N	
Filtre Quartz	

Technicien : *AE*

Pour la demande d'analyse, voici les échantillons :
 1a - Métaux sur contenants 1 + 2 + 3
 1b - Hg sur contenants 1 + 2 + 3
 2a - Métaux sur contenant 4
 2b - Hg sur contenant 4
 3a - Hg sur contenant 5
 3b - Hg sur contenant 6
 3c - Hg sur contenant 7

Formulaire
« ME - Décontamination de la verrerie »

Document : F ECH 11

Révision N° : 6

Page : 1 de 1

Partie B : Décontamination initiale Barboteurs - Métaux USEPA 29

Compagnie :	Projet :	# du Cold box :
Source :	Essai :	# du filtre :
Échantillonnée le :	Date décontamination :	Heure :

Identification des pièces seulement si nécessaire.

Décontamination			Rinçage Eau	Eau + Savon	Eau	Rincer H ₂ O démín.	Tremper HNO ₃ 10 %	Rincer H ₂ O démín.	Rincer Acétone
Item (dans l'ordre)	#	Remarques	1 x	1 x	3 x	3 x	4 hres	3 x	3 x
S (bas cloche - barb.)			/	/	/	/	/	/	/
Barboteur 1			/	/	/	/	/	/	/
Barboteur 2			/	/	/	/	/	/	/
Barboteur 3			/	/	/	/	/	/	/
Barboteur 4 (si applicable)			/	/	/	/	/	/	/
Barboteur 5 (si Hg)			/	/	/	/	/	/	/
Barboteur 6 (si Hg)			/	/	/	/	/	/	/
Coudes (5 ou...)			/	/	/	/	/	/	/

Vérification initiale de la verrerie du train d'échantillonnage et conserver le dernier rinçage à l'acétone si nécessaire.

N.B. Joint d'étanchéité à réaliser avec du tape de téflon si absence de O-ring

Commentaires :

Décontaminé par :

W.F

Date :

19/02/2024

Endroit :

Q.C

CONSULAIR GESTION GLOBALE AIR ET ENVIRONNEMENT	Formulaire « Détermination des métaux »	CODE D'ESSAI : INC 2 - ME - E2
Document : F ECH 12	Révision N° : 12	Page : 1 de 2

Décontamination avant essai et détermination de l'humidité recueillie - USEPA 29		
Compagnie : AEM	Projet : 24-8263	# du filtre:
Source : INC 2	Essai : 2	# Cold Box: ME-1
Échantillonnée le : 20-08-2024	Date de l'assemblage : 19-08-2024	Heure :

Décontamination avant essai de la buse et de la sonde					
Item	Remarques	Brosser acétone	Rincer 3x HNO ₃ 10 %	Rincer 3x eau démin.	Rincer 3x Acétone
Buse et liner de verre		✓	✓	✓	✓
Vérification de la buse et sondes d'échantillonnage à conserver :				OUI	NON

Décontamination avant essai du train					
Item	Remarques	Brosser acétone (si nécessaire)	Rincer 3x HNO ₃ 10 %	Rincer 3x eau démin.	Rincer 3x Acétone
du by-pass au barboteur 6		✓	✓	✓	✓
Vérification du train d'échantillonnage à conserver :				OUI	NON
Remarques :					

Volume d'eau recueilli (g)					
ITEM #	PIÈCES	CONTENU	POIDS		
			APRÈS	AVANT	TOTAL
1	Barboteur 1 - GS mod	VIDE (optionnel) OU CMM H ₂ O déminéralisée (100 ml)	745,10	636,56	1381,66 pour H ₂ O
2	Barboteur 2 - GS mod	HNO ₃ 5% / H ₂ O ₂ 10% (100 ml)	634,31	132,15	Vide
3	Barboteur 3 - GS	HNO ₃ 5% / H ₂ O ₂ 10% (100 ml)	712,05	698,98	HNO ₃
4	Barboteur 4 - GS mod	VIDE (normalement) <i>Si présence de liquide, ajouter aux BB1,2 et 3</i>	643,31	641,06	HNO ₃
5	Barboteur 5 - GS mod	KMnO ₄ 4% / H ₂ SO ₄ 10% (100 ml) recouvert d'aluminium	113,04	114,73	Vide
6	Barboteur 6 - GS mod	KMnO ₄ 4% / H ₂ SO ₄ 10% (100 ml) recouvert d'aluminium	735,42	736,99	KMnO ₄
7	Contenant de dessiccant	GEL DE SILICE	187,43	589,18	KMnO ₄
TOTAL :			1927,90	1883,72	G.S

Particules totales (g)		
# FILTRE QUARTZ	POIDS (g)	REMARQUES
Q26-87-26	0,4926	

Lots des produits utilisés	
Produits	# LOT
Acétone ACS	
Solution d'acide nitrique (HNO ₃) 10%	
Solution d'acide nitrique (HNO ₃) 0.1N	
Solution d'acide sulfurique (H ₂ SO ₄) 10%	
Solution d'acide chlorhydrique (HCl) 8N	
Permanganate de potassium (KMnO ₄)	
Solution H ₂ O ₂ 10% / HNO ₃ 5%	
Remarques :	

Technicien : **AE**

CONSULAIR GESTION GLOBALE AIR ET ENVIRONNEMENT	Formulaire « Détermination des métaux »	CODE D'ESSAI : INC2-ME-E2
Document : F ECH 12	Révision N° : 12	Page : 2 de 2

Récupération finale du dispositif de prélèvement MÉTAUX USEPA 29

Date de récupération : 20-08-2024	Heure de récupération :
Pesée des barboteurs pour l'humidité : ✓	Nettoyage de l'extérieur des différentes pièces : ✓
Conditionnement des contenants de récupération : ✓	

Contenant 1 - Récupération du filtre (Séparateur principal)

Mettre le filtre dans un pétri propre et scellé (pince en polyéthylène ou teflon)	✓
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Contenants 2 et 3 - Récupération de la buse et de la sonde

Items	Remarques	Brosser 100 ml Acétone	Rincer 100 ml HNO ₃ 0,1N	Niveau
de la buse à la partie avant du porte-filtre	—	✓	✓	✓

Contenant 4 - Récupération de la partie arrière du porte-filtre aux barboteurs métaux (Barb. 1, 2, 3)

Items	Remarques	Rincer 100 ml HNO ₃ 0,1N	Niveau	Volume (mL)
de la partie arrière du porte-filtre aux barboteurs métaux (Barb. 1, 2, 3)	—	✓	✓	300

Contenant 5 - Récupération barboteurs 4 seul. Si présence de liquide, ajouter aux barboteurs 1, 2, 3

Items	Remarques	Rincer 100 ml HNO ₃ 0,1N	Niveau	Volume (mL)
barboteur 4	—	✓	✓	200

Contenant 6 - Récupération barboteurs 5 et 6 (KMnO₄)

Items	Remarques	Rincer 100 ml KMnO ₄ /H ₂ SO ₄	Rincer 100 ml eau	Niveau	Volume (mL)
du barboteur 5 au barboteur 6 (pot de verre ambré)	—	✓	✓	✓	400

Contenant 7 - Récupération barboteurs 5 et 6 (KMnO₄) avec HCl 8N

Items	Remarques	200 mL H ₂ O dans bouteille récup. Rincer 25 mL HCl 8N	Niveau	Volume (mL)
du barboteur 5 au barboteur 6	—	✓	✓	228

Remarques :

BB12 = 320 ml (HCl et ME)
BB1234 = 300 ml

Blancs :

100 mL Acétone	✓	Pour la demande d'analyse, voici les échantillons : 1a - Métaux sur contenants 1 + 2 + 3 1b - Hg sur contenants 1 + 2 + 3 2a - Métaux sur contenant 4 2b - Hg sur contenant 4 3a - Hg sur contenant 5 3b - Hg sur contenant 6 3c - Hg sur contenant 7
300 mL HNO ₃ 0,1N	✓	
100 mL H ₂ O	✓	
200 mL Solution H ₂ O ₂ 10% / HNO ₃ 5%	✓	
100 mL KMnO ₄ 4% / H ₂ SO ₄ 10%	✓	
200 mL H ₂ O + 25 mL HCl 8N	✓	
Filtre Quartz	✓	

Technicien : AE

 Formulaire « Détermination des métaux »		CODE D'ESSAI : INC 2- ME- E 3
Document : F ECH 12		Page : 1 de 2

Décontamination avant essai et détermination de l'humidité recueillie - USEPA 29		
Compagnie : AEM	Projet : EM-8263	# du filtre:
Source : Inc 2	Essai : 3	# Cold Box:
Échantillonnée le : 20-08-2021	Date de l'assemblage : 20-08-2021	Heure :

Décontamination avant essai de la buse et de la sonde					
Item	Remarques	Brosser acétone	Rincer 3x HNO ₃ 10 %	Rincer 3x eau démin.	Rincer 3x Acétone
Buse et liner de verre		✓	✓	✓	✓
Vérification de la buse et sondes d'échantillonnage à conserver :				OUI	NON

Décontamination avant essai du train					
Item	Remarques	Brosser acétone (si nécessaire)	Rincer 3x HNO ₃ 10 %	Rincer 3x eau démin.	Rincer 3x Acétone
du by-pass au barboteur 6		✓	✓	✓	✓
Vérification du train d'échantillonnage à conserver :				OUI	NON

Remarques :

Volume d'eau recueilli (g)					
ITEM #	PIÈCES	CONTENU	POIDS		
			APRÈS	AVANT	TOTAL
1	Barboteur 1 - GS mod	VIDE (optionnel) OU CMM H ₂ O déminéralisée (100 ml)	786,54	656,81	1221,20
2	Barboteur 2 - GS mod	HNO ₃ 5% / H ₂ O ₂ 10% (100 ml)	627,17	611,00	vide
3	Barboteur 3 - GS	HNO ₃ 5% / H ₂ O ₂ 10% (100 ml)	626,83	617,58	HNO ₃
4	Barboteur 4 - GS mod	VIDE (normalement) Si présence de liquide, ajouter aux BB1,2 et 3	626,06	625,11	HNO ₃
5	Barboteur 5 - GS mod	KMnO ₄ 4% / H ₂ SO ₄ 10% (100 ml) recouvert d'aluminium	589,26	592,60	vide
6	Barboteur 6 - GS mod	KMnO ₄ 4% / H ₂ SO ₄ 10% (100 ml) recouvert d'aluminium	707,20	709,75	KMnO ₄
7	Contenant de dessiccant	GEL DE SILICE	703,82	707,21	KMnO ₄
TOTAL :			1973,85	1931,08	Cr.S

Particules totales (g)		
# FILTRE QUARTZ	POIDS (g)	REMARQUES
Q2B-87-28	0,5205	

Lots des produits utilisés	
Produits	# LOT
Acétone ACS	
Solution d'acide nitrique (HNO ₃) 10%	
Solution d'acide nitrique (HNO ₃) 0.1N	
Solution d'acide sulfurique (H ₂ SO ₄) 10%	
Solution d'acide chlorhydrique (HCl) 8N	
Permanganate de potassium (KMnO ₄)	
Solution H ₂ O ₂ 10% / HNO ₃ 5%	

Remarques :
2 filtres sont utilisés pour cet essai : Q2B-87-27 + Q2B-87-28.

Technicien : AE

CONSULAIR GESTION GLOBALE AIR ET ENVIRONNEMENT	Formulaire « Détermination des métaux »	CODE D'ESSAI : INC2-ME-E3
Document : F ECH 12	Révision N° : 12	Page : 2 de 2

Récupération finale du dispositif de prélèvement MÉTAUX USEPA 29

Date de récupération : 20-08-2014	Heure de récupération :
Pesée des barboteurs pour l'humidité : ✓	Nettoyage de l'extérieur des différentes pièces : ✓
Conditionnement des contenants de récupération : ✓	

Contenant 1 - Récupération du filtre (Séparateur principal)

Mettre le filtre dans un pétri propre et scellé (pince en polyéthylène ou teflon)	✓
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Contenants 2 et 3 - Récupération de la buse et de la sonde

Items	Remarques	Brosser 100 ml Acétone	Rincer 100 ml HNO ₃ 0,1N	Niveau
de la buse à la partie avant du porte-filtre	—	✓	✓	✓

Contenant 4 - Récupération de la partie arrière du porte-filtre aux barboteurs métaux (Barb. 1, 2, 3)

Items	Remarques	Rincer 100 ml HNO ₃ 0,1N	Niveau	Volume (mL)
de la partie arrière du porte-filtre aux barboteurs métaux (Barb. 1, 2, 3)	—	✓	✓	320

Contenant 5 - Récupération barboteurs 4 seul. Si présence de liquide, ajouter aux barboteurs 1, 2, 3

Items	Remarques	Rincer 100 ml HNO ₃ 0,1N	Niveau	Volume (mL)
barboteur 4	—	✓	✓	100

Contenant 6 - Récupération barboteurs 5 et 6 (KMnO₄)

Items	Remarques	Rincer 100 ml KMnO ₄ /H ₂ SO ₄	Rincer 100 ml eau	Niveau	Volume (mL)
du barboteur 5 au barboteur 6 (pot de verre ambré)	—	✓	✓	✓	400

Contenant 7 - Récupération barboteurs 5 et 6 (KMnO₄) avec HCl 8N

Items	Remarques	200 mL H ₂ O dans bouteille récup. Rincer 25 mL HCl 8N	Niveau	Volume (mL)
du barboteur 5 au barboteur 6	—	✓	✓	225

Remarques :

BB12 = 310 ml
BB1234 = 320 ml

pour HCl et ME

Blancs :

100 mL Acétone	✓
300 mL HNO ₃ 0,1N	✓
100 mL H ₂ O	✓
200 mL Solution H ₂ O ₂ 10% / HNO ₃ 5%	✓
100 mL KMnO ₄ 4% / H ₂ SO ₄ 10%	✓
200 mL H ₂ O + 25 mL HCl 8N	✓
Filtre Quartz	✓

Technicien : AB

Pour la demande d'analyse, voici les échantillons :
 1a - Métaux sur contenants 1 + 2 + 3
 1b - Hg sur contenants 1 + 2 + 3
 2a - Métaux sur contenant 4
 2b - Hg sur contenant 4
 3a - Hg sur contenant 5
 3b - Hg sur contenant 6
 3c - Hg sur contenant 7

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CODE DE L'ESSAI : Inc 2 - COSV - E2

Vérification avant essai et montage du dispositif de prélèvement - COSV (SPE 1/RM/2)

Compagnie : AEM Meliadine	Projet : 24-8263	# Ensemble de verrerie : 38
Source : Inc 2	Essai : A	# Hot Box:
Date : 19-08-2021	Heure :	

1 - DÉCONTAMINATION & VÉRIFICATION AVANT ESSAI - BUSE ET SONDE

Item :	Remarques :	Brosse - DHA	HA
		3x Ch.	3x Ch.
Buse et sonde	—	✓	✓
Vérification de la buse et sondes d'échantillonnage à conserver :		OUI	NON

2 - VÉRIFICATION AVANT ESSAI - TRAIN

Item :	Remarques :	HA
		3x Ch.
Train	—	✓
Vérification de la verrerie du train d'échantillonnage à conserver :		OUI

3 - VOLUME D'EAU RECUEILLIE

ITEM #	PIÈCE	CONTENU	POIDS (g)		
			APRÈS	AVANT	TOTAL
1	Condenseur (réfrigérant)	VIDE			
2	Trappe de résine *	XAD-2	263,60	280,23	
3	Trappe à condensat	VIDE	743,83	507,86	
4	Barboteur Greenburg-Smith	ÉTHYLÈNE GLYCOL (100-150 mL)	730,79	695,95	
5	Barboteur modifié	VIDE	610,06	609,87	
6	Contenant de dessiccant	GEL DE SILICE	1695,12	1682,76	
TOTAL					

*: Recouvrir de papier d'aluminium après la prépesée, et retirer avant la pesée après essai.

REMARQUES :

4 - LOTS DES SOLVANTS UTILISÉS

SOLVANTS	# LOT
Dichlorométhane (grade optima)	
Hexane (grade optima)	
Acétone (grade optima)	
Éthylène glycol	
Eau HPLC	
Résine XAD-2	
Vérifié par : AE	Date : 19-08-2021
	Endroit : Worldwise

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CODE DE L'ESSAI : Juc 2 - COSV - EA

Récupération finale du dispositif de prélèvement - COSV (SPE 1/RM/2)

Date de récupération : 20-08-2014	Heure de récupération :
Nettoyage de l'extérieur des différentes pièces :	✓
Conditionnement (HA) des contenants (verre ambré) de récupération :	✓

Contenant 1 - Buse-Sonde

Item :	Remarques :	Brosse HA	HA 3x Ch.	Niveau
Buse et Sonde	—	✓	✓	✓

Contenant 2 - Filtre

Filtre	Pétri scellé avec ruban de teflon - dans le papier d'aluminium	✓
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Contenant 3 - Récupération de la partie arrière du Porte-filtre au Condenseur (avant trappe)

Item :	Remarques :	Tremp. H-A 5 min. Ch.	HA 3x Ch.	Niveau
Avant trappe résine	—	✓	✓	✓

Contenant 4 - Récupération de la Trappe de résine XAD-2

Trappe de résine XAD-2	Sceller avec ruban de teflon - enveloppé papier d'aluminium	✓
------------------------	---	---

Contenant 5 - Récupération de la Trappe à condensat au 1er Barboteur (eau)

Item (dans l'ordre) :	Remarques :	H ₂ O HPLC 3x	Niveau
Eau	—	✓	✓

Contenant 6 - Rincage final de la partie arrière du Porte-filtre au dernier Barboteur

Item :	Remarques :	HA 3x Ch.	Niveau
Rincage final	—	✓	✓

Les pots doivent être en verre ambré.
Remarques :
Blanc :

Blanc de terrain (1x pour chaque 3 essais) - faire aspirer volume d'air équivalent à tous les tests de fuite

Récupération par : AE

Date : 19-08-2014

Endroit : Vieux-Bois

Partie A : Décontamination initiale du train - COSV (SPE 1/RM/2)

Compagnie :

Projet :

Date de la décontamination :

Heure :

Numéro de l'ensemble de verrerie (Train) :

38

Décontamination

Sol.
RBS

Eau +
Savon

Eau
démén.

DHA

HA

Identifier les pièces de verre seulement si elles sont différentes de l'ensemble

Item (dans l'ordre)	# pièce	Remarques / pièce	2 hrs	3x Rinç.	3x Rinç.	3x Ch.	3x Ch.
By pass			—	—	—	—	—
Cloche femelle			—	—	—	—	—
Support à filtre en téflon			—	—	—	—	—
Cloche mâle			—	—	—	—	—
Réfrigérant	2.1.2		—	—	—	—	—
Trappe de résine							
Trappe à condensat			—	—	—	—	—
Grand L	cond 7.2		—	—	—	—	—
Barboteur Greenburg-Smith			—	—	—	—	—
Coude			—	—	—	—	—
Barboteur Std			—	—	—	—	—
Coude (HAP)							
Barboteur Std (HAP)							
Pétri de verre							
Bouteilles de verre ambré							
Garnitures (Téflon + Aluminium)							
Nombre total de pièces		Code de décontamination (# Contenant) :	wf-19/07/2024-00138				

Lot des Solvants :

Dichlorométhane (grade optima) : 62254

Hexane (grade optima) : 238901

Acétone (grade optima) : 64024

Commentaires :

Décontaminé par :

wf

Date :

19/07/2024

Endroit :

QC

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 CODE DE L'ESSAI : **Inc 2 - COSV - E2**
Vérification avant essai et montage du dispositif de prélèvement - COSV (SPE 1/RM/2)

Compagnie : AEM Meliadine	Projet : u-8263	# Ensemble de verrerie : 36
Source : Inc 2	Essai : 2	# Hot Box:
Date : 20-08-2024	Heure :	

1 - DÉCONTAMINATION & VÉRIFICATION AVANT ESSAI - BUSE ET SONDE

Item :	Remarques :	Brosse - DHA	HA
		3x Ch.	3x Ch.
Buse et sonde		✓	✓
Vérification de la buse et sondes d'échantillonnage à conserver :		OUI	NON

2 - VÉRIFICATION AVANT ESSAI - TRAIN

Item :	Remarques :	HA
		3x Ch.
Train		✓
Vérification de la verrerie du train d'échantillonnage à conserver :		OUI NON

3 - VOLUME D'EAU RECUEILLIE

ITEM #	PIÈCE	CONTENU	POIDS (g)		
			APRÈS	AVANT	TOTAL
1	Condenseur (réfrigérant)	VIDE			
2	Trappe de résine *	XAD-2	322,39	311,71	
3	Trappe à condensat	VIDE	127,83	371,00	
4	Barboteur Greenburg-Smith	ÉTHYLÈNE GLYCOL (100-150 mL)	716,44	694,28	
5	Barboteur modifié	VIDE	134,41	136,16	
6	Contenant de dessiccant	GEL DE SILICE	1703,61	1692,94	
TOTAL					

*: Recouvrir de papier d'aluminium après la prépesée, et retirer avant la pesée après essai.

REMARQUES :

4 - LOTS DES SOLVANTS UTILISÉS

SOLVANTS	# LOT
Dichlorométhane (grade optima)	
Hexane (grade optima)	
Acétone (grade optima)	
Éthylène glycol	
Eau HPLC	
Résine XAD-2	
Vérifié par : AB	Date : 20-08-24 Endroit : Warehouse

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CODE DE L'ESSAI *Ince2 - COSV - E2*
Récupération finale du dispositif de prélèvement - COSV (SPE 1/RM/2)

Date de récupération : <i>20-08-2014</i>	Heure de récupération :
Nettoyage de l'extérieur des différentes pièces :	☒
Conditionnement (HA) des contenants (verre ambré) de récupération :	☒

Contenant 1 - Buse-Sonde

Item :	Remarques :	Brosse HA	HA 3x Ch.	Niveau
Buse et Sonde	<i>—</i>	☒	☒	☒

Contenant 2 - Filtre

Filtre	Pétri scellé avec ruban de teflon - dans le papier d'aluminium	☒
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Contenant 3 - Récupération de la partie arrière du Porte-filtre au Condenseur (avant trappe)

Item :	Remarques :	Tremp. H-A 5 min. Ch.	HA 3x Ch.	Niveau
Avant trappe résine	<i>—</i>	☒	☒	☒

Contenant 4 - Récupération de la Trappe de résine XAD-2

Trappe de résine XAD-2	Sceller avec ruban de teflon - enveloppé papier d'aluminium	☒
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Contenant 5 - Récupération de la Trappe à condensat au 1er Barboteur (eau)

Item (dans l'ordre) :	Remarques :	H ₂ O HPLC 3x	Niveau
Eau	<i>—</i>	☒	☒

Contenant 6 - Rinçage final de la partie arrière du Porte-filtre au dernier Barboteur

Item :	Remarques :	HA 3x Ch.	Niveau
Rinçage final	<i>—</i>	☒	☒

Les pots doivent être en verre ambré.
Remarques :
—
Blanc :

Blanc de terrain (1x pour chaque 3 essais) - faire aspirer volume d'air équivalent à tous les tests de fuite

Récupération par : *AE*

Date : *20-08-2014*

Endroit : *Mare Aduse*

Partie A : Décontamination initiale du train - COSV (SPE 1/RM/2)

Compagnie :

Projet :

Date de la décontamination :

Heure :

Numéro de l'ensemble de verrerie (Train) :

36

Décontamination

Sol.
RBS

Eau +
Savon

Eau
dém. n.

DHA

HA

Identifier les pièces de verre seulement si elles sont différentes de l'ensemble

Item (dans l'ordre)	# pièce	Remarques / pièce	2 hrs	3x Ring.	3x Ring.	3x Ch.	3x Ch.
By pass			✓	✓	✓	✓	✓
Cloche femelle			✓	✓	✓	✓	✓
Support à filtre en téflon			✓	✓	✓	✓	✓
Cloche mâle			✓	✓	✓	✓	✓
Réfrigérant	Rf 9.8		✓	✓	✓	✓	✓
Trappe de résine							
Trappe à condensat			✓	✓	✓	✓	✓
Grand L	Cond 9.8		✓	✓	✓	✓	✓
Barboteur Greenburg-Smith			✓	✓	✓	✓	✓
Coude			✓	✓	✓	✓	✓
Barboteur Std			✓	✓	✓	✓	✓
Coude (HAP)							
Barboteur Std (HAP)							
Pétri de verre							
Bouteilles de verre ambré							
Garnitures (Téflon + Aluminium)							

Nombre total de pièces

Code de décontamination (# Contenant) : wf-14/07/2024-COSV-36

Lot des Solvants :

Dichlorométhane (grade optima) : 62257

Hexane (grade optima) : 231904

Acétone (grade optima) : 64024

Commentaires :

Décontaminé par :

wf

Date :

19/07/2024

Endroit :

Q.C

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CODE DE L'ESSAI : INC 2 - COSV - E3

Vérification avant essai et montage du dispositif de prélèvement - COSV (SPE 1/RM/2)

Compagnie : AEM	Projet : 24-8263	# Ensemble de verrerie : 39
Source : Inc 2	Essai : 3	# Hot Box: .
Date : 20-08-2024	Heure :	

1 - DÉCONTAMINATION & VÉRIFICATION AVANT ESSAI - BUSE ET SONDE

Item :	Remarques :	Brosse - DHA	HA
		3x Ch.	3x Ch.
Buse et sonde	—	✓	✓
Vérification de la buse et sondes d'échantillonnage à conserver :		OUI	NON

2 - VÉRIFICATION AVANT ESSAI - TRAIN

Item :	Remarques :	HA
		3x Ch.
Train	—	✓
Vérification de la verrerie du train d'échantillonnage à conserver :		OUI

3 - VOLUME D'EAU RECUEILLIE

ITEM #	PIÈCE	CONTENU	POIDS (g)		
			APRÈS	AVANT	TOTAL
1	Condenseur (réfrigérant)	VIDE			
2	Trappe de résine *	XAD-2	264,40	745,40	247,90
3	Trappe à condensat	VIDE	662,54	634,71	122,63
4	Barboteur Greenburg-Smith	ÉTHYLÈNE GLYCOL (100-150 mL)	742,42	636,44	105,98
5	Barboteur modifié	VIDE	590,59	590,28	
6	Contenant de dessiccant	GEL DE SILICE	1711,72	1703,61	
TOTAL					

* : Recouvrir de papier d'aluminium après la prépesée, et retirer avant la pesée après essai.

REMARQUES :

4 - LOTS DES SOLVANTS UTILISÉS

SOLVANTS	# LOT
Dichlorométhane (grade optima)	
Hexane (grade optima)	
Acétone (grade optima)	
Éthylène glycol	
Eau HPLC	
Résine XAD-2	
Vérifié par : AE	Date : 20-08-24
Endroit : Bureau H&E	

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CODE DE L'ESSAI : **DNC 2 - COSV - E3**
Récupération finale du dispositif de prélèvement - COSV (SPE 1/RM/2)

Date de récupération : 20-08-2024	Heure de récupération :
Nettoyage de l'extérieur des différentes pièces :	☒
Conditionnement (HA) des contenants (verre ambré) de récupération :	☒

Contenant 1 - Buse-Sonde

Item :	Remarques :	Brosse HA	HA 3x Ch.	Niveau
Buse et Sonde	☒	☒	☒	☒

Contenant 2 - Filtre

Filtre	Pétri scellé avec ruban de teflon - dans le papier d'aluminium	☒
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Contenant 3 - Récupération de la partie arrière du Porte-filtre au Condenseur (avant trappe)

Item :	Remarques :	Tremp. H-A 5 min. Ch.	HA 3x Ch.	Niveau
Avant trappe résine				

Contenant 4 - Récupération de la Trappe de résine XAD-2

Trappe de résine XAD-2	Sceller avec ruban de teflon - enveloppé papier d'aluminium	☒
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Contenant 5 - Récupération de la Trappe à condensat au 1er Barboteur (eau)

Item (dans l'ordre) :	Remarques :	H ₂ O HPLC 3x	Niveau
Eau	☒	☒	☒

Contenant 6 - Rinçage final de la partie arrière du Porte-filtre au dernier Barboteur

Item :	Remarques :	HA 3x Ch.	Niveau
Rinçage final			

Les pots doivent être en verre ambré.

Remarques :

Blanc :

Blanc de terrain (1x pour chaque 3 essais) - faire aspirer volume d'air équivalent à tous les tests de fuite	☒
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Récupération par : AE	Date : 20-08-2024	Endroit : Love House
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Partie A : Décontamination initiale du train - COSV (SPE 1/RM/2)

Compagnie :

Projet :

Date de la décontamination :

Heure :

Numéro de l'ensemble de verrerie (Train) :

39

Décontamination

Sol.
RBS

Eau +
Savon

Eau
démin.

DHA

HA

Identifier les pièces de verre seulement si elles sont différentes de l'ensemble

Item (dans l'ordre)	# pièce	Remarques / pièce	2 hrs	3x Rinç.	3x Rinç.	3x Ch.	3x Ch.
By pass			—	—	—	—	—
Cloche femelle			—	—	—	—	—
Support à filtre en téflon			—	—	—	—	—
Cloche mâle			—	—	—	—	—
Réfrigérant	Ref 7/1		—	—	—	—	—
Trappe de résine							
Trappe à condensat			—	—	—	—	—
Grand L	cond. 7.0		—	—	—	—	—
Barboteur Greenburg-Smith			—	—	—	—	—
Coude			—	—	—	—	—
Barboteur Std			—	—	—	—	—
Coude (HAP)							
Barboteur Std (HAP)							
Pétri de verre							
Bouteilles de verre ambré							
Garnitures (Téflon + Aluminium)							

Nombre total de pièces

Code de décontamination (# Contenant) :

wf-19/07/2024-408/39

Lot des Solvants :

Dichlorométhane (grade optima) : 62257

Hexane (grade optima) : 23901

Acétone (grade optima) : 64029

Commentaires :

Décontaminé par :

wf

Date :

19/07/2024

Endroit :

Q.C.

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CODE DE L'ESSAI : Inc 1 - COSV - E 2

Vérification avant essai et montage du dispositif de prélèvement - COSV (SPE 1/RM/2)

Compagnie : AEM-Melhadine	Projet : 24-8263	# Ensemble de verrerie : 34
Source : Inc 1	Essai : 2	# Hot Box:
Date : 16-08-2021	Heure :	

1 - DÉCONTAMINATION & VÉRIFICATION AVANT ESSAI - BUSE ET SONDE

Item :	Remarques :	Brosse - DHA	HA
		3x Ch.	3x Ch.
Buse et sonde	✓	✓	✓
Vérification de la buse et sondes d'échantillonnage à conserver :		OUI	NON

2 - VÉRIFICATION AVANT ESSAI - TRAIN

Item :	Remarques :	HA
		3x Ch.
Train	✓	✓
Vérification de la verrerie du train d'échantillonnage à conserver :		OUI

3 - VOLUME D'EAU RECUEILLIE

ITEM #	PIÈCE	CONTENU	POIDS (g)		
			APRÈS	AVANT	TOTAL
1	Condenseur (réfrigérant)	VIDE			
2	Trappe de résine *	XAD-2	252,48	234,78	
3	Trappe à condensat	VIDE	732,83	523,89	
4	Barboteur Greenburg-Smith	ÉTHYLÈNE GLYCOL (100-150 mL)	719,12	698,90	
5	Barboteur modifié	VIDE	591,06	590,57	
6	Contenant de dessiccant	GEL DE SILICE	1775,17	1767,26	
TOTAL					

* : Recouvrir de papier d'aluminium après la prépesée, et retirer avant la pesée après essai.

REMARQUES :

4 - LOTS DES SOLVANTS UTILISÉS

SOLVANTS	# LOT
Dichlorométhane (grade optima)	
Hexane (grade optima)	
Acétone (grade optima)	
Éthylène glycol	
Eau HPLC	
Résine XAD-2	
Vérifié par : AE	Date : 18-08-2021
Endroit : Ware House	

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CODE DE L'ESSAI : *Incl - COSV - E2*
Récupération finale du dispositif de prélèvement - COSV (SPE 1/RM/2)

Date de récupération : <i>18-08-2024</i>	Heure de récupération :
Nettoyage de l'extérieur des différentes pièces :	☒
Conditionnement (HA) des contenants (verre ambré) de récupération :	☒

Contenant 1 - Buse-Sonde

Item :	Remarques :	Brosse HA	HA 3x Ch.	Niveau
Buse et Sonde		☒	☒	☒

Contenant 2 - Filtre

Filtre	Pétri scellé avec ruban de teflon - dans le papier d'aluminium	☒
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Contenant 3 - Récupération de la partie arrière du Porte-filtre au Condenseur (avant trappe)

Item :	Remarques :	Tremp. H-A 5 min. Ch.	HA 3x Ch.	Niveau
Avant trappe résine				

Contenant 4 - Récupération de la Trappe de résine XAD-2

Trappe de résine XAD-2	Sceller avec ruban de teflon - enveloppé papier d'aluminium	☒
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Contenant 5 - Récupération de la Trappe à condensat au 1er Barboteur (eau)

Item (dans l'ordre) :	Remarques :	H ₂ O HPLC 3x	Niveau
Eau		☒	☒

Contenant 6 - Rincage final de la partie arrière du Porte-filtre au dernier Barboteur

Item :	Remarques :	HA 3x Ch.	Niveau
Rincage final		☒	☒

Les pots doivent être en verre ambré.
Remarques :
Blanc :

Blanc de terrain (1x pour chaque 3 essais) - faire aspirer volume d'air équivalent à tous les tests de fuite

Récupération par : <i>AE</i>	Date : <i>18-08-2024</i>	Endroit : <i>Wave House</i>
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Partie A : Décontamination initiale du train - COSV (SPE 1/RM/2)

Compagnie :

Projet :

Date de la décontamination :

Heure :

Numéro de l'ensemble de verrerie (Train) :

34

Décontamination

Sol.
RBS

Eau +
Savon

Eau
dém.

DHA

HA

Identifier les pièces de verre seulement si elles sont différentes de l'ensemble

Item (dans l'ordre)	# pièce	Remarques / pièce	2 hrs	3x Rinç.	3x Rinç.	3x Ch.	3x Ch.
By pass			-	-	-	-	-
Cloche femelle			-	-	-	-	-
Support à filtre en téflon			-	-	-	-	-
Cloche mâle			-	-	-	-	-
Réfrigérant	Rf 7F		-	-	-	-	-
Trappe de résine							
Trappe à condensat			-	-	-	-	-
Grand L	coude 7F		-	-	-	-	-
Barboteur Greenburg-Smith			-	-	-	-	-
Coude			-	-	-	-	-
Barboteur Std			-	-	-	-	-
Coude (HAP)							
Barboteur Std (HAP)							
Pétri de verre							
Bouteilles de verre ambré							
Garnitures (Téflon + Aluminium)							

Nombre total de pièces
Code de décontamination (# Contenant) : wf-19/07/2024-COSV/34

Lot des Solvants :

Dichlorométhane (grade optima) : 62257

Hexane (grade optima) : 235901

Acétone (grade optima) : 64024

Commentaires :

Décontaminé par :

wf

Date :

19/07/2024

Endroit :

Q.C

Formulaire
« Détermination des COSV »

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CODE DE L'ESSAI : Inc 1 - COSV - E1

Vérification avant essai et montage du dispositif de prélèvement - COSV (SPE 1/RM/2)

Compagnie : Agnico eagle	Projet : 20-8263	# Ensemble de verrerie : 03
Source : Incinérateur 1	Essai : 1	# Hot Box: OK - 4
Date : 14-09-2024	Heure :	

1 - DÉCONTAMINATION & VÉRIFICATION AVANT ESSAI - BUSE ET SONDE

Item :	Remarques :	Brosse - DHA	HA
		3x Ch.	3x Ch.
Buse et sonde		✓	✓
Vérification de la buse et sondes d'échantillonnage à conserver :		OUI	NON

2 - VÉRIFICATION AVANT ESSAI - TRAIN

Item :	Remarques :	HA
		3x Ch.
Train		✓
Vérification de la verrerie du train d'échantillonnage à conserver :		OUI

3 - VOLUME D'EAU RECUEILLIE

ITEM #	PIÈCE	CONTENU	POIDS (g)		
			APRÈS	AVANT	TOTAL
1	Condenseur (réfrigérant)	VIDE			
2	Trappe de résine *	XAD-2	233,89	211,84	
3	Trappe à condensat	VIDE	573,18	377,43	
4	Barboteur Greenburg-Smith	ÉTHYLÈNE GLYCOL (100-150 mL)	643,60	624,26	
5	Barboteur modifié	VIDE	603,65	607,70	
6	Contenant de dessiccant	GEL DE SILICE	1731,73	1719,65	
			TOTAL		

*: Recouvrir de papier d'aluminium après la prépesée, et retirer avant la pesée après essai.

REMARQUES :

4 - LOTS DES SOLVANTS UTILISÉS

SOLVANTS	# LOT
Dichlorométhane (grade optima)	
Hexane (grade optima)	
Acétone (grade optima)	
Éthylène glycol	
Eau HPLC	
Résine XAD-2	
Vérifié par : AE	Date : 15-09-2024
Endroit : Wavehouse	

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« Détermination des COSV »

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CODE DE L'ESSAI : *INC 1 - COSV - E1*
Récupération finale du dispositif de prélèvement - COSV (SPE 1/RM/2)

Date de récupération : *16-08-2024*

Heure de récupération :

Nettoyage de l'extérieur des différentes pièces :

Conditionnement (HA) des contenants (**verre ambré**) de récupération :

Contenant 1 - Buse-Sonde

Item :	Remarques :	Brosse HA	HA 3x Ch.	Niveau
Buse et Sonde	<i>-</i>	<i>✓</i>	<i>✓</i>	<i>✓</i>

Contenant 2 - Filtre

Filtre	Pétri scellé avec ruban de teflon - dans le papier d'aluminium	<i>✓</i>
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Contenant 3 - Récupération de la partie arrière du Porte-filtre au Condenseur (avant trappe)

Item :	Remarques :	Tremp. H-A 5 min. Ch.	HA 3x Ch.	Niveau
Avant trappe résine	<i>-</i>	<i>✓</i>	<i>✓</i>	<i>✓</i>

Contenant 4 - Récupération de la Trappe de résine XAD-2

Trappe de résine XAD-2	Sceller avec ruban de teflon - enveloppé papier d'aluminium	<i>✓</i>
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Contenant 5 - Récupération de la Trappe à condensat au 1er Barboteur (eau)

Item (dans l'ordre) :	Remarques :	H ₂ O HPLC 3x	Niveau
Eau	<i>✓</i>	<i>✓</i>	<i>✓</i>

Contenant 6 - Rinçage final de la partie arrière du Porte-filtre au dernier Barboteur

Item :	Remarques :	HA 3x Ch.	Niveau
Rinçage final	<i>-</i>	<i>✓</i>	<i>✓</i>

Les pots doivent être en verre ambré.
Remarques :
Blanc :

Blanc de terrain (1x pour chaque 3 essais) - faire aspirer volume d'air équivalent à tous les tests de fuite

Récupération par : *AE*

Date : *16-08-2024*

Endroit : *Wine House*

Partie A : Décontamination initiale du train - COSV (SPE 1/RM/2)

Compagnie :

Projet :

Date de la décontamination :

Heure :

Numéro de l'ensemble de verrerie (Train) :

03

Décontamination

Sol.
RBS

Eau +
Savon

Eau
démén.

DHA

HA

Identifier les pièces de verre seulement si elles sont différentes de l'ensemble

Item (dans l'ordre)	# pièce	Remarques / pièce	2 hrs	3x Rinç.	3x Rinç.	3x Ch.	3x Ch.
By pass			✓	✓	✓	✓	✓
Cloche femelle			✓	✓	✓	✓	✓
Support à filtre en téflon			✓	✓	✓	✓	✓
Cloche mâle			✓	✓	✓	✓	✓
Réfrigérant	21 7.2		✓	✓	✓	✓	✓
			✓	✓	✓	✓	✓
Trappe de résine							
Trappe à condensat			✓	✓	✓	✓	✓
Grand L	L 9.4		✓	✓	✓	✓	✓
			✓	✓	✓	✓	✓
Barboteur Greenburg-Smith			✓	✓	✓	✓	✓
Coude			✓	✓	✓	✓	✓
Barboteur Std			✓	✓	✓	✓	✓
Coude (HAP)							
Barboteur Std (HAP)							
Pétri de verre							
Bouteilles de verre ambré							
Garnitures (Téflon + Aluminium)							

Nombre total de pièces
Code de décontamination (# Contenant) : wf-04/2024 COSV 03

Lot des Solvants :

Dichlorométhane (grade optima) : 63103

Hexane (grade optima) : 23502

Acétone (grade optima) : 63292

Commentaires :

Décontaminé par :

N.O

Date :

03/07/2024

Endroit :

Q.C

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 CODE DE L'ESSAI : IHC1 - COSV - E3
Vérification avant essai et montage du dispositif de prélèvement - COSV (SPE 1/RM/2)

Compagnie : <u>AEM-Meliadine</u>	Projet : <u>24-8263</u>	# Ensemble de verrerie : <u>38</u>
Source : <u>IHC 1</u>	Essai : <u>3</u>	# Hot Box:
Date : <u>17-08-2024</u>	Heure :	

1 - DÉCONTAMINATION & VÉRIFICATION AVANT ESSAI - BUSE ET SONDE

Item :	Remarques :	Brosse - DHA	HA
		3x Ch.	3x Ch.
Buse et sonde	<u>—</u>	<u>✓</u>	<u>✓</u>
Vérification de la buse et sondes d'échantillonnage à conserver :		<u>OUI</u>	NON

2 - VÉRIFICATION AVANT ESSAI - TRAIN

Item :	Remarques :	HA
		3x Ch.
Train	<u>—</u>	<u>✓</u>
Vérification de la verrerie du train d'échantillonnage à conserver :		<u>OUI</u> NON

3 - VOLUME D'EAU RECUEILLIE

ITEM #	PIÈCE	CONTENU	POIDS (g)		
			APRÈS	AVANT	TOTAL
1	Condenseur (réfrigérant)	VIDE			
2	Trappe de résine *	XAD-2	<u>316,79</u>	<u>296,49</u>	
3	Trappe à condensat	VIDE	<u>704,18</u>	<u>513,27</u>	
4	Barboteur Greenburg-Smith	ÉTHYLÈNE GLYCOL (100-150 mL)	<u>724,24</u>	<u>700,16</u>	
5	Barboteur modifié	VIDE	<u>597,24</u>	<u>596,64</u>	
6	Contenant de dessiccant	GEL DE SILICE	<u>1682,74</u>	<u>1674,66</u>	
TOTAL					

* : Recouvrir de papier d'aluminium après la prépesée, et retirer avant la pesée après essai.

REMARQUES :

4 - LOTS DES SOLVANTS UTILISÉS

SOLVANTS	# LOT
Dichlorométhane (grade optima)	
Hexane (grade optima)	
Acétone (grade optima)	
Éthylène glycol	
Eau HPLC	
Résine XAD-2	
Vérifié par : <u>AE</u>	Date : <u>17-08-24</u> Endroit : <u>Nare House</u>

Formulaire « Détermination des COSV »

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CODE DE L'ESSAI : *IncA - COSV - E3*

Récupération finale du dispositif de prélèvement - COSV (SPE 1/RM/2)

Date de récupération : <i>19-08-2014</i>	Heure de récupération :
Nettoyage de l'extérieur des différentes pièces :	☒
Conditionnement (HA) des contenants (verre ambré) de récupération :	☒

Contenant 1 - Buse-Sonde

Item :	Remarques :	Brosse HA	HA 3x Ch.	Niveau
Buse et Sonde		☒	☒	☒

Contenant 2 - Filtre

Filtre	Pétri scellé avec ruban de teflon - dans le papier d'aluminium	☒
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Contenant 3 - Récupération de la partie arrière du Porte-filtre au Condenseur (avant trappe)

Item :	Remarques :	Tremp. H-A 5 min. Ch.	HA 3x Ch.	Niveau
Avant trappe résine		☒	☒	☒

Contenant 4 - Récupération de la Trappe de résine XAD-2

Trappe de résine XAD-2	Sceller avec ruban de teflon - enveloppé papier d'aluminium	☒
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Contenant 5 - Récupération de la Trappe à condensat au 1er Barboteur (eau)

Item (dans l'ordre) :	Remarques :	H ₂ O HPLC 3x	Niveau
Eau		☒	☒

Contenant 6 - Rinçage final de la partie arrière du Porte-filtre au dernier Barboteur

Item :	Remarques :	HA 3x Ch.	Niveau
Rinçage final		☒	☒

Les pots doivent être en verre ambré.

Remarques :

Blanc :

Blanc de terrain (1x pour chaque 3 essais) - faire aspirer volume d'air équivalent à tous les tests de fuite

Récupération par : <i>AE</i>	Date : <i>19-08-2014</i>	Endroit : <i>Maréla Juse</i>
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Révision N° : 6

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Partie A : Décontamination initiale du train - COSV (SPE 1/RM/2)

Compagnie :

Projet :

Date de la décontamination :

Heure :

Numéro de l'ensemble de verrerie (Train) :

35

Décontamination

Sol.
RBS

Eau +
Savon

Eau
démén.

DHA

HA

Identifier les pièces de verre seulement si elles sont différentes de l'ensemble

Item (dans l'ordre)	# pièce	Remarques / pièce	2 hrs	3x Rinç.	3x Rinç.	3x Ch.	3x Ch.
By pass			—	—	—	—	—
Cloche femelle			—	—	—	—	—
Support à filtre en téflon			—	—	—	—	—
Cloche mâle			—	—	—	—	—
Réfrigérant	Ref. 2.1A		—	—	—	—	—
Trappe de résine							
Trappe à condensat			—	—	—	—	—
Grand L	Change 2.1A		—	—	—	—	—
Barboteur Greenburg-Smith			—	—	—	—	—
Coude			—	—	—	—	—
Barboteur Std			—	—	—	—	—
Coude (HAP)							
Barboteur Std (HAP)							
Pétri de verre							
Bouteilles de verre ambré							
Garnitures (Téflon + Aluminium)							

Nombre total de pièces

Code de décontamination (# Contenant) :

REF-19/07/2024-108-35

Lot des Solvants :

Dichlorométhane (grade optima) : 62257

Hexane (grade optima) : 235901

Acétone (grade optima) : 64027

Commentaires :

Décontaminé par :

WF

Date :

19/07/2024

Endroit :

Q.C

	Formulaire « Détermination des métaux »	CODE D'ESSAI : Inc1 - ME - E1
	Document : F ECH 12	Révision N° : 12

Décontamination avant essai et détermination de l'humidité recueillie - USEPA 29		
Compagnie : Agnico eagle	Projet : 24-8263	# du filtre:
Source : Incinérateur principe 1	Essai : 1	# Cold Box: ME - 1
Échantillonnée le : 16-08-2024	Date de l'assemblage : 15-08-2024	Heure :

Décontamination avant essai de la buse et de la sonde					
Item	Remarques	Brosser acétone	Rincer 3x HNO ₃ 10 %	Rincer 3x eau démin.	Rincer 3x Acétone
Buse et liner de verre	-	✓	✓	✓	✓
Vérification de la buse et sondes d'échantillonnage à conserver :				OUI	NON

Décontamination avant essai du train					
Item	Remarques	Brosser acétone (si nécessaire)	Rincer 3x HNO ₃ 10 %	Rincer 3x eau démin.	Rincer 3x Acétone
du by-pass au barboteur 6	-	✓	✓	✓	✓
Vérification du train d'échantillonnage à conserver :				OUI	NON
Remarques :					

Volume d'eau recueilli (g)					
ITEM #	PIÈCES	CONTENU	POIDS		
			APRÈS	AVANT	TOTAL
1	Barboteur 1 - GS mod	VIDE (optionnel) OU CMM H ₂ O déminéralisée (100 ml)	825,13	637,66	100ml H ₂ O (check)
2	Barboteur 2 - GS mod	HNO ₃ 5% / H ₂ O ₂ 10% (100 ml)	613,34	590,62	Vide
3	Barboteur 3 - GS	HNO ₃ 5% / H ₂ O ₂ 10% (100 ml)	644,39	633,84	(HNO ₃)
4	Barboteur 4 - GS mod	VIDE (normalement) Si présence de liquide, ajouter aux BB1,2 et 3	641,83	641,14	(HNO ₃)
5	Barboteur 5 - GS mod	KMnO ₄ 4% / H ₂ SO ₄ 10% (100 ml) recouvert d'aluminium	512,09	514,99	Vide
6	Barboteur 6 - GS mod	KMnO ₄ 4% / H ₂ SO ₄ 10% (100 ml) recouvert d'aluminium	743,28	730,67	KMnO ₄ /741,13
7	Contenant de dessiccant	GEL DE SILICE	587,64	588,59	KMnO ₄ /581,62
TOTAL :			1838,84	1814,90	C.S

Particules totales (g)		
# FILTRE QUARTZ	POIDS (g)	REMARQUES
82B-86-14	0,8269	

Lots des produits utilisés	
Produits	# LOT
Acétone ACS	-
Solution d'acide nitrique (HNO ₃) 10%	-
Solution d'acide nitrique (HNO ₃) 0.1N	-
Solution d'acide sulfurique (H ₂ SO ₄) 10%	-
Solution d'acide chlorhydrique (HCl) 8N	-
Permanganate de potassium (KMnO ₄)	-
Solution H ₂ O ₂ 10% / HNO ₃ 5%	-

Remarques :
Technicien : AE

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Récupération finale du dispositif de prélèvement MÉTAUX USEPA 29					
Date de récupération : 16-08-2021		Heure de récupération : 13h00			
Pesée des barboteurs pour l'humidité :	✓	Nettoyage de l'extérieur des différentes pièces :		✓	
Conditionnement des contenants de récupération :		✓			
Contenant 1 - Récupération du filtre (Séparateur principal)					
Mettre le filtre dans un pétri propre et scellé (pince en polyéthylène ou teflon)				✓	
Contenants 2 et 3 - Récupération de la buse et de la sonde					
Items	Remarques	Brosser 100 ml Acétone	Rincer 100 ml HNO ₃ 0.1N	Niveau	
de la buse à la partie avant du porte-filtre	-	✓	✓	✓	
Contenant 4 - Récupération de la partie arrière du porte-filtre aux barboteurs métaux (Barb. 1, 2, 3)					
Items	Remarques	Rincer 100 mL HNO ₃ 0.1N	Niveau	Volume (mL)	
de la partie arrière du porte-filtre aux barboteurs métaux (Barb. 1, 2, 3)	-	✓	✓	320	
Contenant 5 - Récupération barboteurs 4 seul. Si présence de liquide, ajouter aux barboteurs 1, 2, 3					
Items	Remarques	Rincer 100 ml HNO ₃ 0.1N	Niveau	Volume (mL)	
barboteur 4	-	✓	✓	100	
Contenant 6 - Récupération barboteurs 5 et 6 (KMnO₄)					
Items	Remarques	Rincer 100 ml KMnO ₄ /H ₂ SO ₄	Rincer 100 ml eau	Niveau	Volume (mL)
du barboteur 5 au barboteur 6 (pot de verre ambré)	-	✓	✓	✓	400
Contenant 7 - Récupération barboteurs 5 et 6 (KMnO₄) avec HCl 8N					
Items	Remarques	200 mL H ₂ O dans bouteille récup. Rincer 25 mL HCl 8N	Niveau	Volume (mL)	
du barboteur 5 au barboteur 6	-	✓	✓	285	
Remarques : BB12 (Hcl) = 410 ml (séparé en deux pots 1 Hcl et 2 ME) BB1234 (ME) = 320 ml					
Blancs :					
100 mL Acétone		Pour la demande d'analyse, voici les échantillons : 1a - Métaux sur contenants 1 + 2 + 3 1b - Hg sur contenants 1 + 2 + 3 2a - Métaux sur contenant 4 2b - Hg sur contenant 4 3a - Hg sur contenant 5 3b - Hg sur contenant 6 3c - Hg sur contenant 7			
300 mL HNO ₃ 0.1N					
100 mL H ₂ O					
200 mL Solution H ₂ O ₂ 10% / HNO ₃ 5%					
100 mL KMnO ₄ 4% / H ₂ SO ₄ 10%					
200 mL H ₂ O + 25 mL HCl 8N					
Filtre Quartz					
Technicien : AE					

 SECTION SURVEILLANCE AIR ET ENVIRONNEMENT	Formulaire « Détermination des métaux »	CODE D'ESSAI : INC 1 - ME - E2
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Décontamination avant essai et détermination de l'humidité recueillie - USEPA 29

Compagnie : AEM Meliadine	Projet : 24-8263	# du filtre:
Source : Inc 1	Essai : 2	# Cold Box: ME-13
Échantillonnée le : 17-08-2024	Date de l'assemblage : 16-08-2024	Heure : 14h00

Décontamination avant essai de la buse et de la sonde

Item	Remarques	Brosser acétone	Rincer 3x HNO ₃ 10 %	Rincer 3x eau démin.	Rincer 3x Acétone
Buse et liner de verre		✓	✓	✓	✓
Vérification de la buse et sondes d'échantillonnage à conserver :				OUI	NON

Décontamination avant essai du train

Item	Remarques	Brosser acétone (si nécessaire)	Rincer 3x HNO ₃ 10 %	Rincer 3x eau démin.	Rincer 3x Acétone
du by-pass au barboteur 6		✓	✓	✓	✓
Vérification du train d'échantillonnage à conserver :				OUI	NON

Remarques :

Volume d'eau recueilli (g)

ITEM #	PIÈCES	CONTENU	POIDS		
			APRÈS	AVANT	TOTAL
1	Barboteur 1 - GS mod	VIDE (optionnel) OU CMM H ₂ O déminéralisée (100 ml)	863,30	687,83	120 (H ₂ O)
2	Barboteur 2 - GS mod	HNO ₃ 5% / H ₂ O ₂ 10% (100 ml)	190,59	160,14	vide
3	Barboteur 3 - GS	HNO ₃ 5% / H ₂ O ₂ 10% (100 ml)	713,79	697,02	HNO ₃ 5%
4	Barboteur 4 - GS mod	VIDE (normalement) <i>Si présence de liquide, ajouter aux BB1,2 et 3</i>	706,29	704,58	HNO ₃ 5%
5	Barboteur 5 - GS mod	KMnO ₄ 4% / H ₂ SO ₄ 10% (100 ml) recouvert d'aluminium	698,87	195,56	vide
6	Barboteur 6 - GS mod	KMnO ₄ 4% / H ₂ SO ₄ 10% (100 ml) recouvert d'aluminium	6713,73	699,61	KMnO ₄
7	Contenant de dessiccant	GEL DE SILICE	6713,73	714,95	KMnO ₄
TOTAL :			2070,80	2047,16	

Particules totales (g)

# FILTRE QUARTZ	POIDS (g)	REMARQUES
82B-8615	0,5294	

Lots des produits utilisés

Produits	# LOT
Acétone ACS	
Solution d'acide nitrique (HNO ₃) 10%	
Solution d'acide nitrique (HNO ₃) 0.1N	
Solution d'acide sulfurique (H ₂ SO ₄) 10%	
Solution d'acide chlorhydrique (HCl) 8N	
Permanganate de potassium (KMnO ₄)	
Solution H ₂ O ₂ 10% / HNO ₃ 5%	

Remarques :

Technicien : **AB**

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Récupération finale du dispositif de prélèvement METAUX USEPA 29

Date de récupération : 18-08-2024	Heure de récupération :
Pesée des barboteurs pour l'humidité : ☒	Nettoyage de l'extérieur des différentes pièces : ☒
Conditionnement des contenants de récupération : ☒	

Contenant 1 - Récupération du filtre (Séparateur principal)

Mettre le filtre dans un pétri propre et scellé (pince en polyéthylène ou teflon)	☒
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Contenants 2 et 3 - Récupération de la buse et de la sonde

Items	Remarques	Brosser 100 ml Acétone	Rincer 100 ml HNO ₃ 0,1N	Niveau
de la buse à la partie avant du porte-filtre	—	☒	☒	☒

Contenant 4 - Récupération de la partie arrière du porte-filtre aux barboteurs métaux (Barb. 1, 2, 3)

Items	Remarques	Rincer 100 mL HNO ₃ 0.1N	Niveau	Volume (mL)
de la partie arrière du porte-filtre aux barboteurs métaux (Barb. 1, 2, 3)	—	☒	☒	300

Contenant 5 - Récupération barboteurs 4 seul. Si présence de liquide, ajouter aux barboteurs 1,2,3

Items	Remarques	Rincer 100 ml HNO ₃ 0.1N	Niveau	Volume (mL)
barboteur 4	—	☒	☒	100

Contenant 6 - Récupération barboteurs 5 et 6 (KMnO₄)

Items	Remarques	Rincer 100 ml KMnO ₄ /H ₂ SO ₄	Rincer 100 ml eau	Niveau	Volume (mL)
du barboteur 5 au barboteur 6 (pot de verre ambré)	—	☒	☒	☒	400

Contenant 7 - Récupération barboteurs 5 et 6 (KMnO₄) avec HCl 8N

Items	Remarques	200 mL H ₂ O dans bouteille récup. Rincer 25 mL HCl 8N	Niveau	Volume (mL)
du barboteur 5 au barboteur 6	—	☒	☒	225

Remarques :

BB 12 = 400 (HCl) partie H₂O
BB 1234 = 300 ml

Blancs :

100 mL Acétone	
300 mL HNO ₃ 0.1N	
100 mL H ₂ O	
200 mL Solution H ₂ O ₂ 10% / HNO ₃ 5%	
100 mL KMnO ₄ 4% / H ₂ SO ₄ 10%	
200 mL H ₂ O + 25 mL HCl 8N	
Filtre Quartz	

Pour la demande d'analyse, voici les échantillons :

- 1a - Métaux sur contenants 1 + 2 + 3
- 1b - Hg sur contenants 1 + 2 + 3
- 2a - Métaux sur contenant 4
- 2b - Hg sur contenant 4
- 3a - Hg sur contenant 5
- 3b - Hg sur contenant 6
- 3c - Hg sur contenant 7

Technicien : AE

 SECTION GÉNÉRALISME AIR ET ENVIRONNEMENT	Formulaire « Détermination des métaux »	CODE D'ESSAI : INC 1 - ME - E₃
Document : F ECH 12	Révision N° : 12	Page : 1 de 2

Décontamination avant essai et détermination de l'humidité recueillie - USEPA 29

Compagnie : Agmico Eagle	Projet : 24 - 8263	# du filtre:
Source : Intervateur principale 1	Essai : 3	# Cold Box: ME - 3
Échantillonnée le 18.08.2024	Date de l'assemblage : 17.08.2024	Heure :

Décontamination avant essai de la buse et de la sonde

Item	Remarques	Brosser acétone	Rincer 3x HNO ₃ 10 %	Rincer 3x eau démin.	Rincer 3x Acétone
Buse et liner de verre		✓	✓	✓	✓
Vérification de la buse et sondes d'échantillonnage à conserver :				OUI	NON

Décontamination avant essai du train

Item	Remarques	Brosser acétone (si nécessaire)	Rincer 3x HNO ₃ 10 %	Rincer 3x eau démin.	Rincer 3x Acétone
du by-pass au barboteur 6		✓	✓	✓	✓
Vérification du train d'échantillonnage à conserver :				OUI	NON

Remarques :

Volume d'eau recueilli (g)

ITEM #	PIÈCES	CONTENU	POIDS		
			APRÈS	AVANT	TOTAL
1	Barboteur 1 - GS mod	VIDE (optionnel) OU CMM H ₂ O déminéralisée (100 ml)	777,64	634,15	100ml (H ₂ O)
2	Barboteur 2 - GS mod	HNO ₃ 5% / H ₂ O ₂ 10% (100 ml)	631,51	588,59	vide
3	Barboteur 3 - GS	HNO ₃ 5% / H ₂ O ₂ 10% (100 ml)	636,13	620,61	HNO ₃
4	Barboteur 4 - GS mod	VIDE (normalement) <i>Si présence de liquide, ajouter aux BB1,2 et 3</i>	640,32	639,29	HNO ₃
5	Barboteur 5 - GS mod	KMnO ₄ 4% / H ₂ SO ₄ 10% (100 ml) recouvert d'aluminium	512,93	512,55	vide
6	Barboteur 6 - GS mod	KMnO ₄ 4% / H ₂ SO ₄ 10% (100 ml) recouvert d'aluminium	739,47	739,49	KMnO ₄
7	Contenant de dessiccant	GEL DE SILICE	583,21	589,69	KMnO ₄
TOTAL :			1933,52	1904,40	G.P

Particules totales (g)

# FILTRE QUARTZ	POIDS (g)	REMARQUES
82B-86-16	9,241	

Lots des produits utilisés

Produits	# LOT
Acétone ACS	
Solution d'acide nitrique (HNO ₃) 10%	
Solution d'acide nitrique (HNO ₃) 0.1N	
Solution d'acide sulfurique (H ₂ SO ₄) 10%	
Solution d'acide chlorhydrique (HCl) 8N	
Permanganate de potassium (KMnO ₄)	
Solution H ₂ O ₂ 10% / HNO ₃ 5%	

Remarques :

Technicien : **AE**

	Formulaire « Détermination des métaux »	CODE D'ESSAI : <i>INC 1 - ME - E3</i>
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Récupération finale du dispositif de prélèvement MÉTAUX USEPA 29					
Date de récupération : <i>18-08-2024</i>		Heure de récupération :			
Pesée des barboteurs pour l'humidité :	✓	Nettoyage de l'extérieur des différentes pièces :		✓	
Conditionnement des contenants de récupération :		✓			
Contenant 1 - Récupération du filtre (Séparateur principal)					
Mettre le filtre dans un pétri propre et scellé (pince en polyéthylène ou teflon)				✓	
Contenants 2 et 3 - Récupération de la buse et de la sonde					
Items	Remarques	Brosser 100 ml Acétone	Rincer 100 ml HNO ₃ 0.1N	Niveau	
de la buse à la partie avant du porte-filtre	✓	✓	✓	✓	
Contenant 4 - Récupération de la partie arrière du porte-filtre aux barboteurs métaux (Barb. 1, 2, 3)					
Items	Remarques	Rincer 100 mL HNO ₃ 0.1N	Niveau	Volume (mL)	
de la partie arrière du porte-filtre aux barboteurs métaux (Barb. 1, 2, 3)	✓	✓	✓	340	
Contenant 5 - Récupération barboteurs 4 seul. Si présence de liquide, ajouter aux barboteurs 1, 2, 3					
Items	Remarques	Rincer 100 ml HNO ₃ 0.1N	Niveau	Volume (mL)	
barboteur 4	✓	✓	✓	100	
Contenant 6 - Récupération barboteurs 5 et 6 (KMnO₄)					
Items	Remarques	Rincer 100 ml KMnO ₄ /H ₂ SO ₄	Rincer 100 ml eau	Niveau	Volume (mL)
du barboteur 5 au barboteur 6 (pot de verre ambré)	✓	✓	✓	✓	400
Contenant 7 - Récupération barboteurs 5 et 6 (KMnO₄) avec HCl 8N					
Items	Remarques	200 mL H ₂ O dans bouteille récup. Rincer 25 mL HCl 8N		Niveau	Volume (mL)
du barboteur 5 au barboteur 6	✓	✓		✓	225
Remarques : <i>B12 = 400ml (pour Hcl de ME)</i> <i>B1234 = 340ml</i>					
Blancs :					
100 mL Acétone	✓	Pour la demande d'analyse, voici les échantillons : 1a - Métaux sur contenants 1 + 2 + 3 1b - Hg sur contenants 1 + 2 + 3 2a - Métaux sur contenant 4 2b - Hg sur contenant 4 3a - Hg sur contenant 5 3b - Hg sur contenant 6 3c - Hg sur contenant 7			
300 mL HNO ₃ 0.1N	✓				
100 mL H ₂ O	✓				
200 mL Solution H ₂ O ₂ 10% / HNO ₃ 5%	✓				
100 mL KMnO ₄ 4% / H ₂ SO ₄ 10%	✓				
200 mL H ₂ O + 25 mL HCl 8N	✓				
Filtre Quartz	✓				
Technicien : <i>AE</i>					

Formulaire « ME - Décontamination de la verrerie »

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Partie A : Décontamination initiale Cloches - Métaux USEPA 29

Compagnie :	Projet :	# du coffre : R-86-2
Source :	Essai :	
Échantillonnée le :	Date décontamination :	Heure :

Identification des pièces seulement si nécessaire.

Décontamination			Rinçage Eau	Eau + Savon	Eau	Rincer H ₂ O démin.	Tremper HNO ₃ 10 %	Rincer H ₂ O démin.	Rincer Acétone
Item (dans l'ordre)	#	Remarques	1 x	1 x	3 x	3 x	4 hres	3 x	3 x
Cloche 1 :	# de filtre :								
By pass			/	/	/	/	/	/	/
Cloche femelle			/	/	/	/	/	/	/
Support à filtre en téflon			/	/	/	/	/	/	/
Cloche mâle			/	/	/	/	/	/	/
Cloche 2 :	# de filtre :								
By pass			/	/	/	/	/	/	/
Cloche femelle			/	/	/	/	/	/	/
Support à filtre en téflon			/	/	/	/	/	/	/
Cloche mâle			/	/	/	/	/	/	/
Cloche 3 :	# de filtre :								
By pass			/	/	/	/	/	/	/
Cloche femelle			/	/	/	/	/	/	/
Support à filtre en téflon			/	/	/	/	/	/	/
Cloche mâle			/	/	/	/	/	/	/

Vérification initiale de la verrerie et conserver le dernier rinçage à l'acétone si nécessaire.

N.B. Joint d'étanchéité à réaliser avec du tape de téflon si absence de O-ring

Commentaires :

Décontaminé par :

wif

Date :

19/07/2010

Endroit :

QIC

Formulaire
« ME - Décontamination de la verrerie »

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Partie B : Décontamination initiale Barboteurs - Métaux USEPA 29

Compagnie :	Projet :	# du Cold box :
Source :	Essai :	# du filtre :
Échantillonnée le :	Date décontamination :	Heure :

Identification des pièces seulement si nécessaire.

Décontamination			Rinçage Eau	Eau + Savon	Eau	Rincer H ₂ O dém. min.	Tremper HNO ₃ 10 %	Rincer H ₂ O dém. min.	Rincer Acétone
Item (dans l'ordre)	#	Remarques	1 x	1 x	3 x	3 x	4 hres	3 x	3 x
S (bas cloche - barb.)			/	/	/	/	/	/	/
Barboteur 1			/	/	/	/	/	/	/
Barboteur 2			/	/	/	/	/	/	/
Barboteur 3			/	/	/	/	/	/	/
Barboteur 4 (si applicable)			/	/	/	/	/	/	/
Barboteur 5 (si Hg)			/	/	/	/	/	/	/
Barboteur 6 (si Hg)			/	/	/	/	/	/	/
Coudes (5 ou...)			/	/	/	/	/	/	/

Vérification initiale de la verrerie du train d'échantillonnage et conserver le dernier rinçage à l'acétone si nécessaire.

N.B. Joint d'étanchéité à réaliser avec du tape de téflon si absence de O-ring

Commentaires :

Décontaminé par :	Date :	Endroit :
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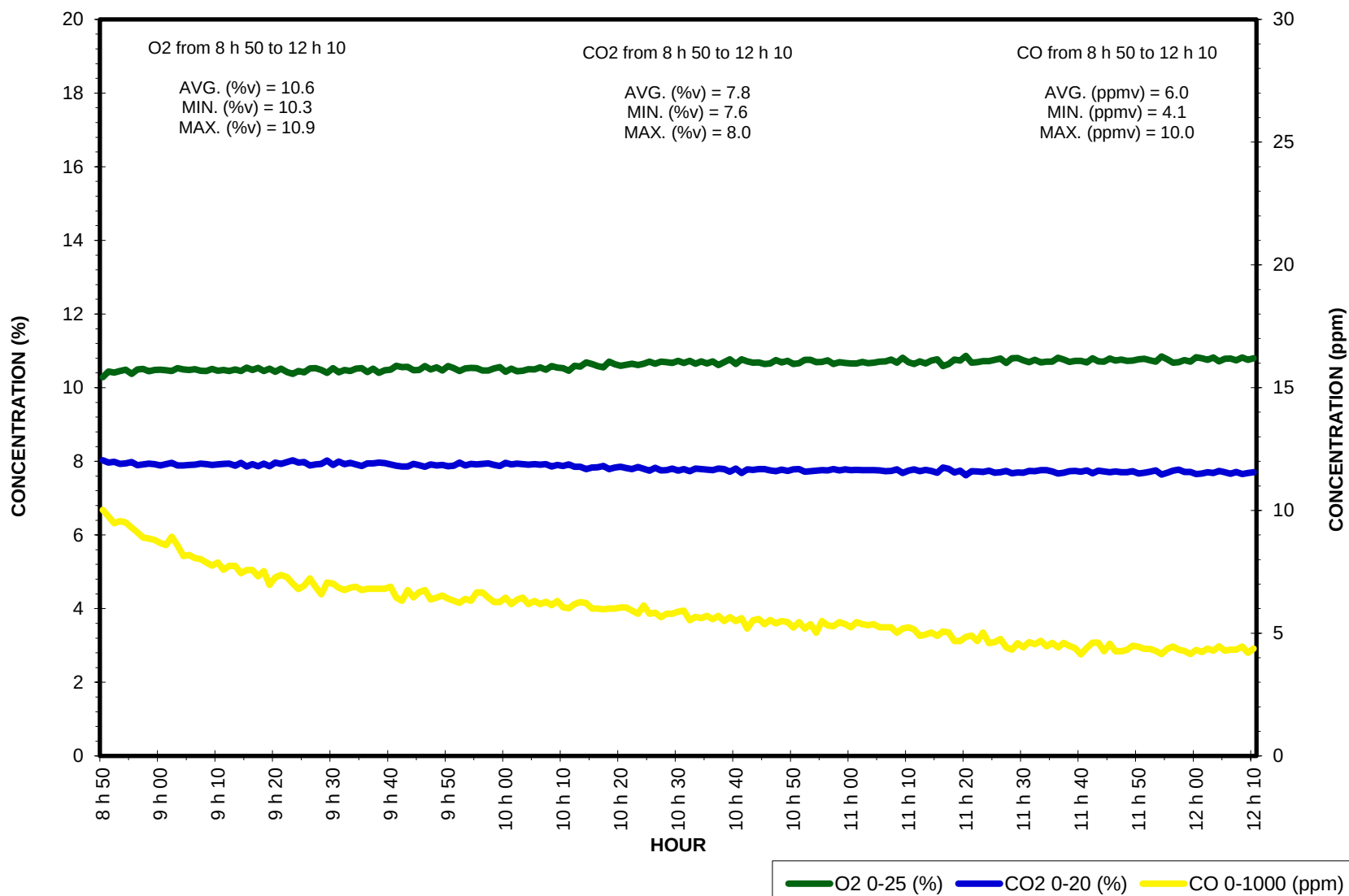
APPENDIX 5

CEMS GRAPHS

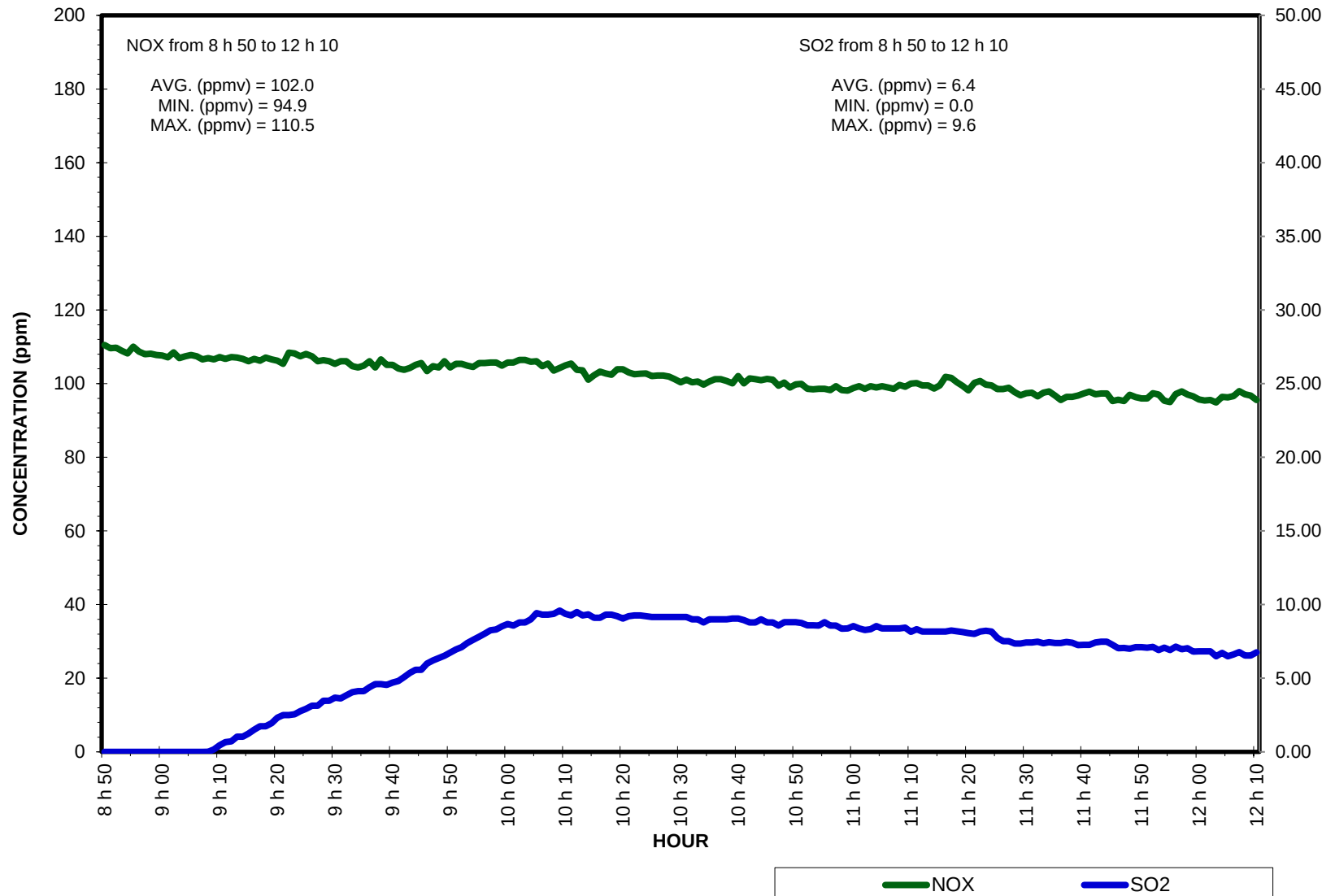


AGNICO EAGLE

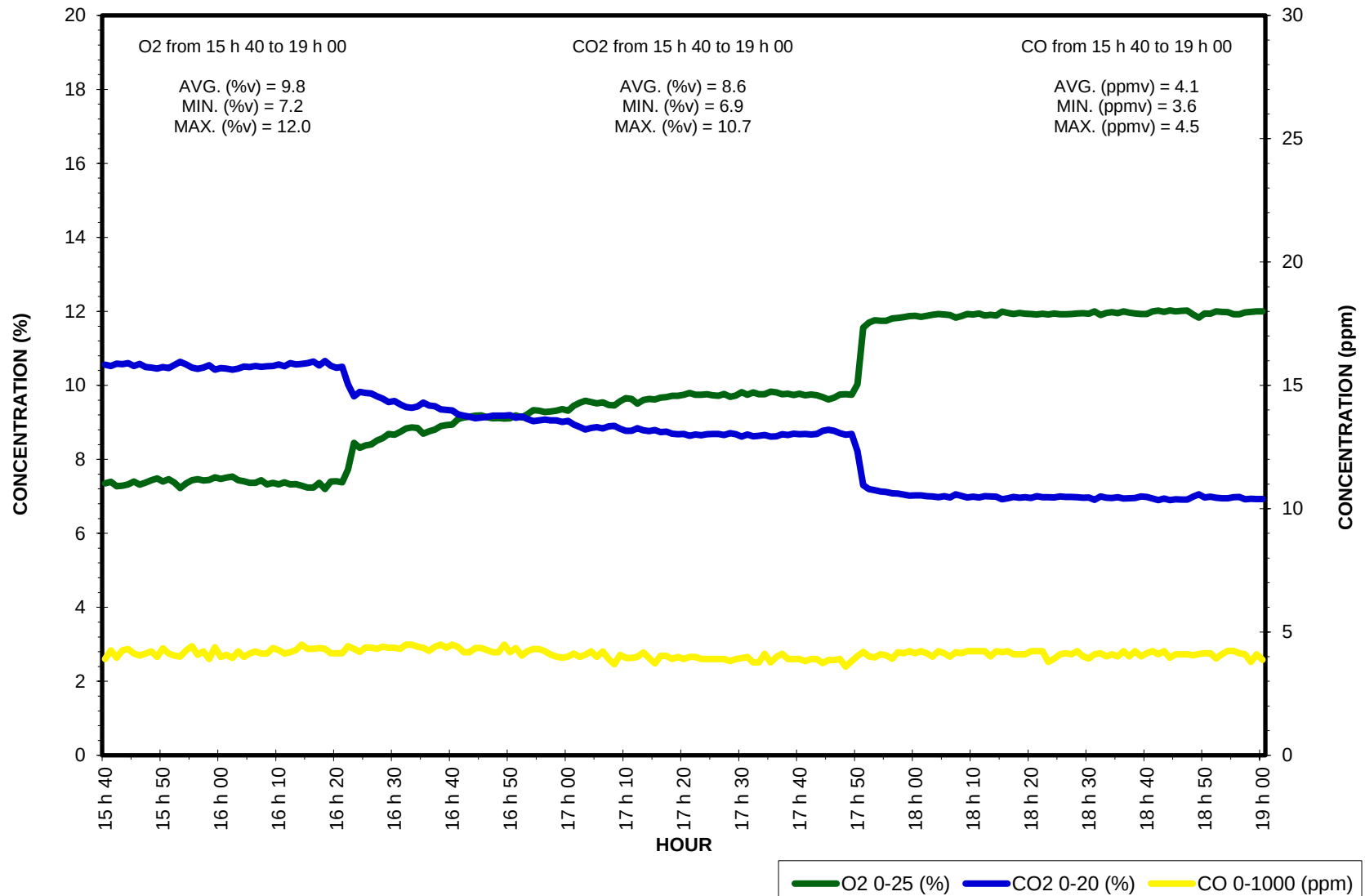
INC1 - MEASUREMENTS OF OXYGEN, CARBON DIOXIDE AND CARBON MONOXIDE - 2024-08-16 - ESSAI INC1 - GAZ - E1



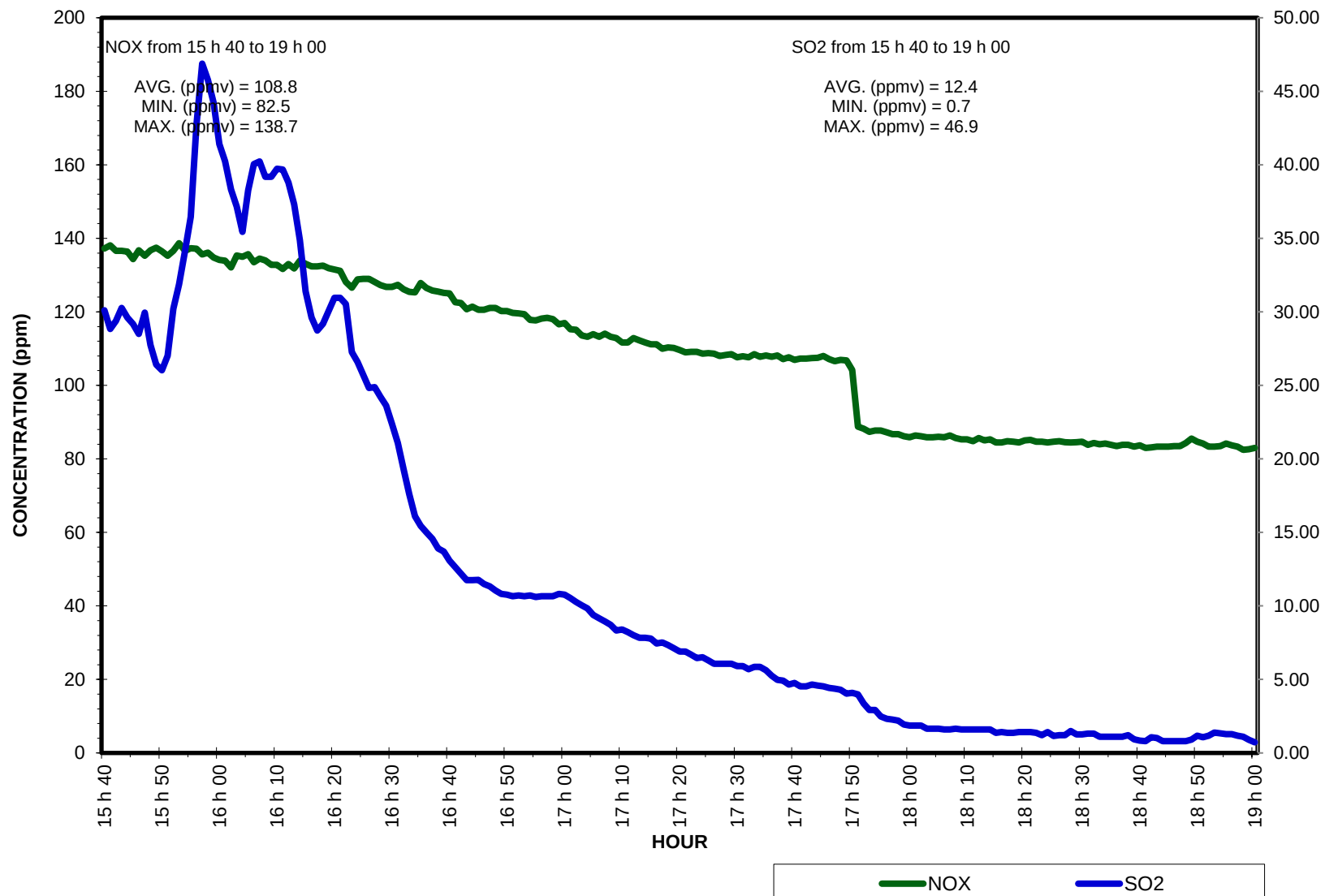
INC1 - MEASUREMENTS OF NITROGEN OXYDES AND SULFUR DIOXIDE - 2024-08-16 - ESSAI INC1 - GAZ - E1



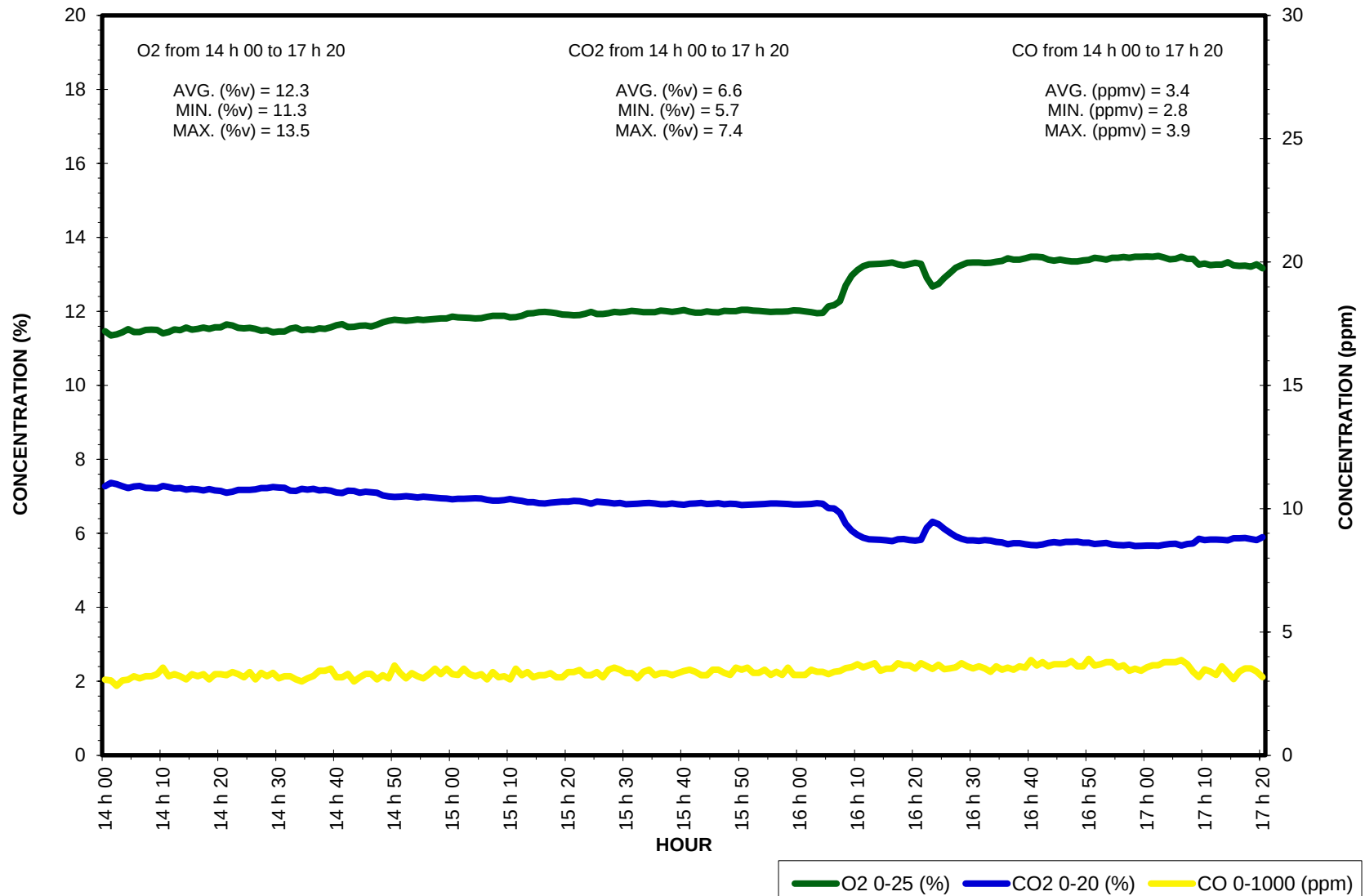
INC1 - MEASUREMENTS OF OXYGEN, CARBON DIOXIDE AND CARBON MONOXIDE - 2024-08-17 - ESSAI INC1 - GAZ - E2



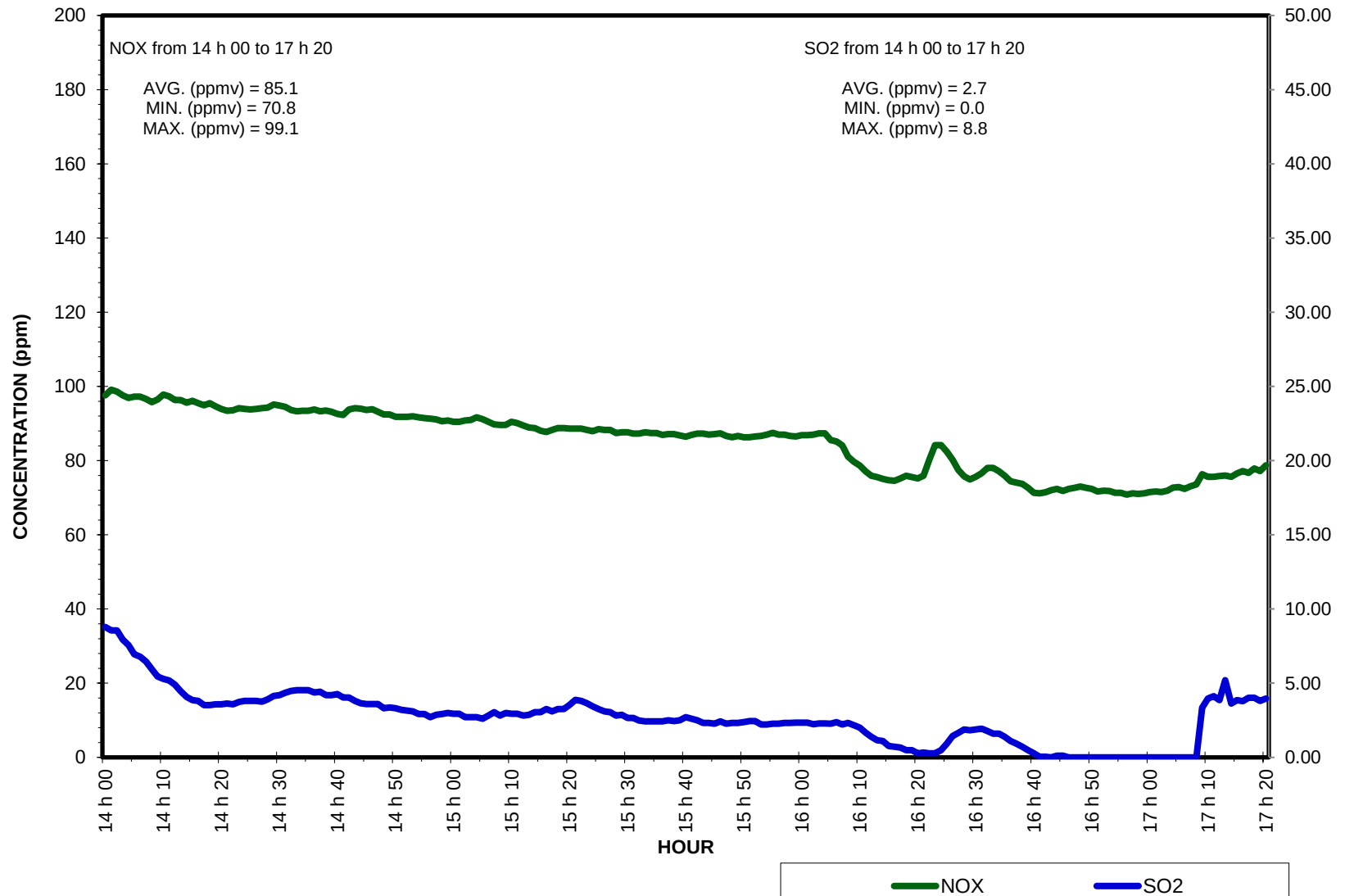
INC1 - MEASUREMENTS OF NITROGEN OXYDES AND SULFUR DIOXIDE - 2024-08-17 - ESSAI INC1 - GAZ - E2



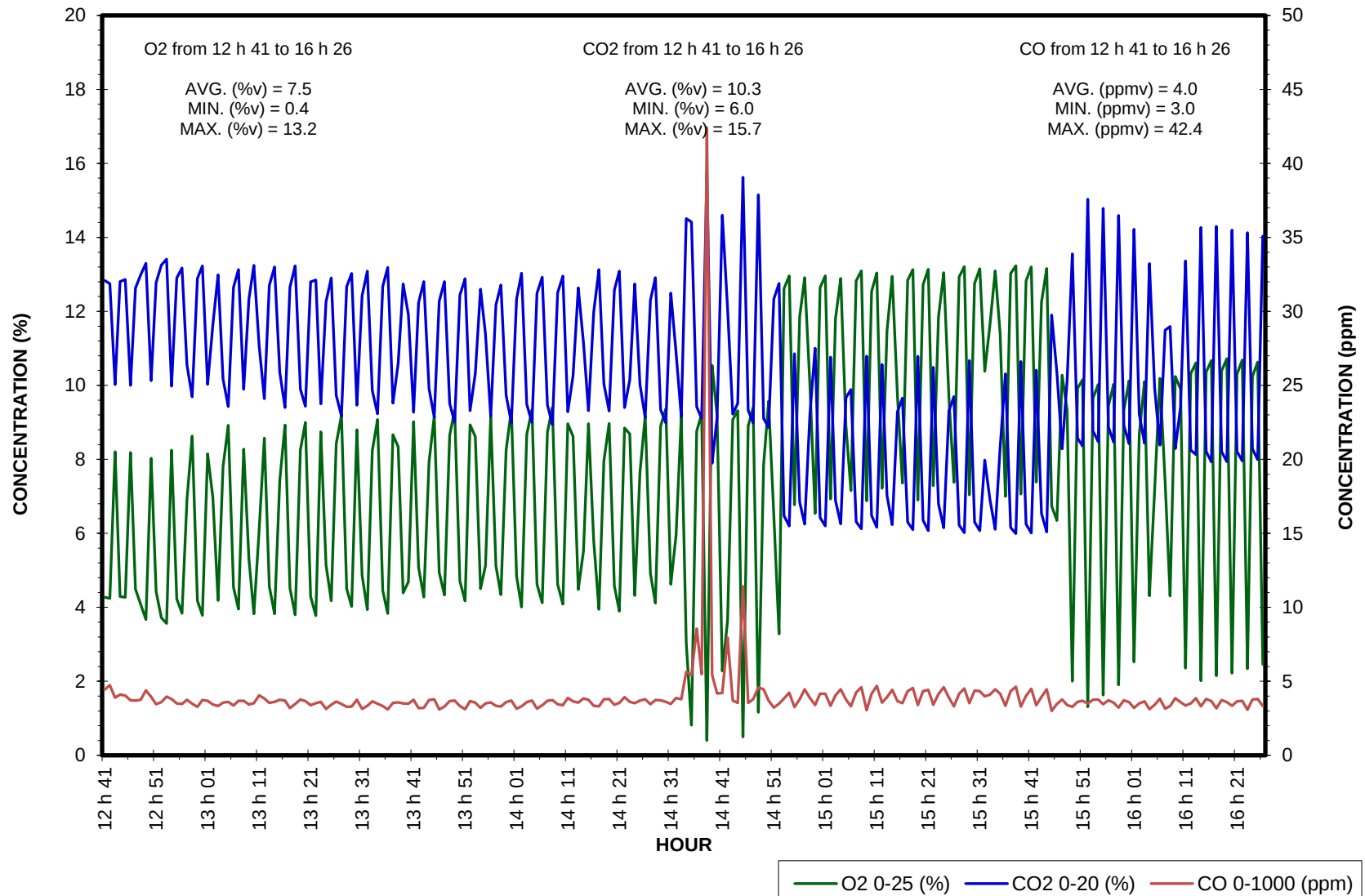
INC1 - MEASUREMENTS OF OXYGEN, CARBON DIOXIDE AND CARBON MONOXIDE - 2024-08-18 - ESSAI INC1 - GAZ - E3



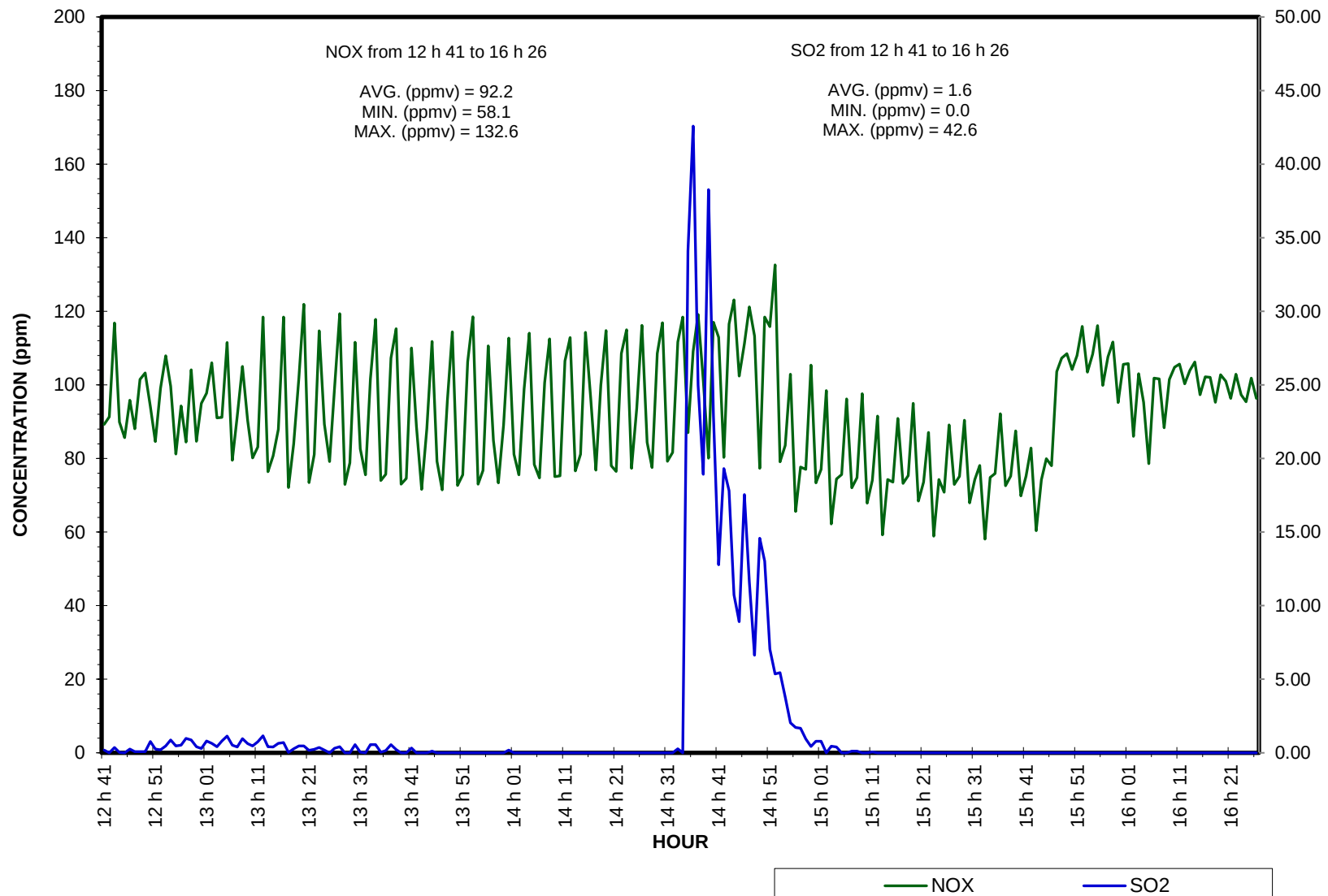
INC1 - MEASUREMENTS OF NITROGEN OXYDES AND SULFUR DIOXIDE - 2024-08-18 - ESSAI INC1 - GAZ - E3



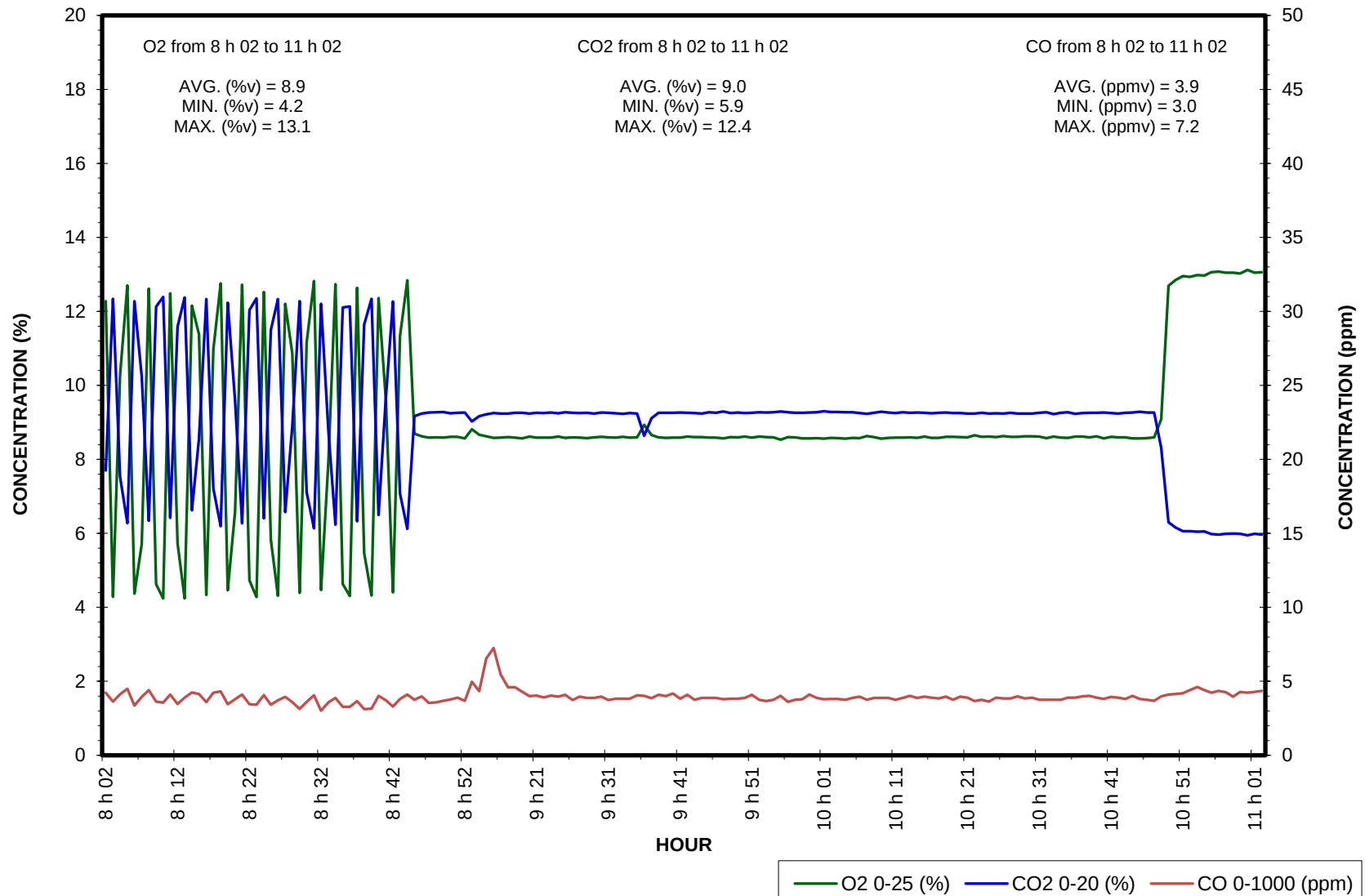
INC2 - MEASUREMENTS OF OXYGEN, CARBON DIOXIDE AND CARBON MONOXIDE - 2024-08-19 - ESSAI INC2 - GAZ - E1



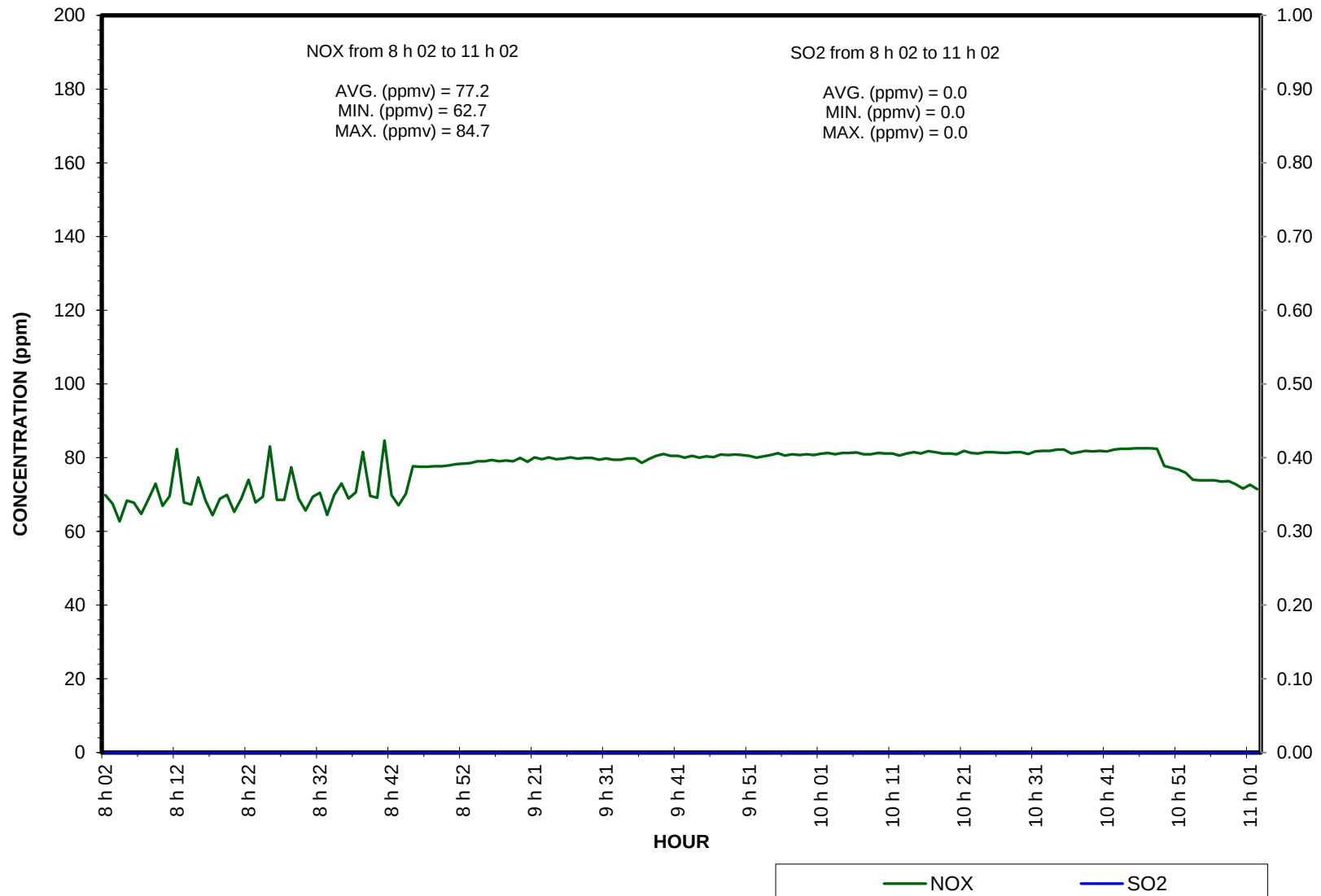
INC2 - MEASUREMENTS OF NITROGEN OXYDES AND SULFUR DIOXIDE - 2024-08-19 - ESSAI INC2 - GAZ - E1



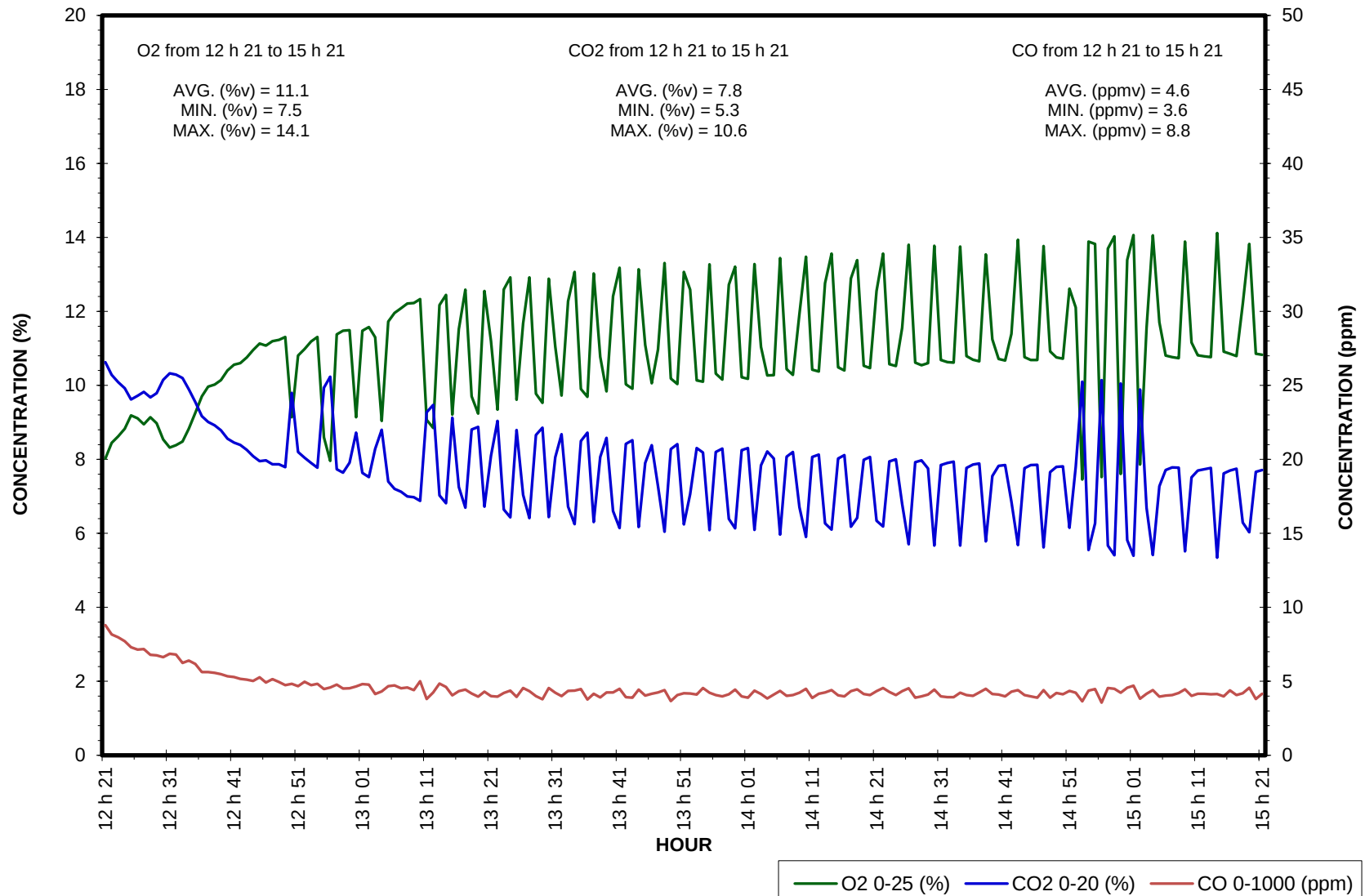
INC2 - MEASUREMENTS OF OXYGEN, CARBON DIOXIDE AND CARBON MONOXIDE - 2024-08-20 - ESSAI INC2 - GAZ - E2



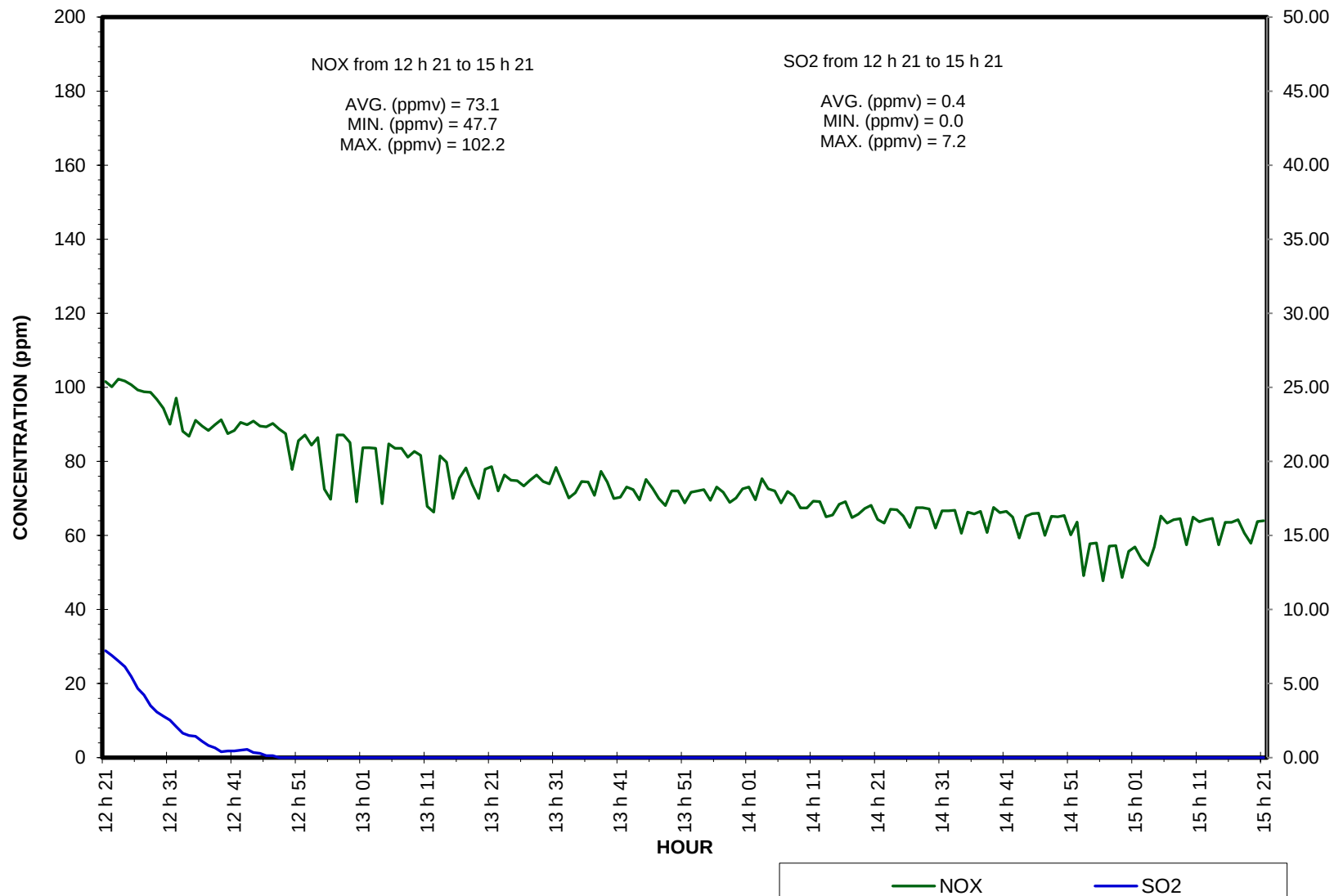
INC2 - MEASUREMENTS OF NITROGEN OXYDES AND SULFUR DIOXIDE - 2024-08-20 - ESSAI INC2 - GAZ - E2



INC2 - MEASUREMENTS OF OXYGEN, CARBON DIOXIDE AND CARBON MONOXIDE - 2024-08-20 - ESSAI INC2 - GAZ - E3



INC2 - MEASUREMENTS OF NITROGEN OXYDES AND SULFUR DIOXIDE - 2024-08-20 - ESSAI INC2 - GAZ - E3



APPENDIX 6

QA/QC DATA



AGNICO EAGLE

QA/QC – Project 24-8263 – INC1 – Agnico Eagle Mines, Meliadine – Metals and particles

INFORMATION ON SAMPLING SITE – EPS 1/RM/8 METHOD A				
RUN NUMBER	INC1-Me-E1	INC1-Me-E2	INC1-Me-E3	CRITERIA
CYCLONIC FLOW ANGLE (°)		0		$\leq 15^\circ$
INVERSE FLOW		NO		NO
STACK DIAMETER (m)		0.851		≥ 0.3
A _D		2.0		≥ 0.5
B _D		5.0		≥ 2.0
NUMBER OF SAMPLING POINTS	40	40	40	≥ 20
GAS VELOCITY (m/s)	9.0	9.2	8.4	$3.0 \leq V \leq 30$
PARTICULATES SAMPLING CRITERIA – EPS 1/RM/8 METHOD E				
SAMPLING DURATION (min)	200	200	200	≥ 60
SAMPLING VOLUME (m ³ R)	3.20	3.06	3.35	≥ 1.5
AVERAGE ISOKINETISM (%)	101	100	99	$90 \leq \text{ISO} \leq 110$
ISOKINETIC CRITERIA (% points)	100%	100%	100%	≥ 90
PROBE TEMPERATURE (°F)	OK	OK	OK	$223 \leq T_p \leq 273$
FILTRE TEMPERATURE (°F)	OK	OK	OK	$223 \leq T_f \leq 273$
EXIT TEMPERATURE (°F)	OK	OK	OK	$32 \leq T_{\text{out}} \leq 68$
4% D _{avg} (ft ³ /min)	0.022	0.021	0.023	
LEAK TEST BEFORE AT -15 inHg (ft ³ /min)	< 0.02	< 0.02	< 0.02	≤ 0.02 or 4% D _{avg}
LEAK TEST AFTER (ft ³ /min)	< 0.02	< 0.02	< 0.02	≤ 0.02 or 4% D _{avg}
ACETONE RESIDUAL (%)		0.1329%		$\leq 0.001\%$
SAMPLING CRITERIA OF METALS – USEPA METHOD 29				
MAX PUMPING RATE (pi ³ /min)	0.67	0.63	0.73	≤ 1.0
SAMPLING VOLUME (m ³ R)	3.2	3.1	3.3	≥ 2.8
SAMPLING DURATION (min)	200	200	200	≥ 120
METAL RESIDUE IN H ₂ O (ng/mL)		OK		≤ 1.0
METAL RESIDUE IN HNO ₃ /H ₂ O ₂ (ng/mL)		OK		≤ 2.0
METAL RESIDU IN KMnO ₄ (ng/mL)		OK		≤ 2.0
METAL RESIDU IN HNO ₃ 0.1N (ng/mL)		OK		≤ 2.0
METAL RESIDU IN HCl 8N (ng/mL)		OK		≤ 2.0
EQUIPMENT INFORMATION				
SAMPLING CONSOLE NUMBER	23	23	23	
DRY GAS METER COEFFICIENT K _c	0.990	0.990	0.990	$0.95 < K_c < 1.05$
ORIFICE COEFFICIENT K _o	0.989	0.989	0.989	
GAS METER COMPENSATED TO 60°F	NO	NO	NO	
Δh@	0.952	0.952	0.952	
ID PITOT	03-06 Q-500	03-06 Q-500	03-06 Q-500	
PITOT TUBE COEFFICIENT	0.779	0.779	0.779	
NOZZLE REFERENCE No.	3Q-504	3Q-504	3Q-504	
NOZZLE DIAMETER (in)	0.5023	0.5023	0.5023	

QA/QC – Project 24-8263 – Agnico Eagle Mines, Meliadine – Incinerator 1 – SVOC

INFORMATION ON SAMPLING SITE – EPS 1/RM/8 METHOD A				
RUN NUMBER	INC1-COSV-E1	INC1-COSV-E2	INC1-COSV-E3	CRITERIA
CYCLONIC FLOW ANGLE (°)		0		$\leq 15^\circ$
INVERSE FLOW		NO		NO
STACK DIAMETER (m)		0.851		≥ 0.3
A _D		2.0		≥ 0.5
B _D		5.0		≥ 2.0
NUMBER OF SAMPLING POINTS	40	40	40	≥ 20
GAS VELOCITY (m/s)	8.9	9.2	8.3	$3.0 \leq V \leq 30$
GENERAL SAMPLING CRITERIA – EPS 1/RM/8 METHOD E				
SAMPLING DURATION (min)	200	200	200	≥ 60
SAMPLING VOLUME (m ³ R)	3.27	3.11	3.42	≥ 1.5
AVERAGE ISOKINETISM (%)	99	99	99	$90 \leq \text{ISO} \leq 110$
ISOKINETIC CRITERIA (% points)	100%	100%	100%	≥ 90
PROBE TEMPERATURE (°F)	OK	OK	OK	$223 \leq T_p \leq 273$
FILTRE TEMPERATURE (°F)	OK	OK	OK	$223 \leq T_f \leq 273$
EXIT TEMPERATURE (°F)	OK	OK	OK	$32 \leq T_{\text{out}} \leq 68$
4% D _{avg} (ft ³ /min)	0.022	0.021	0.023	
LEAK TEST BEFORE AT -15 inHg (ft ³ /min)	< 0.02	< 0.02	< 0.02	≤ 0.02 or 4% D _{avg}
LEAK TEST AFTER (ft ³ /min)	< 0.02	< 0.02	< 0.02	≤ 0.02 or 4% D _{avg}
SVOC SAMPLING CRITERIA – SPE 1/RM/2				
TRAP TEMPERATURE	OK	OK	OK	$32 \leq T_{\text{trap}} \leq 68$
MAXIMUM PUMPING RATE (ft ³ /min)	0.618	0.600	0.664	≤ 1.0
SAMPLING VOLUME (m ³ R)	3.273	3.107	3.424	≥ 3.0
SAMPLING DURATION (min)	200.000	200.000	200.000	≥ 180
HEXANE/ACETONE BLANK	OK	OK	OK	OK
H ₂ O HPLC BLANK	OK	OK	OK	OK
RESIN BLANK	OK	OK	OK	OK
FIELD BLANK	OK	OK	OK	OK
EQUIPMENT INFORMATION				
SAMPLING CONSOLE NUMBER	25	25	25	
DRY GAS METER COEFFICIENT K _c	1.001	1.001	1.001	$0.95 < K_c < 1.05$
ORIFICE COEFFICIENT K _o	0.740	0.740	0.740	
GAS METER COMPENSATED TO 60°F	NO	NO	NO	
Δh@	1.683	1.683	1.683	
ID PITOT	03-08 Q-500	03-08 Q-500	03-08 Q-500	
PITOT TUBE COEFFICIENT	0.741	0.741	0.741	
NOZZLE REFERENCE No.	3Q-507	3Q-507	3Q-507	
NOZZLE DIAMETER (in)	0.5093	0.5093	0.5093	

QA/QC – Project 24-8263 – Incinerator 2 – Agnico Eagle Mines, Meliadine – Metals and particles

INFORMATION ON SAMPLING SITE – EPS 1/RM/8 METHOD A				
RUN NUMBER	INC2-Me-E1	INC2-Me-E2	INC2-Me-E3	CRITERIA
CYCLONIC FLOW ANGLE (°)		0		$\leq 15^\circ$
INVERSE FLOW		NO		NO
STACK DIAMETER (m)		0.457		≥ 0.3
A _D		1.4		≥ 0.5
B _D		6.7		≥ 2.0
NUMBER OF SAMPLING POINTS	19	36	36	≥ 20
GAS VELOCITY (m/s)	10.3	10.3	10.1	$3.0 \leq V \leq 30$
PARTICULATES SAMPLING CRITERIA – EPS 1/RM/8 METHOD E				
SAMPLING DURATION (min)	95	180	180	≥ 60
SAMPLING VOLUME (m ³ R)	1.62	3.08	2.86	≥ 1.5
AVERAGE ISOKINETISM (%)	101	99	97	$90 \leq \text{ISO} \leq 110$
ISOKINETIC CRITERIA (% points)	100%	100%	97%	≥ 90
PROBE TEMPERATURE (°F)	OK	OK	OK	$223 \leq T_p \leq 273$
FILTRE TEMPERATURE (°F)	OK	OK	OK	$223 \leq T_f \leq 273$
EXIT TEMPERATURE (°F)	OK	OK	OK	$32 \leq T_{\text{out}} \leq 68$
4% D _{avg} (ft ³ /min)	0.023	0.023	0.022	
LEAK TEST BEFORE AT -15 inHg (ft ³ /min)	< 0.02	< 0.02	< 0.02	≤ 0.02 or 4% D _{avg}
LEAK TEST AFTER (ft ³ /min)	< 0.02	< 0.02	< 0.02	≤ 0.02 or 4% D _{avg}
ACETONE RESIDUAL (%)		0.1329%		$\leq 0.001\%$
SAMPLING CRITERIA OF METALS – USEPA METHOD 29				
MAX PUMPING RATE (pi ³ /min)	0.63	0.62	0.60	≤ 1.0
SAMPLING VOLUME (m ³ R)	1.6	3.1	2.9	≥ 2.8
SAMPLING DURATION (min)	95	180	180	≥ 120
METAL RESIDUE IN H ₂ O (ng/mL)		OK		≤ 1.0
METAL RESIDUE IN HNO ₃ /H ₂ O ₂ (ng/mL)		OK		≤ 2.0
METAL RESIDU IN KMnO ₄ (ng/mL)		OK		≤ 2.0
METAL RESIDU IN HNO ₃ 0.1N (ng/mL)		OK		≤ 2.0
METAL RESIDU IN HCl 8N (ng/mL)		OK		≤ 2.0
EQUIPMENT INFORMATION				
SAMPLING CONSOLE NUMBER	23	23	23	
DRY GAS METER COEFFICIENT K _c	0.990	0.990	0.990	$0.95 < K_c < 1.05$
ORIFICE COEFFICIENT K _o	0.989	0.989	0.989	
GAS METER COMPENSATED TO 60°F	NO	NO	NO	
Δh@	0.952	0.952	0.952	
ID PITOT	03-06 Q-500	03-06 Q-500	03-06 Q-500	
PITOT TUBE COEFFICIENT	0.779	0.779	0.779	
NOZZLE REFERENCE No.	3Q-504	3Q-504	3Q-511	
NOZZLE DIAMETER (in)	0.5023	0.5023	0.4811	

QA/QC – Project 24-8263 – Agnico Eagle Mines, Meliadine – Incinerator 2 – SVOC

INFORMATION ON SAMPLING SITE – EPS 1/RM/8 METHOD A				
RUN NUMBER	INC2-COSV-E1	INC2-COSV-E2	INC2-COSV-E3	CRITERIA
CYCLONIC FLOW ANGLE (°)		0		$\leq 15^\circ$
INVERSE FLOW		NO		NO
STACK DIAMETER (m)		0.457		≥ 0.3
A _D		1.4		≥ 0.5
B _D		6.7		≥ 2.0
NUMBER OF SAMPLING POINTS	36	36	36	≥ 20
GAS VELOCITY (m/s)	9.9	9.8	9.7	$3.0 \leq V \leq 30$
GENERAL SAMPLING CRITERIA – EPS 1/RM/8 METHOD E				
SAMPLING DURATION (min)	180	180	180	≥ 60
SAMPLING VOLUME (m ³ R)	3.00	3.06	3.12	≥ 1.5
AVERAGE ISOKINETISM (%)	100	98	98	$90 \leq \text{ISO} \leq 110$
ISOKINETIC CRITERIA (% points)	100%	100%	100%	≥ 90
PROBE TEMPERATURE (°F)	OK	OK	OK	$223 \leq T_p \leq 273$
FILTRE TEMPERATURE (°F)	OK	OK	OK	$223 \leq T_f \leq 273$
EXIT TEMPERATURE (°F)	OK	OK	OK	$32 \leq T_{\text{out}} \leq 68$
4% D _{avg} (ft ³ /min)	0.023	0.023	0.024	
LEAK TEST BEFORE AT -15 inHg (ft ³ /min)	< 0.02	< 0.02	< 0.02	≤ 0.02 or 4% D _{avg}
LEAK TEST AFTER (ft ³ /min)	< 0.02	< 0.02	< 0.02	≤ 0.02 or 4% D _{avg}
SVOC SAMPLING CRITERIA – SPE 1/RM/2				
TRAP TEMPERATURE	OK	OK	OK	$32 \leq T_{\text{trap}} \leq 68$
MAXIMUM PUMPING RATE (ft ³ /min)	0.608	0.616	0.656	≤ 1.0
SAMPLING VOLUME (m ³ R)	3.000	3.058	3.118	≥ 3.0
SAMPLING DURATION (min)	180.000	180.000	180.000	≥ 180
HEXANE/ACETONE BLANK	OK	OK	OK	OK
H ₂ O HPLC BLANK	OK	OK	OK	OK
RESIN BLANK	OK	OK	OK	OK
FIELD BLANK	OK	OK	OK	OK
EQUIPMENT INFORMATION				
SAMPLING CONSOLE NUMBER	25	25	25	
DRY GAS METER COEFFICIENT K _c	1.001	1.001	1.001	$0.95 < K_c < 1.05$
ORIFICE COEFFICIENT K _o	0.740	0.740	0.740	
GAS METER COMPENSATED TO 60°F	NO	NO	NO	
Δh@	1.683	1.683	1.683	
ID PITOT	03-08 Q-500	03-08 Q-500	03-08 Q-500	
PITOT TUBE COEFFICIENT	0.741	0.741	0.741	
NOZZLE REFERENCE No.	3Q-507	3Q-507	3Q-508	
NOZZLE DIAMETER (in)	0.5093	0.5093	0.5086	

SUMMARY OF CALIBRATION AND VERIFICATION OF DIRECT READING DEVICES						
Gas	Ladder	Validation of the acquisition of data	Check with the analyzer (error calibration)	Initial Verification to the Probe - Error systematic	Final Check to the Probe - Error systematic	Drift from the device
		TOLERANCE +/- 0.5%	TOLERANCE +/- 2%	+/- 5%	+/- 5%	TOLERANCE +/- 3%
O2	Low (zero)	0.00	0.00	1.20	1.02	0.18
	Average	0.00	0.04	0.40	0.00	0.40
	High	0.00	0.09	N / A	N / A	N / A
CO2	Low (zero)	0.00	0.11	0.17	0.95	0.78
	Average	0.00	0.17	0.22	1.51	1.28
	High	0.00	1.06	N / A	N / A	N / A
CO	Low (zero)	0.00	0.00	0.00	0.11	0.11
	Average	0.00	1.51	1.82	1.71	0.11
	High	0.00	0.05	N / A	N / A	N / A
SO2	Low (zero)	0.00	0.00	0.11	1.19	1.08
	Average	0.00	1.01	0.00	0.00	0.00
	High	0.00	0.82	N / A	N / A	N / A
NOX	Low (zero)	0.00	0.00	0.00	0.00	0.00
	Average	0.00	0.99	0.02	0.02	0.00
	High	0.00	0.92	N / A	N / A	N / A
OTHER	Low (zero)			N / A	N / A	N / A
	Average			N / A	N / A	N / A
	High			N / A	N / A	N / A

Gas	Ladder	Validation of the acquisition of data	Check with the analyzer (error calibration)	Initial Verification to the Probe - Performance of the	Final Check to the Probe - Performance of the	Drift from the device
				TOLERANCE +/- 20%	TOLERANCE +/- 20%	TOLERANCE +/- 3%
SRT	Low (zero)			N / A	N / A	N / A
	Average					
	High					N / A

Primary standard gas concentrations							
Ladder	O2 (%)	CO2 (%)	CO (ppm)	SO2 (ppm)	NOX (ppm)	SRT (ppm)	Other
Average	12.59	10.08	487.9	499.3	529.1	15.0	500.0
High	22.51	17.91	935.5	924.6	903.3	30.0	900.0
Calibration Error Check Concentrations							
Ladder	O2 (%)	CO2 (%)	CO (ppm)	SO2 (ppm)	NOX (ppm)	SRT (ppm)	Other
Zero	0.00	0.00	0.0	0.0	0.0	0.0	0.0
Average	12.59	10.08	487.9	499.3	529.1	15.0	500.0
High	22.51	17.91	935.5	924.6	903.3	30.0	900.0
Systematic error checking concentrations							
Ladder	O2 (%)	CO2 (%)	CO (ppm)	SO2 (ppm)	NOX (ppm)	SRT (ppm)	Other
Average	12.59	10.08	487.9	499.3	529.1	15.0	500.0
System response time					Number of points used (stratification)		
					Use 12 points according to SPE1RM8 method		

SUMMARY OF CALIBRATION AND VERIFICATION OF DIRECT READING DEVICES						
Gas	Ladder	Validation of the acquisition of data	Check with the analyzer (error calibration)	Initial Verification to the Probe - Error systematic	Final Check to the Probe - Error systematic	Drift from the device
		TOLERANCE +/- 0.5%	TOLERANCE +/- 2%	+/- 5%	+/- 5%	TOLERANCE +/- 3%
O2	Low (zero)	0.00	0.00	0.93	0.84	0.09
	Average	0.00	0.04	0.36	0.04	0.31
	High	0.00	0.09	N / A	N / A	N / A
CO2	Low (zero)	0.00	0.11	0.06	0.22	0.17
	Average	0.00	0.17	0.56	0.56	0.00
	High	0.00	1.06	N / A	N / A	N / A
CO	Low (zero)	0.00	0.00	0.00	0.11	0.11
	Average	0.00	1.51	1.71	0.86	0.86
	High	0.00	0.05	N / A	N / A	N / A
SO2	Low (zero)	0.00	0.00	0.43	0.32	0.11
	Average	0.00	1.01	0.54	0.00	0.54
	High	0.00	0.82	N / A	N / A	N / A
NOX	Low (zero)	0.00	0.00	0.00	0.00	0.00
	Average	0.00	0.99	0.58	0.35	0.22
	High	0.00	0.92	N / A	N / A	N / A
OTHER	Low (zero)			N / A	N / A	N / A
	Average			N / A	N / A	N / A
	High			N / A	N / A	N / A

Gas	Ladder	Validation of the acquisition of data	Check with the analyzer (error calibration)	Initial Verification to the Probe - Performance of the	Final Check to the Probe - Performance of the	Drift from the device
				TOLERANCE +/- 20%	TOLERANCE +/- 20%	TOLERANCE +/- 3%
SRT	Low (zero)			N / A	N / A	N / A
	Average					
	High					N / A

Primary standard gas concentrations							
Ladder	O2 (%)	CO2 (%)	CO (ppm)	SO2 (ppm)	NOX (ppm)	SRT (ppm)	Other
Average	12.59	10.08	487.9	499.3	529.1	15.0	500.0
High	22.51	17.91	935.5	924.6	903.3	30.0	900.0
Calibration Error Check Concentrations							
Ladder	O2 (%)	CO2 (%)	CO (ppm)	SO2 (ppm)	NOX (ppm)	SRT (ppm)	Other
Zero	0.00	0.00	0.0	0.0	0.0	0.0	0.0
Average	12.59	10.08	487.9	499.3	529.1	15.0	500.0
High	22.51	17.91	935.5	924.6	903.3	30.0	900.0
Systematic error checking concentrations							
Ladder	O2 (%)	CO2 (%)	CO (ppm)	SO2 (ppm)	NOX (ppm)	SRT (ppm)	Other
Average	12.59	10.08	487.9	499.3	529.1	15.0	500.0
System response time					Number of points used (stratification)		
					Use 12 points according to SPE1RM8 method		

SUMMARY OF CALIBRATION AND VERIFICATION OF DIRECT READING DEVICES						
Gas	Ladder	Validation of the acquisition of data	Check with the analyzer (error calibration)	Initial Verification to the Probe - Error systematic	Final Check to the Probe - Error systematic	Drift from the device
		TOLERANCE +/- 0.5%	TOLERANCE +/- 2%	+/- 5%	+/- 5%	TOLERANCE +/- 3%
O2	Low (zero)	0.00	0.00	1.02	1.16	0.13
	Average	0.00	0.04	0.04	0.13	0.09
	High	0.00	0.09	N / A	N / A	N / A
CO2	Low (zero)	0.00	0.11	0.06	0.39	0.34
	Average	0.00	0.17	0.11	0.39	0.28
	High	0.00	1.06	N / A	N / A	N / A
CO	Low (zero)	0.00	0.00	0.21	0.11	0.11
	Average	0.00	1.51	1.07	0.32	0.75
	High	0.00	0.05	N / A	N / A	N / A
SO2	Low (zero)	0.00	0.00	0.43	0.22	0.22
	Average	0.00	1.01	0.54	0.65	0.11
	High	0.00	0.82	N / A	N / A	N / A
NOX	Low (zero)	0.00	0.00	0.00	0.11	0.11
	Average	0.00	0.99	0.13	0.09	0.04
	High	0.00	0.92	N / A	N / A	N / A
OTHER	Low (zero)			N / A	N / A	N / A
	Average			N / A	N / A	N / A
	High			N / A	N / A	N / A

Gas	Ladder	Validation of the acquisition of data	Check with the analyzer (error calibration)	Initial Verification to the Probe - Performance of the	Final Check to the Probe - Performance of the	Drift from the device
				TOLERANCE +/- 20%	TOLERANCE +/- 20%	TOLERANCE +/- 3%
SRT	Low (zero)			N / A	N / A	N / A
	Average					
	High					N / A

Primary standard gas concentrations							
Ladder	O2 (%)	CO2 (%)	CO (ppm)	SO2 (ppm)	NOX (ppm)	SRT (ppm)	Other
Average	12.59	10.08	487.9	499.3	529.1	15.0	500.0
High	22.51	17.91	935.5	924.6	903.3	30.0	900.0
Calibration Error Check Concentrations							
Ladder	O2 (%)	CO2 (%)	CO (ppm)	SO2 (ppm)	NOX (ppm)	SRT (ppm)	Other
Zero	0.00	0.00	0.0	0.0	0.0	0.0	0.0
Average	12.59	10.08	487.9	499.3	529.1	15.0	500.0
High	22.51	17.91	935.5	924.6	903.3	30.0	900.0
Systematic error checking concentrations							
Ladder	O2 (%)	CO2 (%)	CO (ppm)	SO2 (ppm)	NOX (ppm)	SRT (ppm)	Other
Average	12.59	10.08	487.9	499.3	529.1	15.0	500.0
System response time					Number of points used (stratification)		
					Use 12 points according to SPE1RM8 method		

SUMMARY OF CALIBRATION AND VERIFICATION OF DIRECT READING DEVICES						
Gas	Ladder	Validation of the acquisition of data	Check with the analyzer (error calibration)	Initial Verification to the Probe - Error systematic	Final Check to the Probe - Error systematic	Drift from the device
		TOLERANCE +/- 0.5%	TOLERANCE +/- 2%	+/- 5%	+/- 5%	TOLERANCE +/- 3%
O2	Low (zero)	0.00	0.00	1.07	1.02	0.04
	Average	0.00	0.04	0.09	0.09	0.00
	High	0.00	0.09	N / A	N / A	N / A
CO2	Low (zero)	0.00	0.11	0.06	1.17	1.12
	Average	0.00	0.17	0.00	0.45	0.45
	High	0.00	1.06	N / A	N / A	N / A
CO	Low (zero)	0.00	0.00	0.00	0.11	0.11
	Average	0.00	1.51	1.07	0.11	0.96
	High	0.00	0.05	N / A	N / A	N / A
SO2	Low (zero)	0.00	0.00	0.11	0.11	0.00
	Average	0.00	1.01	0.65	0.32	0.32
	High	0.00	0.82	N / A	N / A	N / A
NOX	Low (zero)	0.00	0.00	0.00	0.11	0.11
	Average	0.00	0.99	0.24	0.35	0.11
	High	0.00	0.92	N / A	N / A	N / A
OTHER	Low (zero)			N / A	N / A	N / A
	Average			N / A	N / A	N / A
	High					

Gas	Ladder	Validation of the acquisition of data	Check with the analyzer (error calibration)	Initial Verification to the Probe - Performance of the	Final Check to the Probe - Performance of the	Drift from the device
				TOLERANCE +/- 20%	TOLERANCE +/- 20%	TOLERANCE +/- 3%
SRT	Low (zero)			N / A	N / A	N / A
	Average					
	High					N / A

Primary standard gas concentrations							
Ladder	O2 (%)	CO2 (%)	CO (ppm)	SO2 (ppm)	NOX (ppm)	SRT (ppm)	Other
Average	12.59	10.08	487.9	499.3	529.1	15.0	500.0
High	22.51	17.91	935.5	924.6	903.3	30.0	900.0
Calibration Error Check Concentrations							
Ladder	O2 (%)	CO2 (%)	CO (ppm)	SO2 (ppm)	NOX (ppm)	SRT (ppm)	Other
Zero	0.00	0.00	0.0	0.0	0.0	0.0	0.0
Average	12.59	10.08	487.9	499.3	529.1	15.0	500.0
High	22.51	17.91	935.5	924.6	903.3	30.0	900.0
Systematic error checking concentrations							
Ladder	O2 (%)	CO2 (%)	CO (ppm)	SO2 (ppm)	NOX (ppm)	SRT (ppm)	Other
Average	12.59	10.08	487.9	499.3	529.1	15.0	500.0
System response time					Number of points used (stratification)		
					Use 12 points according to SPE1RM8 method		

SUMMARY OF CALIBRATION AND VERIFICATION OF DIRECT READING DEVICES						
Gas	Ladder	Validation of the acquisition of data	Check with the analyzer (error calibration)	Initial Verification to the Probe - Error systematic	Final Check to the Probe - Error systematic	Drift from the device
		TOLERANCE +/- 0.5%	TOLERANCE +/- 2%	+/- 5%	+/- 5%	TOLERANCE +/- 3%
O2	Low (zero)	0.00	0.00	1.20	1.33	0.13
	Average	0.00	0.04	0.00	0.04	0.04
	High	0.00	0.09	N / A	N / A	N / A
CO2	Low (zero)	0.00	0.11	0.06	0.67	0.61
	Average	0.00	0.17	0.84	1.40	0.56
	High	0.00	1.06	N / A	N / A	N / A
CO	Low (zero)	0.00	0.00	0.00	0.11	0.11
	Average	0.00	1.51	1.28	0.53	0.75
	High	0.00	0.05	N / A	N / A	N / A
SO2	Low (zero)	0.00	0.00	0.11	0.32	0.22
	Average	0.00	1.01	0.54	0.32	0.22
	High	0.00	0.82	N / A	N / A	N / A
NOX	Low (zero)	0.00	0.00	0.00	0.11	0.11
	Average	0.00	0.99	0.35	0.69	0.33
	High	0.00	0.92	N / A	N / A	N / A
OTHER	Low (zero)			N / A	N / A	N / A
	Average			N / A	N / A	N / A
	High			N / A	N / A	N / A

Gas	Ladder	Validation of the acquisition of data	Check with the analyzer (error calibration)	Initial Verification to the Probe - Performance of the	Final Check to the Probe - Performance of the	Drift from the device
				TOLERANCE +/- 20%	TOLERANCE +/- 20%	TOLERANCE +/- 3%
SRT	Low (zero)			N / A	N / A	N / A
	Average					
	High					N / A

Primary standard gas concentrations							
Ladder	O2 (%)	CO2 (%)	CO (ppm)	SO2 (ppm)	NOX (ppm)	SRT (ppm)	Other
Average	12.59	10.08	487.9	499.3	529.1	15.0	500.0
High	22.51	17.91	935.5	924.6	903.3	30.0	900.0
Calibration Error Check Concentrations							
Ladder	O2 (%)	CO2 (%)	CO (ppm)	SO2 (ppm)	NOX (ppm)	SRT (ppm)	Other
Zero	0.00	0.00	0.0	0.0	0.0	0.0	0.0
Average	12.59	10.08	487.9	499.3	529.1	15.0	500.0
High	22.51	17.91	935.5	924.6	903.3	30.0	900.0
Systematic error checking concentrations							
Ladder	O2 (%)	CO2 (%)	CO (ppm)	SO2 (ppm)	NOX (ppm)	SRT (ppm)	Other
Average	12.59	10.08	487.9	499.3	529.1	15.0	500.0
System response time					Number of points used (stratification)		
					Use 12 points according to SPE1RM8 method		

