



A.Lanfranco
& Associates Inc.

Environmental Consultants

Prepared for

**All Roads Construction
Ltd.**

Coquitlam, B.C.

EMISSION MONITORING REPORT

July 2026 COMPLIANCE SURVEY

Permit: GVA1145

Prepared by: L. Agassiz

Issued on: August 6, 2026

CERTIFICATION

The field monitoring for this survey was conducted by certified stack test technicians as required by the British Columbia Ministry of Environment (BC MOE) Field Sampling Manual.

The field crew consisted of:

Mr. L. Agassiz (certified), Mr. J. Gibbs (certified), and Mr. J. Dennis.

The report was prepared by Mr. L. Agassiz using reporting principles and guidelines generally acceptable to B.C. MOE and Metro Vancouver (MV).

The field crew and A. Lanfranco and Associates Inc. certify that the test methods used were MOE/MV approved reference methods for the parameters investigated.

Report reviewed on August 6, 2026, by:



Mark Lanfranco
President | Owner

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SUMMARY

The following table presents the average emission results for the listed parameters. The emission survey was conducted at the All-Roads Construction hot mix asphalt plant in Coquitlam, BC on July 30, 2026.

PARAMETER	RESULT	PERMITTED LEVEL
Particulate (mg/Sm ³ @ 16% O ₂)	2.49	30
Carbon Monoxide (mg/Sm ³ @ 16% O ₂)	63.7	200
Total Hydrocarbons (mg/Sm ³ @ 16% O ₂)	13.9	40
Flowrate (Sm ³ /min)	506	870
Temperature (°C)	116	

All results are at standard conditions of 20 °C and 101.325 kPa (dry)

There are no permit exceedances, and the results are like previous testing. The differences year by year are in a normal range of outcomes for this process.

1 TEST PROGRAM ORGANIZATION and INTRODUCTION

Plant Test Coordinator:	Mr. Dennis Eby Plant Manager All Roads Construction Ltd. D.Eby@allroadsconstruction.com
Sampling Coordinator:	Mr. Mark Lanfranco President Owner A. Lanfranco and Associates Inc. (604) 881-2582 mark.lanfranco@alanfranco.com
Sampling Crew:	Mr. L. Agassiz – A. Lanfranco and Associates Inc. Mr. J. Gibbs – A. Lanfranco and Associates Inc. Mr. J. Dennis – A. Lanfranco and Associates Inc.

In July 2026, All Roads commissioned A. Lanfranco and Associates Inc. of Surrey, BC to conduct an emission survey on the baghouse stack at their Coquitlam asphalt plant.

The purpose of the survey was to measure and report various emission parameters from the asphalt manufacturing process. The testing was conducted to determine compliance with permitted particulate matter, carbon monoxide, and organics discharges at 16% O₂. The emission limits are stipulated in All Roads Permit GVA1145.

This report documents the methods used and results found for the triplicate one-hour emission tests that were conducted on July 30, 2026.

2 PROCESS DESCRIPTION

The All Roads hot mix asphalt plant, located at 2320 Rogers Avenue in Coquitlam, B.C. is a rotary drum mix asphalt plant. The unit is a natural gas fired Gencor Ultra II drum burner.

Dust laden flue gases generated in the mixer and dryer are cleaned by a Gencor CFS151 Baghouse. Following the fabric filtration, cleaned flue gases are discharged to atmosphere through a 1.37-meter stack which is monitored by a Dwyer real time particulate monitoring system. An ID fan is employed in the system.

On July 30, 2026, the plant maintained an average production rate of about 200 tonnes/hr during the monitoring.

3 METHODOLOGY

The sampling and analytical methods used throughout this survey conform to the procedures outlined in the B.C. "Source Testing Code" 2020 Edition and the B.C. air analytical manual.

3.1 Sampling Techniques

Samples from the main stack were collected from two ports located at 90 degrees to each other. Particulate samples were taken with an APEX sample train (Fig. 1) equipped with a heated five-foot stainless-steel probe and heated filter assembly. The sample ports were about 3.5 diameters downstream and 1.0 diameters upstream of the nearest disturbances. From these criteria a 24-point, two traverse sampling regime was established for the particulate tests (Fig. 2 and 2a). Each point was sampled for two and one-half minutes resulting in the final sample volumes of about 1.2 cubic meters.

Velocities were measured with an S-type pitot tube and oil manometer. The probe and connecting glassware were brushed and rinsed with distilled water and acetone into a glass sample bottle after sample completion. Flue gas analysis (O_2 and CO_2) was conducted with Fyrite analysers and an on-line CEM system. Cyclonic flow was not present in the stack.

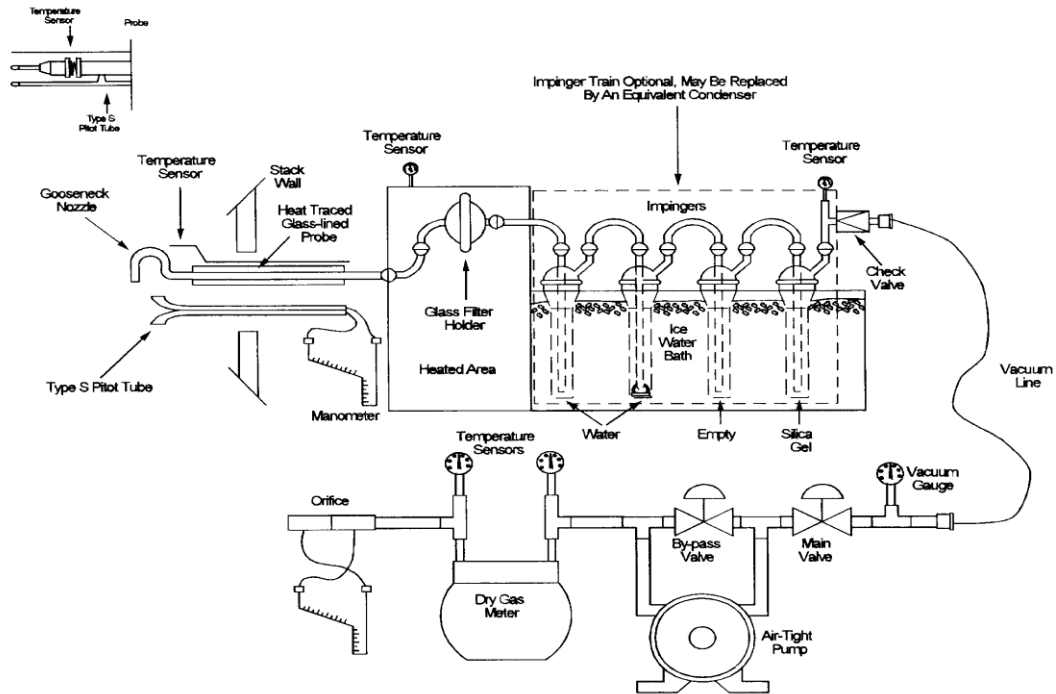


Figure 1: EPA Method 5 Particulate Sampling Train

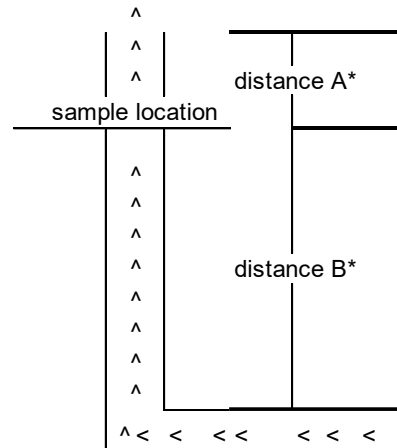
Figure - 2 Location of Traverse Points in Circular Stacks

(inches from inside wall to traverse point)

Client Stack I.D.: All Roads - Baghouse

Diameter (inches)	54	
Total Points	24	Diameters Upstream: 1
# of Ports Used	2	
Points / Traverse	12	Diameters Downstream: 3.5

Point	Distance from Wall
1	1.1
2	3.6
3	6.4
4	9.6
5	13.5
6	19.2
7	34.8
8	40.5
9	44.4
10	47.6
11	50.4
12	52.9



* distance A : duct diameters upstream from flow disturbance
 * distance B : duct diameters downstream from flow disturbance
 < < < < : flow direction

Figure 2a Location of Traverse Points in Circular Stacks

(percent of diameter from inside wall to traverse point)

Traverse Point Number on a Diameter	Number of Traverse Points on a Diameter					
	2	4	6	8	10	12
1	14.6%	6.7%	4.4%	3.2%	2.6%	2.1%
2	85.4%	25.0%	14.6%	10.5%	8.2%	6.7%
3		75.0%	29.6%	19.4%	14.6%	11.8%
4		93.3%	70.4%	32.3%	22.6%	17.7%
5			85.4%	67.7%	34.2%	25.0%
6			95.6%	80.6%	65.8%	35.6%
7				89.5%	77.4%	64.4%
8				96.8%	85.4%	75.0%
9					91.8%	82.3%
10					97.4%	88.2%
11						93.3%
12						97.9%

CEM System for Organics, CO and O₂

Continuous emission monitoring (CEM) was conducted for Organics (THC)/CO/O₂/CO₂ using A. Lanfranco and Associates Inc. CEM mobile laboratory. This unit is a trailer with the following instrumentation:

Name	CAI ZPA Analyzer	VIG FID
Manufacturer	California Analytical Instruments	Vig Industries, Inc.
Model	ZPA	20SHy10NAT
Serial Number	N0C0606	9060725
Parameters	O ₂ , SO ₂ , CO ₂ , CO	THC, VOC
Ranges	O ₂ : 0-25%, CO ₂ : 0-40%, SO ₂ : 0-200 or 0-2000 ppm, CO: 0-500 or 0-2500 ppm	0-10, 0-100, 0-1000, or 0-10000 ppm
Analyzer Type	NDIR (non-dispersive infrared) and paramagnetic	FID - Flame Ionizing Detector
Description	This instrument measures the concentration of SO ₂ , CO ₂ , and CO contained in sampling gas on the principle that different atomic molecules have an absorption spectrum in the wave band of infrared rays, and the intensity of absorption is determined by the Lambert-Beer law. O ₂ is measured with a separate paramagnetic sensor	The Total Hydrocarbon Analyzer Model-20-S measures concentrations of a wide variety of hydrocarbons in gas mixtures and in air using a Heated Flame Ionization Detector (FID). The process starts with a hydrogen flame. The resulting flame burns such a temperature as to pyrolyze most organic compounds producing ions and electrons in proportion to the concentration of carbon atoms present. Two plates are presented to the ions, one plate is electrically charged, the other plate, the collector is attached to a current to voltage amplifier. The ions are attracted to the collector where upon the ions cause a current to be induced.

A diagram of the sampling, conditioning and analyzer system is provided in Figure 3. With this system the stack gas is withdrawn from the source through a coarse filter and stainless-steel probe with associated pumps, filters and water removal components. The THC analyzer withdrew a side-stream of the filtered gas for hot FID analysis.

Prior to compliance testing and between each test all measuring instrumentation was calibrated with Protocol 1 and NIST Traceable, 1% certified calibration gas standards. Calibration gas certificates are appended.

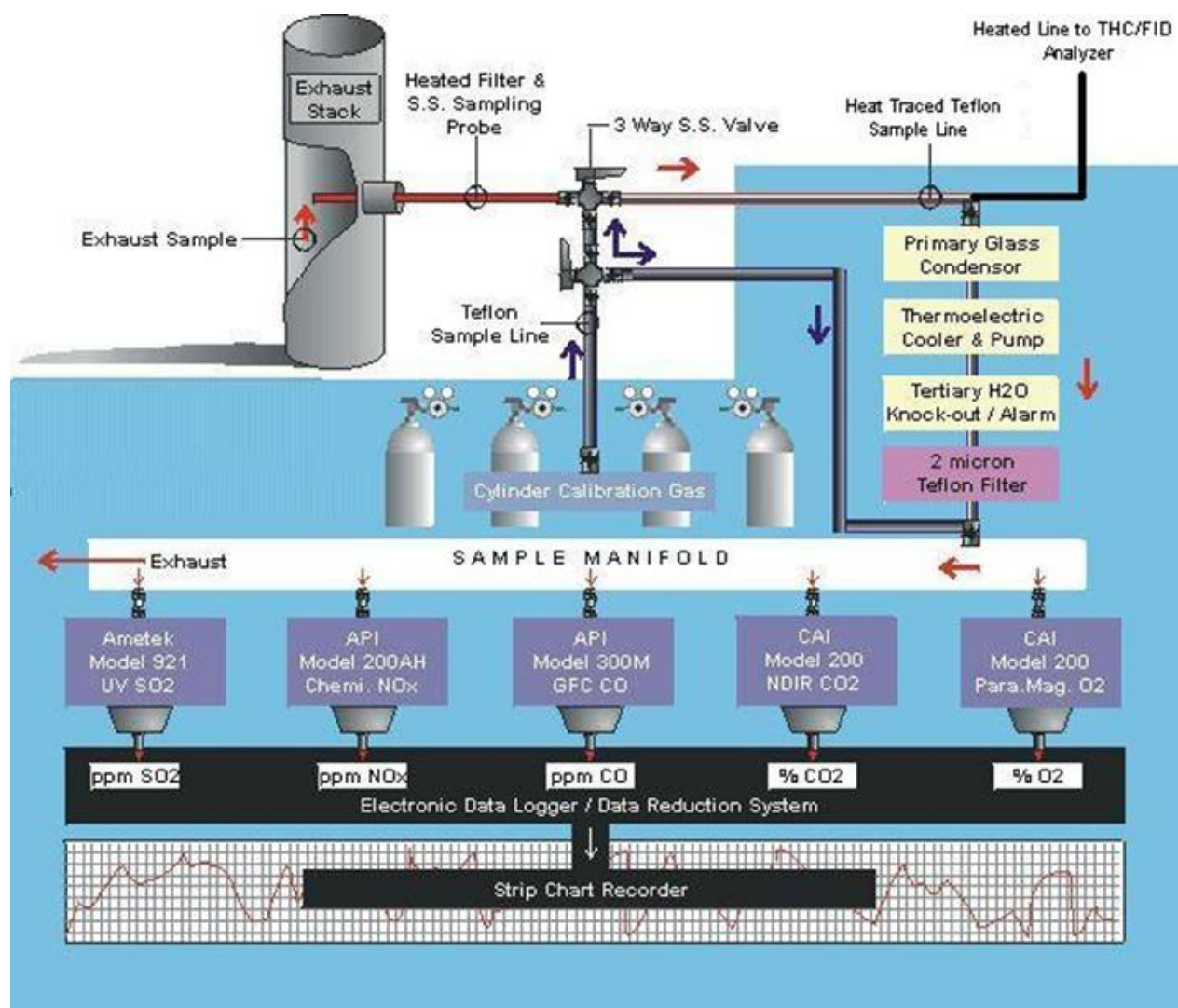


Figure 3 – CEM Measurement System Schematic

3.2 Analytical Techniques

Gravimetric analysis of the particulate samples was conducted by A. Lanfranco and Associates Inc. at their Surrey laboratory. The filters were conditioned by drying at 105 °C and desiccating for 24 hours. Final weighing of the filter occurred after the conditioning process, at which time the initial weight of the filter was subtracted. Probe washings were evaporated to dryness in porcelain dishes, desiccated for 24 hours and weighed. Blanks were carried through all procedures

CEM data was collected by data acquisition system by comparing stack gas responses to calibration gas responses.

Calibration gas mixtures used were:

Cylinder Name	Cylinder NIST Number	Expiry Date	Pressure (PSI)	THC (ppm)	CO (ppm)	O ₂ (Vol. %)	CO ₂ (Vol. %)
Zero Gas (N ₂)	CC45773	12-Jun-33	1850	0	0	0	0
1 Gas	T40KDK8	16-Sep-33	450	-	493.3	-	-
2 Gas	T357U1F	12-Mar-29	1220	-	255.4	-	-
Low Meth	CC137247	6-Feb-32	1100	45.05	-	-	-
Mid Meth	T2L7KA1	12-Feb-32	910	91.98	-	-	-
O ₂ /CO ₂	SA250268A	12-Jun-34	1980	-	-	10.90	10.98

4 RESULTS

The results of the particulate and stack parameters were calculated using a computer program consistent with reporting requirements of Metro Vancouver. Standard conditions used were 20 °C and 101.325 kPa (dry).

Detailed test results are presented in Table 1. Supporting data is presented in Tables 2, 3 and the Appendices. CEM minutely averages are presented in Appendix 1. Corrections to 16% O₂ were made with CEM data. Total Hydrocarbons are expressed as Methane (CH₄).

TABLE 1: Baghouse Stack Emission Test Results

Parameter		Test 1	Test 2	Test 3	Average
Test Date		30-Jul-26	30-Jul-26	30-Jul-26	
Test Time		07:05 - 08:06	08:42 -09:43	10:03 - 11:04	
CEM Test Time		07:05 - 08:05	08:42 - 09:42	10:03 - 11:03	
Duration	(minutes)	60	60	60	
Particulate	(mg/Sm ³)	4.08	3.91	4.61	4.20
Particulate	(mg/Sm ³ @ 16% O ₂)	2.40	2.32	2.74	2.49
Particulate	(kg/hr)	0.12	0.12	0.14	0.13
Particulate	(kg/day)	2.95	2.89	3.34	3.06
Flowrate	(Sm ³ /min)	502	512	502	506
Flowrate	(Am ³ /min)	912	907	909	909
Temperature	(°C)	116	116	116	116
CO	(mg/Sm ³ @ 16% O ₂)	64.5	66.8	59.6	63.7
THC	(mg/Sm ³ @ 16% O ₂)	14.6	13.3	13.7	13.9
O ₂	(vol % dry)	12.6	12.6	12.7	12.6
CO ₂	(vol % dry)	4.78	4.74	4.75	4.76
H ₂ O	(vol %)	27.0	25.3	26.9	26.4
Isokinetic Variation	(%)	106	97.9	102	102

Standard conditions (S) of 20 °C and 101.325 kPa dry

TABLE 2: PROCESS OPERATING CONDITIONS

Run	Date	Run Time	Production Rate (Tonnes/hr)	Mix Temp. (°C)	RAP
Run 1	30-Jul-26	07:05 - 08:06	200	160	20%
Run 2	30-Jul-26	08:42 -09:43	200	160	20%
Run 3	30-Jul-26	10:03 - 11:04	200	160	20%
Average			200	160	20%

TABLE 3: GRAMS PER TONNE OF ASPHALT

Parameter	Mass Emission (grams/tonne of asphalt)
Particulate Matter	0.38
Carbon Monoxide	9.66
Total Hydrocarbons	2.10

5 DISCUSSION OF RESULTS

Particulate emissions from the asphalt plant ranged from 2.32 to 2.74 mg/Sm³ at 16% O₂, averaging 2.49 mg/Sm³ at 16% O₂. This result is well below the permitted level of 30 mg/Sm³ @ 16% O₂ and indicates that the particulate abatement system is functioning at an acceptable level.

The carbon monoxide, organics, volumetric flowrate and particulate for this survey are in compliance with All Roads Construction Ltd. Permit GVA1145 dated August 30, 2022.

There were no problems encountered in sample collection or analysis. Particulate samples were collected isokinetically at all points and the process operated in a normal manner during testing. The test results, therefore, are considered to be an accurate representation of emission characteristics for the process conditions maintained on the test date.

APPENDIX 1

COMPUTER OUTPUTS of MEASURED and CALCULATED DATA

Client: All Roads
Jobsite: Coquitlam, BC
Source: Baghouse Stack

Date: 30-Jul-26
Run: 1 - Particulate
Run Time: 07:05 - 08:06

Particulate Concentration:	4.1 mg/dscm	0.0018 gr/dscf
	2.2 mg/Acm	0.0010 gr/Acf
	2.4 mg/dscm (@ 16% O2)	0.0010 gr/dscf (@ 16% O2)

Emission Rate:	0.12 kg/hr	0.271 lb/hr
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Sample Gas Volume:	1.2256 dscm	43.281 dscf
Total Sample Time:	60.0 minutes	

Average Isokineticity:	106.4 %
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Flue Gas Characteristics

Moisture:	26.99 %	
Temperature	116.3 oC	241.3 oF
Flow	502.5 dscm/min	17746 dscf/min
	8.37 dscm/sec	295.8 dscf/sec
	911.9 Acm/min	32203 Acf/min
Velocity	10.286 m/sec	33.75 f/sec
Gas Analysis	12.56 % O2	4.78 % CO2
	29.268 Mol. Wt (g/gmole) Dry	26.226 Mol. Wt (g/gmole) Wet

*** Standard Conditions:** Metric: 20 deg C, 101.325 kPa
 Imperial: 68 deg F, 29.92 in.Hg

Client: All Roads
Jobsite: Coquitlam, BC
Source: Baghouse Stack

Date: 30-Jul-26
Run: 1 - Particulate
Run Time: 07:05 - 08:06

Control Unit (Y) 1.0317
 Nozzle Diameter (in.) 0.3338
 Pitot Factor 0.8381
 Baro. Press. (in. Hg) 30.01
 Static Press. (in. H₂O) -0.15
 Stack Height (ft) 40
 Stack Diameter (in.) 54.0
 Stack Area (sq.ft.) 15.904
 Minutes Per Reading 2.5
 Minutes Per Point 2.5
 Port Length (inches) 3.5

Gas Analysis (Vol. %):

	CO ₂	O ₂
CEMS	4.78	12.56
Average =	<u>4.78</u>	<u>12.56</u>

Condensate Collection:

Impinger 1 (grams)	245.0
Impinger 2 (grams)	75.0
Impinger 3 (grams)	10.0
Impinger 4 (grams)	10.0

Total Gain (grams) **340.0**

Collection:

Filter (grams) **0.00050**
Washings (grams) **0.00450**

Total (grams) **0.00500**

Traverse	Point	Time (min.)	Dry Gas Meter (ft ³)	Pitot ^P (in. H ₂ O)	Orifice ^H (in. H ₂ O)	Dry Gas Temperature Inlet (oF)	Outlet (oF)	Stack (oF)	Wall Dist. (in.)	Isokin. (%)
		0.0	380.010							
1	1	2.5	381.850	0.280	1.92	70	70	249	1.1	106.6
	2	5.0	383.660	0.270	1.87	70	70	245	3.6	106.5
	3	7.5	385.440	0.260	1.80	70	70	244	6.4	106.6
	4	10.0	387.280	0.280	1.93	70	70	245	9.6	106.3
	5	12.5	389.160	0.290	2.01	70	70	241	13.5	106.4
	6	15.0	390.970	0.270	1.87	70	70	242	19.2	106.2
	7	17.5	392.790	0.270	1.88	72	72	241	34.8	106.4
	8	20.0	394.610	0.270	1.88	72	72	241	40.5	106.4
	9	22.5	396.500	0.290	2.02	72	72	242	44.4	106.7
	10	25.0	398.250	0.250	1.74	73	73	242	47.6	106.1
	11	27.5	399.970	0.240	1.68	73	73	241	50.4	106.4
	12	30.0	401.620	0.220	1.54	73	73	240	52.9	106.5
		0.0	401.620							
2	1	2.5	403.340	0.240	1.68	72	72	239	1.1	106.4
	2	5.0	405.030	0.230	1.61	73	73	239	3.6	106.6
	3	7.5	406.640	0.210	1.47	73	73	240	6.4	106.3
	4	10.0	408.290	0.220	1.54	73	73	240	9.6	106.5
	5	12.5	409.980	0.230	1.61	74	74	241	13.5	106.5
	6	15.0	411.670	0.230	1.61	73	73	239	19.2	106.6
	7	17.5	413.390	0.240	1.68	73	73	239	34.8	106.2
	8	20.0	415.150	0.250	1.75	74	74	240	40.5	106.4
	9	22.5	416.870	0.240	1.68	74	74	240	44.4	106.1
	10	25.0	418.630	0.250	1.75	74	74	241	47.6	106.5
	11	27.5	420.420	0.260	1.82	74	74	240	50.4	106.1
	12	30.0	422.000	0.200	1.40	74	74	239	52.9	106.6
			Average:	0.250	1.739	72.3	72.3	241.3		106.4

Client: All Roads
Jobsite: Coquitlam, BC
Source: Baghouse Stack

Date: 30-Jul-26
Run: 2 - Particulate
Run Time: 08:42 -09:43

Particulate Concentration:	3.9 mg/dscm	0.0017 gr/dscf
	2.2 mg/Acm	0.0010 gr/Acf

2.3 mg/dscm (@ 16% O2) 0.0010 gr/dscf (@ 16% O2)

Emission Rate:	0.12 kg/hr	0.265 lb/hr
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Sample Gas Volume:	1.1508 dscm	40.641 dscf
Total Sample Time:	60.0 minutes	

Average Isokineticity: 97.9 %

Flue Gas Characteristics

Moisture: 25.27 %

Temperature	115.6 oC	240.0 oF
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Flow	512.5 dscm/min	18098 dscf/min
	8.54 dscm/sec	301.6 dscf/sec
	907.0 Acm/min	32030 Acf/min

Velocity	10.231 m/sec	33.57 f/sec
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Gas Analysis	12.64 % O2	4.74 % CO2
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29.264 Mol. Wt (g/gmole) Dry 26.417 Mol. Wt (g/gmole) Wet

* **Standard Conditions:** Metric: 20 deg C, 101.325 kPa
Imperial: 68 deg F, 29.92 in.Hg

Client: All Roads
Jobsite: Coquitlam, BC
Source: Baghouse Stack

Date: 30-Jul-26
Run: 2 - Particulate
Run Time: 08:42 -09:43

Control Unit (Y) 1.0317
 Nozzle Diameter (in.) 0.3338
 Pitot Factor 0.8381
 Baro. Press. (in. Hg) 30.01
 Static Press. (in. H₂O) -0.15
 Stack Height (ft) 40
 Stack Diameter (in.) 54.0
 Stack Area (sq.ft.) 15.904
 Minutes Per Reading 2.5
 Minutes Per Point 2.5
 Port Length (inches) 3.5

Gas Analysis (Vol. %):

	CO ₂	O ₂
CEMS	4.74	12.64
Average =	<u>4.74</u>	<u>12.64</u>

Condensate Collection:

Impinger 1 (grams)	250.0
Impinger 2 (grams)	30.0
Impinger 3 (grams)	5.0
Impinger 4 (grams)	7.0

Total Gain (grams) 292.0

Collection:

Filter (grams)	0.00050
Washings (grams)	0.00400
Total (grams)	<u>0.00450</u>

Traverse	Point	Time (min.)	Dry Gas Meter (ft ³)	Pitot ^P (in. H ₂ O)	Orifice ^H (in. H ₂ O)	Dry Gas Temperature		Stack (oF)	Wall Dist. (in.)	Isokin. (%)
						Inlet (oF)	Outlet (oF)			
		0.0	422.173							
1	1	2.5	423.800	0.240	1.49	77	77	241	1.1	97.9
	2	5.0	425.390	0.230	1.43	77	77	241	3.6	97.7
	3	7.5	426.950	0.220	1.37	76	76	240	6.4	98.1
	4	10.0	428.510	0.220	1.37	76	76	240	9.6	98.1
	5	12.5	430.100	0.230	1.43	76	76	240	13.5	97.8
	6	15.0	431.660	0.220	1.37	76	76	239	19.2	98.0
	7	17.5	433.290	0.240	1.49	77	77	240	34.8	98.0
	8	20.0	434.950	0.250	1.55	77	77	241	40.5	97.9
	9	22.5	436.580	0.240	1.49	77	77	241	44.4	98.0
	10	25.0	438.250	0.250	1.56	78	78	240	47.6	98.2
	11	27.5	439.920	0.250	1.56	78	78	240	50.4	98.2
	12	30.0	441.450	0.210	1.31	78	78	241	52.9	98.2
		0.0	441.450							
2	1	2.5	443.180	0.270	1.68	78	78	240	1.1	97.9
	2	5.0	444.940	0.280	1.75	78	78	240	3.6	97.8
	3	7.5	446.670	0.270	1.68	78	78	240	6.4	97.9
	4	10.0	448.430	0.280	1.75	78	78	239	9.6	97.8
	5	12.5	450.230	0.290	1.81	79	79	239	13.5	98.1
	6	15.0	451.970	0.270	1.69	79	79	239	19.2	98.2
	7	17.5	453.700	0.270	1.69	79	79	240	34.8	97.7
	8	20.0	455.430	0.270	1.68	78	78	240	40.5	97.9
	9	22.5	457.220	0.290	1.81	78	78	240	44.4	97.8
	10	25.0	458.890	0.250	1.56	79	79	240	47.6	98.0
	11	27.5	460.490	0.230	1.43	79	79	240	50.4	97.9
	12	30.0	462.020	0.210	1.51	80	80	240	52.9	97.8
			Average:	0.249	1.561	77.8	77.8	240.0		97.9

Client: All Roads
Jobsite: Coquitlam, BC
Source: Baghouse Stack

Date: 30-Jul-26
Run: 3 - Particulate
Run Time: 10:03 - 11:04

Particulate Concentration: 4.6 mg/dscm 0.0020 gr/dscf
 2.5 mg/Acm 0.0011 gr/Acf
 2.7 mg/dscm (@ 16% O2) 0.0012 gr/dscf (@ 16% O2)

Emission Rate: 0.14 kg/hr 0.307 lb/hr

Sample Gas Volume: 1.1704 dscm 41.332 dscf
Total Sample Time: 60.0 minutes

Average Isokineticity: 101.7 %

Flue Gas Characteristics

Moisture: 26.89 %

Temperature 115.8 oC 240.4 oF

Flow 502.2 dscm/min 17736 dscf/min
 8.37 dscm/sec 295.6 dscf/sec
 909.0 Acm/min 32100 Acf/min

Velocity 10.253 m/sec 33.64 f/sec

Gas Analysis 12.66 % O2 4.75 % CO2

29.266 Mol. Wt (g/gmole) Dry 26.236 Mol. Wt (g/gmole) Wet

* **Standard Conditions:** Metric: 20 deg C, 101.325 kPa
 Imperial: 68 deg F, 29.92 in.Hg

Client: All Roads
Jobsite: Coquitlam, BC
Source: Baghouse Stack

Date: 30-Jul-26
Run: 3 - Particulate
Run Time: 10:03 - 11:04

Control Unit (Y) 1.0317
Nozzle Diameter (in.) 0.3338
Pitot Factor 0.8381
Baro. Press. (in. Hg) 30.01
Static Press. (in. H2O) -0.15
Stack Height (ft) 40
Stack Diameter (in.) 54.0
Stack Area (sq.ft.) 15.904
Minutes Per Reading 2.5
Minutes Per Point 2.5
Port Length (inches) 3.5

Gas Analysis (Vol. %):

	CO2	O2
CEMS	4.75	12.66
Average =	<u>4.75</u>	<u>12.66</u>

Condensate Collection:

Impinger 1 (grams)	245.0
Impinger 2 (grams)	65.0
Impinger 3 (grams)	3.0
Impinger 4 (grams)	10.0

Total Gain (grams) **323.0**

Collection:

Filter (grams)	0.00030
Washings (grams)	0.00510

Total (grams) **0.00540**

Traverse	Point	Time (min.)	Dry Gas Meter (ft3)	Pitot ^P (in. H2O)	Orifice ^H (in. H2O)	Dry Gas Temperature Inlet (oF)	Outlet (oF)	Stack (oF)	Wall Dist. (in.)	Isokin. (%)
		0.0	462.213							
1	1	2.5	463.990	0.270	1.76	83	83	242	1.1	101.7
	2	5.0	465.800	0.280	1.82	83	83	242	3.6	101.7
	3	7.5	467.580	0.270	1.76	83	83	242	6.4	101.8
	4	10.0	469.390	0.280	1.83	83	83	241	9.6	101.6
	5	12.5	471.230	0.290	1.89	83	83	241	13.5	101.5
	6	15.0	473.010	0.270	1.76	83	83	240	19.2	101.7
	7	17.5	474.790	0.270	1.77	84	84	240	34.8	101.5
	8	20.0	476.540	0.260	1.70	84	84	240	40.5	101.7
	9	22.5	478.360	0.280	1.84	85	85	240	44.4	101.7
	10	25.0	480.050	0.240	1.58	85	85	239	47.6	101.9
	11	27.5	481.700	0.230	1.51	85	85	239	50.4	101.6
	12	30.0	483.310	0.220	1.40	85	85	240	52.9	101.4
		0.0	483.310							
	1	2.5	484.990	0.240	1.57	85	85	240	1.1	101.4
	2	5.0	486.640	0.230	1.51	85	85	240	3.6	101.7
	3	7.5	488.250	0.220	1.44	85	85	240	6.4	101.4
	4	10.0	489.900	0.230	1.51	85	85	241	9.6	101.8
	5	12.5	491.550	0.230	1.51	86	86	241	13.5	101.6
	6	15.0	493.160	0.220	1.44	86	86	241	19.2	101.3
	7	17.5	494.850	0.240	1.57	86	86	241	34.8	101.9
	8	20.0	496.570	0.250	1.64	86	86	241	40.5	101.6
	9	22.5	498.260	0.240	1.58	86	86	240	44.4	101.8
	10	25.0	499.980	0.250	1.64	85	85	240	47.6	101.7
	11	27.5	501.670	0.240	1.58	85	85	239	50.4	101.9
	12	30.0	503.250	0.210	1.38	85	85	239	52.9	101.8
			Average:	0.248	1.625	84.6	84.6	240.4		101.7

A. Lanfranco and Associates Inc.
METLab CEM Report

Client: All Roads - Coquitlam, BC
Source: Baghouse
Run: 1

Moisture % =
26.99

O2 Correction 16
Year: 2026

Date	Time	O ₂ (Vol. %)	CO ₂ (Vol. %)	CO (ppm)	THC (ppm as CH ₄)
30-Jul	706	12.47	4.83	96.92	26.88
30-Jul	707	12.38	4.88	98.63	23.66
30-Jul	708	12.51	4.81	98.03	28.55
30-Jul	709	12.41	4.86	98.84	28.36
30-Jul	710	12.45	4.85	101.45	30.36
30-Jul	711	12.44	4.85	99.64	25.82
30-Jul	712	12.38	4.88	103.07	31.73
30-Jul	713	12.51	4.81	102.26	32.05
30-Jul	714	12.41	4.86	103.77	32.83
30-Jul	715	12.51	4.81	101.35	31.21
30-Jul	716	12.43	4.85	103.47	31.96
30-Jul	717	12.49	4.82	103.57	30.43
30-Jul	718	12.53	4.80	96.52	28.08
30-Jul	719	12.47	4.83	99.14	27.22
30-Jul	720	12.62	4.75	93.80	26.85
30-Jul	721	12.48	4.82	94.60	26.29
30-Jul	722	12.59	4.77	92.69	26.81
30-Jul	723	12.54	4.79	91.48	25.16
30-Jul	724	12.55	4.79	94.81	27.09
30-Jul	725	12.57	4.77	92.39	26.92
30-Jul	726	12.46	4.84	97.83	28.53
30-Jul	727	12.58	4.77	96.72	28.56
30-Jul	728	12.47	4.84	102.76	32.64
30-Jul	729	12.52	4.81	102.16	31.12
30-Jul	730	12.49	4.82	100.85	31.15
30-Jul	731	12.49	4.82	104.78	32.19
30-Jul	732	12.55	4.79	100.25	31.71
30-Jul	733	12.46	4.84	101.76	29.63
30-Jul	734	12.60	4.76	96.42	30.38
30-Jul	735	12.50	4.81	98.33	30.36
30-Jul	736	12.58	4.78	96.32	28.78
30-Jul	737	12.58	4.77	95.81	27.88
30-Jul	738	12.56	4.78	95.21	27.09
30-Jul	739	12.67	4.73	89.67	25.54
30-Jul	740	12.55	4.79	90.67	26.13
30-Jul	741	12.67	4.73	89.97	25.88
30-Jul	742	12.58	4.77	90.88	25.57
30-Jul	743	12.60	4.76	91.78	26.18
30-Jul	744	12.61	4.76	91.38	27.49
30-Jul	745	12.55	4.79	93.60	27.10
30-Jul	746	12.68	4.71	88.66	24.69
30-Jul	747	12.57	4.78	91.08	27.05
30-Jul	748	12.64	4.74	90.88	25.45
30-Jul	749	12.59	4.77	90.67	22.49
30-Jul	750	12.61	4.76	89.67	23.24
30-Jul	751	12.64	4.74	86.14	24.64
30-Jul	752	12.54	4.80	91.08	26.22
30-Jul	753	12.69	4.71	87.75	23.43
30-Jul	754	12.58	4.77	88.56	26.11
30-Jul	755	12.66	4.72	87.25	23.36
30-Jul	756	12.62	4.75	88.26	25.31
30-Jul	757	12.62	4.74	88.56	22.61
30-Jul	758	12.70	4.71	86.54	24.88
30-Jul	759	12.62	4.76	88.16	24.00
30-Jul	800	12.73	4.68	85.74	22.79
30-Jul	801	12.62	4.75	86.95	25.88
30-Jul	802	12.66	4.72	88.26	24.03
30-Jul	803	12.65	4.74	86.24	22.72
30-Jul	804	12.61	4.75	86.14	24.36
30-Jul	805	12.70	4.70	84.23	23.41

Average	12.56	4.78	94.2	27.1
Minimum	12.38	4.68	84.2	22.5
Maximum	12.73	4.88	104.8	32.8

Mass Concentration (mg/m3 dry) **n/a** **n/a** **109.8** **24.8**

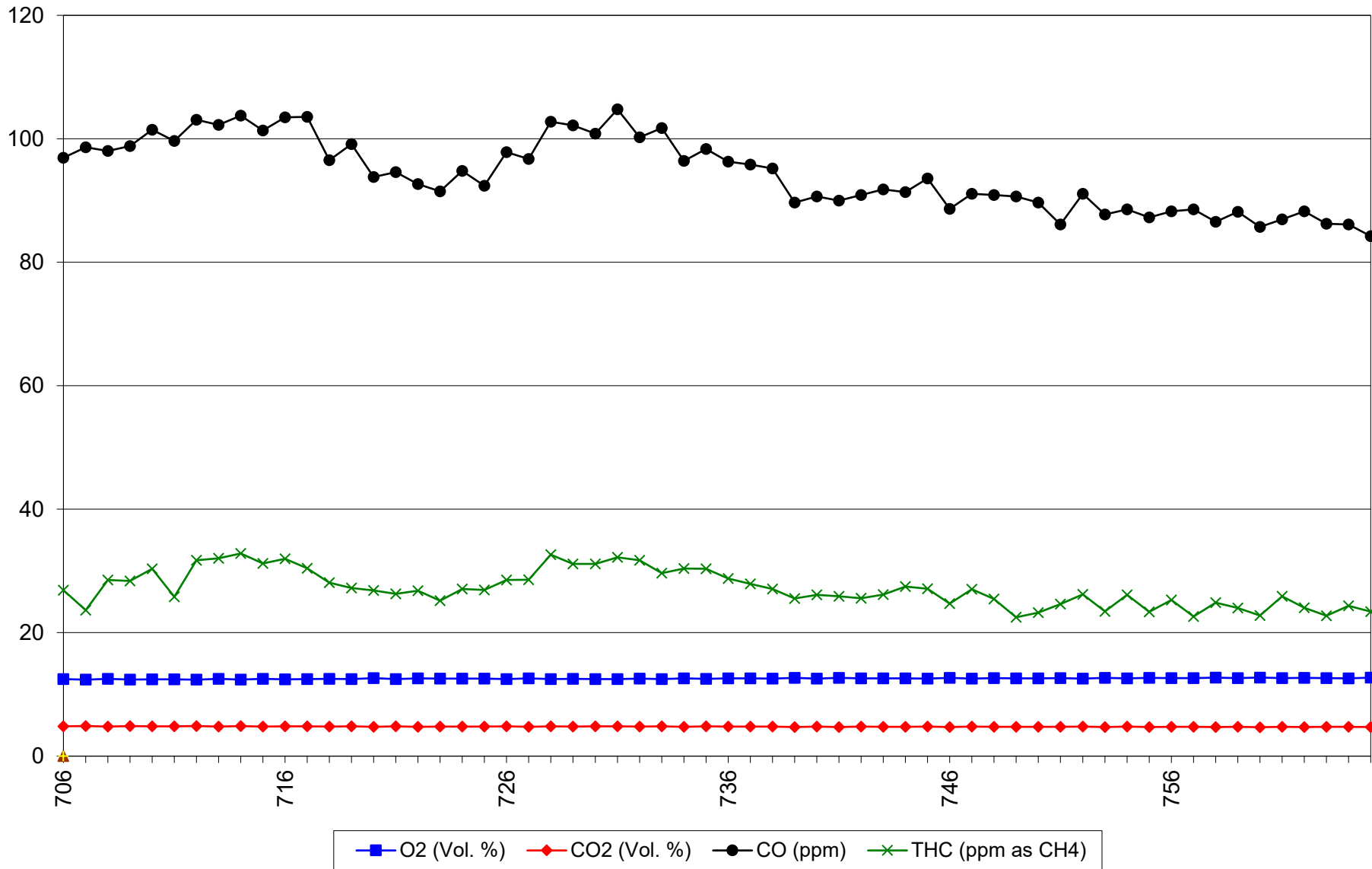
Mass Concentration (mg/m3 dry) Corrected to 16% O2 **64.5** **14.6**

Range 25.0 20.00 500.0 100.0

Calibration Summary	O2	CO2	CO	THC
Gas (Cert. Value)	10.90	10.98	255.4	45.05
Analyzer Initial Span	10.92	10.97	254.0	44.90
Analyzer Initial Zero	0.07	0.19	-0.80	-0.2
Initial Gas Response	10.93	10.98	256.0	44.9
Final Gas Response	10.95	10.99	251.0	42.0
Initial Zero Response	0.08	0.20	-0.8	-0.20
Final Zero Response	0.05	0.03	0.8	-0.20

Error Summary				
Analyzer Cal. Errr (+/- 2% or 5% THC)	0.1%	0.0%	-0.3%	-0.3%
Analyzer Zero Err (+/- 2% or 5% THC)	0.3%	1.0%	-0.2%	-0.2%
Initial Span Syster (+/- 5%)	0.0%	0.0%	0.4%	0.0%
Final Span Syster (+/- 5%)	0.1%	0.1%	-0.6%	-2.9%
Initial Zero Syster (+/- 5%)	0.0%	0.1%	0.0%	0.0%
Final Zero Syster (+/- 5%)	-0.1%	-0.8%	0.3%	0.0%
Test Span Drift (+/- 3%)	0.1%	0.0%	-1.0%	-2.9%
Test Zero Drift (+/- 3%)	-0.1%	-0.9%	0.3%	0.0%

Baghouse Stack - Run 1 (July 30, 2026)
All Roads - Coquitlam, BC
METLab CEM Results



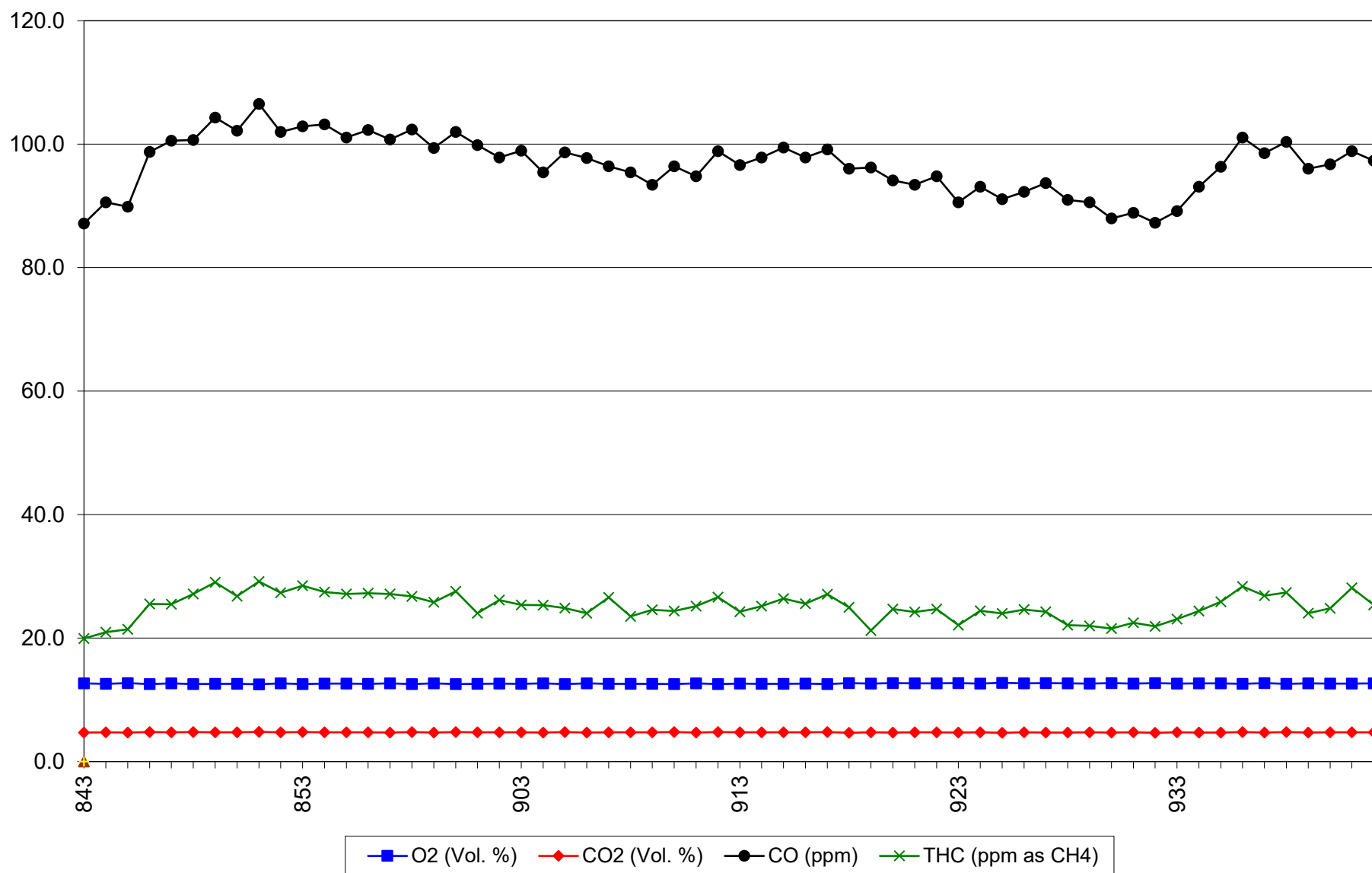
A. Lanfranco and Associates Inc.
METLab CEM Report

Client:	All Roads - Coquitlam, BC			Moisture % =	
Source:	Baghouse	O2 Correction	16	25.27	
Run:	2	Year:	2026		
Date	Time	O2 (Vol. %)	CO2 (Vol. %)	CO (ppm)	THC (ppm as CH4)
30-Jul	843	12.69	4.72	87.15	19.94
30-Jul	844	12.62	4.76	90.58	20.94
30-Jul	845	12.71	4.70	89.87	21.43
30-Jul	846	12.57	4.78	98.75	25.54
30-Jul	847	12.66	4.74	100.57	25.50
30-Jul	848	12.58	4.78	100.67	27.16
30-Jul	849	12.59	4.77	104.30	29.06
30-Jul	850	12.62	4.75	102.18	26.78
30-Jul	851	12.53	4.81	106.52	29.18
30-Jul	852	12.66	4.73	101.98	27.35
30-Jul	853	12.57	4.78	102.89	28.51
30-Jul	854	12.63	4.75	103.19	27.45
30-Jul	855	12.63	4.74	101.07	27.14
30-Jul	856	12.61	4.76	102.28	27.28
30-Jul	857	12.67	4.73	100.77	27.14
30-Jul	858	12.58	4.78	102.38	26.76
30-Jul	859	12.69	4.71	99.36	25.81
30-Jul	900	12.58	4.78	101.98	27.58
30-Jul	901	12.62	4.75	99.86	24.03
30-Jul	902	12.64	4.74	97.84	26.15
30-Jul	903	12.60	4.76	98.95	25.36
30-Jul	904	12.69	4.71	95.42	25.33
30-Jul	905	12.58	4.77	98.65	24.87
30-Jul	906	12.69	4.71	97.74	24.05
30-Jul	907	12.59	4.77	96.43	26.59
30-Jul	908	12.62	4.76	95.42	23.54
30-Jul	909	12.62	4.75	93.40	24.58
30-Jul	910	12.56	4.80	96.43	24.38
30-Jul	911	12.69	4.72	94.82	25.18
30-Jul	912	12.57	4.78	98.85	26.64
30-Jul	913	12.65	4.74	96.63	24.26
30-Jul	914	12.60	4.77	97.84	25.19
30-Jul	915	12.61	4.76	99.46	26.40
30-Jul	916	12.65	4.74	97.84	25.56
30-Jul	917	12.57	4.78	99.15	27.13
30-Jul	918	12.73	4.69	96.03	25.00
30-Jul	919	12.63	4.76	96.23	21.22
30-Jul	920	12.72	4.70	94.11	24.72
30-Jul	921	12.66	4.73	93.40	24.25
30-Jul	922	12.67	4.73	94.82	24.73
30-Jul	923	12.72	4.70	90.58	22.12
30-Jul	924	12.63	4.76	93.10	24.43
30-Jul	925	12.77	4.67	91.08	24.00
30-Jul	926	12.66	4.73	92.30	24.62
30-Jul	927	12.70	4.71	93.71	24.29
30-Jul	928	12.67	4.73	90.98	22.10
30-Jul	929	12.65	4.74	90.58	21.98
30-Jul	930	12.71	4.70	87.96	21.54
30-Jul	931	12.64	4.74	88.87	22.49
30-Jul	932	12.73	4.69	87.25	21.92
30-Jul	933	12.63	4.75	89.17	23.07
30-Jul	934	12.67	4.73	93.10	24.38
30-Jul	935	12.66	4.73	96.33	25.89
30-Jul	936	12.59	4.77	101.07	28.37
30-Jul	937	12.70	4.71	98.55	26.88
30-Jul	938	12.60	4.77	100.36	27.38
30-Jul	939	12.68	4.72	96.03	24.04
30-Jul	940	12.63	4.75	96.73	24.84
30-Jul	941	12.65	4.73	98.85	28.14
30-Jul	942	12.66	4.74	97.34	25.37
Average		12.64	4.74	96.7	25.1
Minimum		12.53	4.67	87.2	19.9
Maximum		12.77	4.81	106.5	29.2
Mass Concentration (mg/m3 dry)		n/a	n/a	112.6	22.4
Mass Concentration (mg/m3 dry) Corrected to 16% O2				66.8	13.3
Range		25.0	20.00	500.0	100.0
Calibration Summary		O2	CO2	CO	THC
Gas (Cert. Value)		10.90	10.98	255.4	45.05
Analyzer Initial Span		10.92	10.97	254.0	44.90
Analyzer Initial Zero		0.07	0.19	-0.80	-0.2
Initial Gas Response		10.95	10.99	251.0	42.0
Final Gas Response		10.92	10.98	253.0	44.9
Initial Zero Response		0.05	0.03	0.8	-0.20
Final Zero Response		0.06	-0.02	-3.2	-0.25
Error Summary					
Analyzer Cal. Errc (+/- 2% or 5% TH		0.1%	0.0%	-0.3%	-0.3%
Analyzer Zero Errn (+/- 2% or 5% TH		0.3%	1.0%	-0.2%	-0.2%
Initial Span Syster (+/- 5%)		0.1%	0.1%	-0.6%	-2.9%
Final Span System (+/- 5%)		0.0%	0.0%	-0.2%	0.0%
Initial Zero System (+/- 5%)		-0.1%	-0.8%	0.3%	0.0%
Final Zero System (+/- 5%)		0.0%	-1.1%	-0.5%	-0.1%
Test Span Drift (+/- 3%)		-0.1%	0.0%	0.4%	2.9%

Baghouse Stack - Run 2 (July 30, 2026)

All Roads - Coquitlam, BC

METLab CEM Results



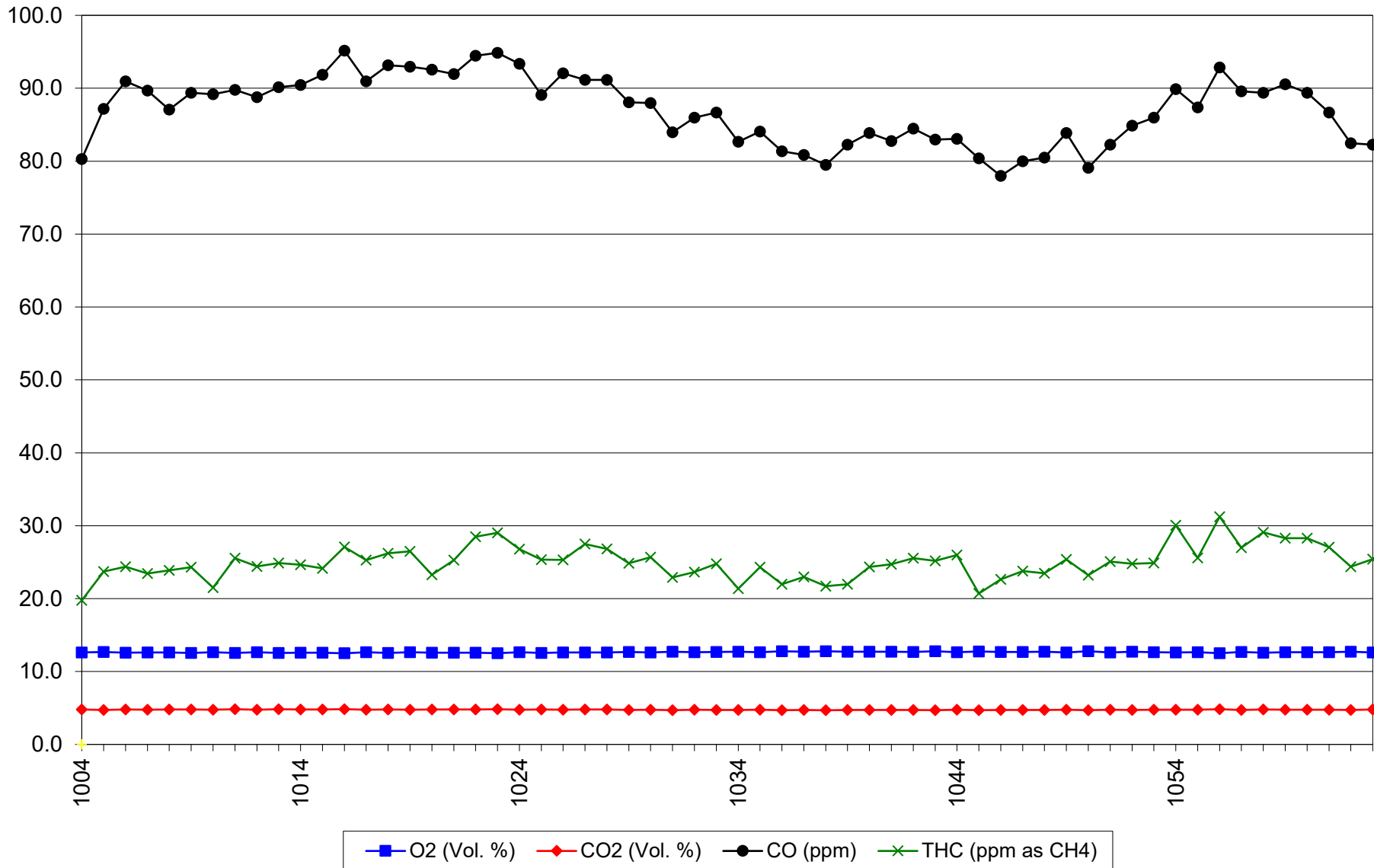
A. Lanfranco and Associates Inc.
METLab CEM Report

Client:	All Roads - Coquitlam, BC			Moisture % =	
Source:	Baghouse	O2 Correction	16	26.89	
Run:	3	Year:	2026		
Date	Time	O2 (Vol. %)	CO2 (Vol. %)	CO (ppm)	THC (ppm as CH4)
30-Jul	1004	12.61	4.78	80.27	19.75
30-Jul	1005	12.67	4.74	87.16	23.70
30-Jul	1006	12.59	4.79	90.96	24.38
30-Jul	1007	12.62	4.77	89.66	23.43
30-Jul	1008	12.62	4.78	87.06	23.87
30-Jul	1009	12.56	4.81	89.36	24.31
30-Jul	1010	12.66	4.75	89.16	21.51
30-Jul	1011	12.55	4.81	89.76	25.54
30-Jul	1012	12.64	4.76	88.76	24.43
30-Jul	1013	12.56	4.81	90.16	24.87
30-Jul	1014	12.57	4.79	90.46	24.64
30-Jul	1015	12.57	4.80	91.86	24.16
30-Jul	1016	12.50	4.84	95.16	27.08
30-Jul	1017	12.65	4.75	90.96	25.29
30-Jul	1018	12.56	4.81	93.16	26.22
30-Jul	1019	12.64	4.76	92.96	26.49
30-Jul	1020	12.59	4.79	92.56	23.28
30-Jul	1021	12.58	4.79	91.96	25.27
30-Jul	1022	12.59	4.78	94.46	28.47
30-Jul	1023	12.51	4.83	94.86	29.03
30-Jul	1024	12.66	4.74	93.36	26.79
30-Jul	1025	12.55	4.81	89.06	25.34
30-Jul	1026	12.63	4.76	92.06	25.31
30-Jul	1027	12.60	4.78	91.16	27.47
30-Jul	1028	12.60	4.78	91.16	26.80
30-Jul	1029	12.69	4.73	88.06	24.86
30-Jul	1030	12.62	4.77	87.96	25.69
30-Jul	1031	12.73	4.71	83.97	22.91
30-Jul	1032	12.65	4.76	85.97	23.66
30-Jul	1033	12.69	4.73	86.67	24.78
30-Jul	1034	12.70	4.72	82.67	21.36
30-Jul	1035	12.66	4.75	84.07	24.32
30-Jul	1036	12.77	4.68	81.37	21.96
30-Jul	1037	12.71	4.72	80.87	22.96
30-Jul	1038	12.78	4.68	79.47	21.71
30-Jul	1039	12.70	4.72	82.27	21.99
30-Jul	1040	12.72	4.72	83.87	24.34
30-Jul	1041	12.71	4.72	82.77	24.72
30-Jul	1042	12.68	4.74	84.47	25.54
30-Jul	1043	12.77	4.69	82.97	25.17
30-Jul	1044	12.66	4.75	83.07	25.99
30-Jul	1045	12.75	4.70	80.37	20.71
30-Jul	1046	12.69	4.73	77.97	22.65
30-Jul	1047	12.69	4.73	79.97	23.78
30-Jul	1048	12.70	4.72	80.47	23.49
30-Jul	1049	12.62	4.77	83.87	25.38
30-Jul	1050	12.77	4.69	79.07	23.21
30-Jul	1051	12.62	4.77	82.27	25.09
30-Jul	1052	12.70	4.72	84.87	24.78
30-Jul	1053	12.65	4.76	85.97	24.87
30-Jul	1054	12.62	4.77	89.86	30.04
30-Jul	1055	12.65	4.76	87.36	25.59
30-Jul	1056	12.53	4.82	92.86	31.23
30-Jul	1057	12.68	4.74	89.56	26.99
30-Jul	1058	12.58	4.80	89.36	29.07
30-Jul	1059	12.65	4.75	90.56	28.27
30-Jul	1100	12.64	4.76	89.36	28.28
30-Jul	1101	12.65	4.75	86.67	27.06
30-Jul	1102	12.72	4.72	82.47	24.39
30-Jul	1103	12.62	4.78	82.27	25.40
Average		12.66	4.75	86.05	25.23
Minimum		12.51	4.68	77.97	20.71
Maximum		12.78	4.83	94.86	31.23
Mass Concentration (mg/m3 dry)		n/a	n/a	100.3	23.0
Mass Concentration (mg/m3 dry) Corrected to 16% O2				59.6	13.7
Range		25.0	20.00	500.0	100.0
Calibration Summary		O2	CO2	CO	THC
Gas (Cert. Value)		10.90	10.98	255.4	45.05
Analyzer Initial Span		10.92	10.97	254.0	44.90
Analyzer Initial Zero		0.07	0.19	-0.80	-0.2
Initial Gas Response		10.92	10.98	253.0	44.6
Final Gas Response		10.98	10.97	252.0	43.5
Initial Zero Response		0.06	-0.02	-3.2	-0.25
Final Zero Response		0.13	-0.01	-3.1	-0.23
Error Summary					
Analyzer Cal. Errc (+/- 2% or 5% TH		0.1%	0.0%	-0.3%	-0.3%
Analyzer Zero Errn (+/- 2% or 5% TH		0.3%	1.0%	-0.2%	-0.2%
Initial Span Systen (+/- 5%)		0.0%	0.0%	-0.2%	-0.3%
Final Span System (+/- 5%)		0.2%	0.0%	-0.4%	-1.4%
Initial Zero System (+/- 5%)		0.0%	-1.1%	-0.5%	-0.1%
Final Zero System (+/- 5%)		0.2%	-1.0%	-0.5%	0.0%
Test Span Drift (+/- 3%)		0.2%	0.0%	-0.2%	-1.1%

Baghouse Stack - Run 3 (July 30, 2026)

All Roads - Coquitlam, BC

METLab CEM Results



APPENDIX 2
CALCULATIONS

Appendix 2 - Calculations

The following sections show the equations and define the variables that were used for this survey. The equations are organized in four sections. Equations 1-11 were used to calculate particulate concentration at standard conditions on a dry basis and with an Oxygen correction. Equations 11-26 were used to sample within the $100 \pm 10\%$ isokinetic variation and to confirm that sampling meets this isokinetic variation threshold. Equations 26-28 were used to calculate the volumetric flowrate of the stack flue gas. Equations 29-36 were used to calculate the results from the CEM system.

A2.1 Contaminant Concentration Calculations

$$c = \frac{m}{V_{std}} \quad \text{Equation 1}$$

$$m_{part} = m_{filter} + m_{pw} + m_{cond} \quad \text{Equation 2}$$

$$m_i = m_{ana,i} - m_{blank} \quad \text{Equation 3}$$

$$V_{std} = \frac{V_{std(imp)}}{35.315} \quad \text{Equation 4}$$

$$V_{std(imp)} = \frac{V_{samp} \times y \times P_m \times (T_{std} + 459.67)}{P_{std} \times (T_{m(ave)} + 459.67)} \quad \text{Equation 5}$$

$$V_{samp} = V_{final} - V_{init} \quad \text{Equation 6}$$

$$P_m = P_B + \frac{\Delta H_{ave}}{13.6} \quad \text{Equation 7}$$

$$\Delta H_{ave} = \frac{1}{n} \sum_{i=1}^n \Delta H_{i(act)}, \text{ where } n = \text{the number of points} \quad \text{Equation 8}$$

$$OC = \frac{20.9 - \%O_{2c}}{20.9 - \%O_{2m}} \quad \text{Equation 9}$$

$$\%O_{2m} = \frac{1}{n} \sum_{i=1}^n \%O_{2i}, \text{ where } n = \text{the number of } O_2 \text{ measurements} \quad \text{Equation 10}$$

$$\%CO_{2m} = \frac{1}{n} \sum_{i=1}^n \%CO_{2i}, \text{ where } n = \text{the number of } CO_2 \text{ measurements} \quad \text{Equation 11}$$

Appendix 2 - Calculations

Where,

c	= Contaminant concentration
m	= Contaminant mass
m_i	= Net analytical mass (mg, ng, or μg)
$m_{ana,i}$	= Analytical mass (mg, ng, or μg)
m_{blank}	= Blank analytical mass (mg, ng, or μg)
m_{part}	= Total particulate mass (mg)
m_{filter}	= Net particulate gain from filter (mg)
m_{pw}	= Net particulate gain from probe wash (mg)
m_{cond}	= Net condensable particulate from lab analysis (mg)
$V_{std(imp)}$	= Sample volume at standard conditions (ft^3)
V_{std}	= Sample volume at standard conditions (m^3)
V_{samp}	= Sample volume at actual conditions (ft^3)
V_{final}	= Final gas meter reading (ft^3)
V_{init}	= Initial gas meter reading (ft^3)
T_{std}	= Standard temperature (68 °F)
T_m	= Gas meter temperature (°F)
$T_{m(ave)}$	= Average gas meter temperature (°F)
P_m	= Absolute meter pressure (inches of Hg)
P_B	= Barometric pressure (inches of Hg)
ΔH_{ave}	= Average of individual point orifice pressures (inches of H_2O)
$\Delta H_{i(act)}$	= Individual recorded point orifice pressures (inches of H_2O)
OC	= Oxygen correction factor (dimensionless)
$\%O_{2c}$	= Oxygen concentration to correct to (% dry basis)
$\%O_{2m}$	= Average measured stack gas oxygen concentration (% dry basis)
$\%CO_{2m}$	= Average measured stack gas oxygen concentration (% dry basis)

Equation 1 is the general concentration calculation used for all contaminants. The contaminant mass, m , is the net analytic mass for the given contaminant. For particulate, m is the sum of the mass contributed from probe washing and filter particulate.

Appendix 2 - Calculations

A2.2 Isokinetic Variation Calculations

$$\Delta H_i = \frac{2.62 \times 10^7 \times c_p \times A_n \times (1 - B_{wo}) \times M_D \times (T_m + 459.67) \times \Delta p_i}{k_o \times M_w \times (T_{stk} + 459.67)} \quad \text{Equation 11}$$

$$R_m = 85.49 \times c_p \times \sqrt{\Delta p_i} \times \sqrt{\frac{(T_{stk_i} + 459.67)}{M_w \times P_B}} \times 60 \times A_n \times \frac{(T_{m_i} + 459.67) \times (1 - B_{wo})}{(T_{stk_i} + 459.67) \times y} \quad \text{Equation 12}$$

$$A_n = \pi \left(\frac{d_n}{24} \right)^2 \quad \text{Equation 13}$$

$$M_w = M_D \times (1 - B_{wo}) + 18 \times B_{wo} \quad \text{Equation 14}$$

$$M_D = 0.44 \times \%CO_2 + 0.32 \times \%O_2 + 0.28 \times (100 - \%CO_2 - \%O_2) \quad \text{Equation 15}$$

$$T_{stk} = \frac{1}{n} \sum_{i=1}^n T_{stk_i}, \text{ where } n = \text{the number of points} \quad \text{Equation 16}$$

$$B_{wo} = \frac{V_{cond}}{V_{cond} + V_{std(imp)}} \quad \text{Equation 17}$$

$$V_{cond} = 0.04707 \times V_{gain} \quad \text{Equation 18}$$

$$Iso = \frac{1}{n} \sum_{i=1}^n Iso_i, \text{ where } n = \text{the number of points} \quad \text{Equation 19}$$

$$Iso_i = \frac{v_{nzi}}{v_i} \quad \text{Equation 20}$$

$$v_i = 85.49 \times c_p \times \sqrt{\Delta p_i} \times \sqrt{\frac{(T_{stk_i} + 459.67)}{(P_{stk} \times M_w)}} \quad \text{Equation 21}$$

$$v_{nzi} = \frac{(V_i - V_{i-1}) \times y \times (T_{stk_i} + 459.67) \times (P_B + \frac{\Delta H_{i(act)}}{13.6})}{A_n \times t_i \times 60 \times (T_{m(i)} + 459.67) \times P_{stk} \times (1 - B_{wo})} \quad \text{Equation 22}$$

$$P_{stk} = P_B + \frac{P_g}{13.6} \quad \text{Equation 23}$$

Appendix 2 - Calculations

$$v_{stk} = \frac{1}{n} \sum_{i=1}^n v_i, \text{ where } n = \text{the number of points}$$

Equation 24

$$v_{nz} = \frac{1}{n} \sum_{i=1}^n v_{nzi}, \text{ where } n = \text{the number of points}$$

Equation 25

Where,

A_n	= Nozzle area (ft ²)
d_n	= Diameter of nozzle (inches)
c_p	= Pitot coefficient (dimensionless)
Δp_i	= Individual point differential pressures (inches of H ₂ O)
T_{stk}	= Average flue gas temperature (°F), second subscript i, indicates individual point measurements
$\Delta H_{i(act)}$	= Calculated individual point orifice pressures (inches of H ₂ O)
P_g	= Stack Static pressure (inches of H ₂ O)
P_{stk}	= Absolute stack pressure (inches of Hg)
M_w	= Wet gas molecular weight (g/gmol)
M_D	= Dry gas molecular weight (g/gmol)
%CO ₂	= Stack gas carbon dioxide concentration (% dry basis)
%O ₂	= Stack gas oxygen concentration (% dry basis)
B_{wo}	= Stack gas water vapour, proportion by volume
V_{cond}	= Total volume of water vapor collected, corrected to standard conditions (ft ³)
V_{gain}	= Condensate gain of impinger contents (mL)
P_{std}	= Standard pressure (29.92 inches of Hg)
V_{stk}	= Average flue gas velocity (ft/sec)
v_i	= Individual point flue gas velocity (ft/sec)
v_{nz}	= Average velocity at nozzle(ft/sec)
v_{nzi}	= Individual point velocity at nozzle(ft/sec)
ISO_i	= Individual point isokinetic variation (%)
ISO	= Average isokinetic variation (%)
R_m	= Isokinetic sampling rate (ft ³ /min)

Appendix 2 - Calculations

A2.3 Volumetric Flowrate Calculations

$$Q_S = Q_A \times \frac{(T_{Std} + 459.67)}{(T_{Stk} + 459.67)} \times \frac{P_{Stk}}{P_{Std}} \quad \text{Equation 26}$$

$$Q_A = \frac{v_{stk} \times 60 \times A_{stk}}{35.315} \quad \text{Equation 27}$$

$$A_{stk} = \pi \left(\frac{d}{24} \right)^2 \quad \text{Equation 28}$$

Where,

Q_A	= Actual flowrate (Am^3/min)
Q_S	= Flowrate (m^3/min) at standard conditions on a dry basis
A_{stk}	= Area of stack (ft^2)
d	= Diameter of stack (inches)

Appendix 2 - Calculations

A2.4 CEM Calculations

$$[CEM]_i = \frac{(2 \times [CEM]_{mi} - (Z_F + Z_I))}{(S_I + S_F) - (Z_I + Z_F)} \times G_c \quad \text{Equation 29}$$

$$E_A = \left(\frac{A_{IS} - G_c}{G_c} \right) \times 100\% \quad \text{Equation 30}$$

$$B_{IS} = \left(\frac{S_I - A_{IS}}{R} \right) \times 100\% \quad \text{Equation 31}$$

$$B_{FS} = \left(\frac{S_F - A_{IS}}{R} \right) \times 100\% \quad \text{Equation 32}$$

$$B_{IZ} = \left(\frac{Z_I - A_{IZ}}{R} \right) \times 100\% \quad \text{Equation 33}$$

$$B_{FZ} = \left(\frac{Z_F - A_{IZ}}{R} \right) \times 100\% \quad \text{Equation 34}$$

$$D_S = \left(\frac{S_F - S_I}{R} \right) \times 100\% \quad \text{Equation 35}$$

$$D_Z = \left(\frac{Z_F - Z_I}{R} \right) \times 100\% \quad \text{Equation 36}$$

Where:

$[CEM]_i$	= One-minute average calibration corrected CEM parameter concentration (ppm or % vol)
$[CEM]_{mi}$	= One-minute average measured CEM parameter concentration (ppm or % vol)
S_I	= Initial calibration span gas system response (ppm or % vol)
S_F	= Final calibration span gas system response (ppm or % vol)
Z_I	= Initial calibration zero gas system response (ppm or % vol)
Z_F	= Final calibration zero gas system response (ppm or % vol)
A_{IS}	= Initial calibration span gas analyzer response (ppm or % vol)
A_{IZ}	= Final calibration zero gas analyzer response (ppm or % vol)
E_A	= Analyzer calibration error (%)
B_{IS}	= Initial system span bias (%)
B_{FS}	= Final system span bias (%)
B_{IZ}	= Initial system zero bias (%)
B_{FZ}	= Final system zero bias (%)
D_S	= Test span drift (%)
D_Z	= Test zero drift (%)
G_c	= Calibration span gas certified concentration (ppm or % vol)
R	= Analyzer range (ppm or % vol)

APPENDIX 3

ANALYTICAL DATA

GRAVIMETRIC ANALYTICAL RESULTS

Client:	All Roads	Sample Date:	30-Jul-26
Source:	Baghouse Stack	Location:	Coquitlam, BC

A. Lanfranco & Associates Standard Operating Procedure:

SOP 1.2.1 Gravimetric determination of total particulate matter

	Initial (g)	Final (g)	Net (g)	Blank Corrected Net (g)
Filters				
Run 1	0.3393	0.3398	0.0005	0.0005
Run 2	0.3412	0.3417	0.0005	0.0005
Run 3	0.3389	0.3392	0.0003	0.0003
Blank	0.3381	0.3381	0.0000	
Probe Washes				
Run 1	86.9713	86.9761	0.0048	0.0045
Run 2	101.7920	101.7963	0.0043	0.0040
Run 3	85.4544	85.4598	0.0054	0.0051
Blank	123.7740	123.7743	0.0003	

	Run 1	Run 2	Run 3
Silica Gels	10.0	7.0	10.0

Task	Personnel	Date	Quality Control	Y/N
Fiter Recovery:	J. Dennis	30-Jul-26	Adequate PW volume:	Y
PW Initial Analysis:	L. Forrer	31-Jul-26	No sample leakage:	Y
PW, Filter and Gel Final Analysis:	S. Verby	6-Aug-26	Filter not compromised:	Y
Data entered to computer:	L. Agassiz	6-Aug-26		

Comments:

No problems encountered in sample analysis.

APPENDIX 4
FIELD DATA SHEETS

[illegible]

10+2
4

CEM FIELD DATA SHEET

Client All Roads Construction
Source Boghouse Stack
Date 30 July 2026

Technician LA
Ambient Temp (°C) 15
Barometric Pressure (in. Hg) 30.01
Trailer ID Big

	N ₂	H ₂	1 Gas	2 Gas	3 Gas	4 Gas	5 Gas	Mid O ₂	High O ₂	Low Meth	Mid Meth	High Meth
Cylinder #	773		DK8	U1F			65A	229-4		247	KA1	
Pressure (psi)	1850	1500	450	1220				1980		1100	910	
Expiry Date	12 June 33		16 Sept 33	12 Nov 29				12 June 31		6 Feb 32	12 Feb 32	
O ₂ (%)								10.90				
CO ₂ (%)								10.98				
CO (ppm)			493.3	255.4								
THC (ppm)										45.05	91.98	
CH ₄ (ppm)												
SO ₂ (ppm)												
NOx (ppm)												

	O ₂	CO ₂	CO	THC	SO ₂	NOx	CH ₄
Analyzer ID	ZPA	ZPA	ZPA	V1F			
Serial Number	806			725			
Analyzer Range	25	20	500	100			

CEM READINGS

Time	Source	O ₂	CO ₂	CO	THC	SO ₂	NOx	CH ₄	Response Time (sec)
Manifold	Amb	20.94							O ₂ Up 81
	1 Gas			493					O ₂ Dn 31
	2 Gas			254					CO ₂ Up 32
	Mid O ₂	10.92	10.97						CO ₂ Dn 31
	N ₂	0.07	0.19	-0.8					CO Up 80
Probe	Amb	20.93							CO Dn 29
	1 Gas			493					THC Up 27
	2 Gas			256					THC Dn 26
	Mid Meth				91.7				SO ₂ Up
	Low Meth				44.9				SO ₂ Dn
	Mid O ₂	10.93	10.98						NOx Up
	N ₂	0.08	0.20	-0.8	-0.2				NOx Dn
									CH ₄ Up
									CH ₄ Dn
Run 1:	0705 - 0805								
	2 Gas			251					
	Low Meth				42				
	Mid O ₂	10.95	10.99	0.8	-0.2				
	N ₂	0.05	0.03	0.8	-0.2				
Run 2:	0842 - 0942								
	2 Gas			253					
	Low Meth				44.6				
	Mid O ₂	10.92	10.98						
	N ₂	0.06	-0.02	-3.2	-0.25				

4A

CEM FIELD DATA SHEET

Client All Roads
Source Bayhaver Stack
Date 30 July 2026

Technician _____

Ambient Temp (°C) _____

Barometric Pressure (in. Hg) _____

Trailer ID _____

[illegible]

	O ₂	CO ₂	CO	THC	SO ₂	NO _x	CH ₄
Analyzer ID							
Serial Number							
Analyzer Range							

CEM READINGS

[illegible]

APPENDIX 5

CALIBRATION DATA and CERTIFICATIONS

A. LANFRANCO and ASSOCIATES INC.**ENVIRONMENTAL CONSULTANTS****NOZZLE DIAMETER CALIBRATION FORM**

Calibrated by: Christian De La O

Date: 10-Jul-26

Signature: 

Nozzle I.D.	d1 (inch)	d2 (inch)	d3 (inch)	difference (inch)	average dia. (inch)	average area (ft ²)
ST01	0.1280	0.1264	0.1280	0.0016	0.1275	0.0000886
ST05	0.1700	0.1720	0.1716	0.0020	0.1712	0.0001599
SS-1	0.1710	0.1714	0.1693	0.0021	0.1706	0.0001587
SS-7	0.1711	0.1685	0.1701	0.0026	0.1699	0.0001574
ST11	0.2049	0.2070	0.2056	0.0021	0.2058	0.0002311
SS-8	0.2050	0.2070	0.2065	0.0020	0.2062	0.0002318
ST10	0.2110	0.2109	0.2120	0.0011	0.2113	0.0002435
SS-18	0.2301	0.2310	0.2318	0.0017	0.2310	0.0002910
ST15	0.2409	0.2390	0.2400	0.0019	0.2400	0.0003141
SS-2	0.2370	0.2390	0.2380	0.0020	0.2380	0.0003089
SS-3	0.2415	0.2426	0.2435	0.0020	0.2425	0.0003208
SS-24	0.2417	0.2415	0.2420	0.0005	0.2417	0.0003187
B	0.2413	0.2408	0.2421	0.0013	0.2414	0.0003178
SS-14	0.2450	0.2445	0.2475	0.0030	0.2457	0.0003292
ST30	0.2465	0.2458	0.2441	0.0024	0.2455	0.0003286
ST20	0.2502	0.2498	0.2514	0.0016	0.2505	0.0003422
A	0.2515	0.2521	0.2506	0.0015	0.2514	0.0003447
SS-9	0.2680	0.2710	0.2670	0.0040	0.2687	0.0003937
ST40	0.2830	0.2835	0.2810	0.0025	0.2825	0.0004353
SS-30	0.2915	0.2919	0.2950	0.0035	0.2928	0.0004676
SS-13	0.3003	0.2996	0.3027	0.0031	0.3009	0.0004937
ST60	0.2999	0.3020	0.2990	0.0030	0.3003	0.0004919
ST50	0.3000	0.3020	0.3015	0.0020	0.3012	0.0004947
SS-10	0.3171	0.3209	0.3195	0.0038	0.3192	0.0005556
SS-327	0.3250	0.3278	0.3265	0.0028	0.3264	0.0005812
ST65	0.3332	0.3339	0.3343	0.0011	0.3338	0.0006077
ST66	0.3345	0.3365	0.3350	0.0020	0.3353	0.0006133
ST80	0.3640	0.3670	0.3665	0.0030	0.3658	0.0007300
ST75	0.3656	0.3642	0.3645	0.0014	0.3648	0.0007257
SS-5	0.3661	0.3687	0.3698	0.0037	0.3682	0.0007394
SS-16	0.3719	0.3721	0.3730	0.0011	0.3723	0.0007561
ST76	0.3758	0.3740	0.3745	0.0018	0.3748	0.0007660
ST85	0.3981	0.3960	0.3988	0.0028	0.3976	0.0008624
SS-15	0.4000	0.3986	0.4005	0.0019	0.3997	0.0008714
DD	0.4040	0.4045	0.4039	0.0006	0.4041	0.0008908
SS11	0.4150	0.4178	0.4190	0.0040	0.4173	0.0009496
ST70	0.4211	0.4249	0.4212	0.0038	0.4224	0.0009731
ST86	0.4550	0.4538	0.4562	0.0024	0.4550	0.0011291
C	0.4940	0.4928	0.4951	0.0023	0.4940	0.0013308
SS-491	0.4890	0.4930	0.4928	0.0040	0.4916	0.0013181
SS-49	0.4959	0.4965	0.4954	0.0011	0.4959	0.0013414
SS-6	0.4943	0.4965	0.4950	0.0022	0.4953	0.0013378
SS-492	0.4940	0.4960	0.4935	0.0025	0.4945	0.0013337
ST90	0.4925	0.4932	0.4952	0.0027	0.4936	0.0013290
ST92	0.5001	0.5015	0.5020	0.0019	0.5012	0.0013701
SS-558	0.5535	0.5550	0.5520	0.0030	0.5535	0.0016709
ST96	0.5565	0.5550	0.5525	0.0040	0.5547	0.0016780
SS-635	0.6350	0.6370	0.6330	0.0040	0.6350	0.0021993
SS-12	0.7411	0.7406	0.7400	0.0011	0.7406	0.0029913

Where:

- (a) D1, D2, D3 = three different nozzle diameters; each diameter must be measured to within (0.025mm) 0.001 in.
- (b) Difference = maximum difference between any two diameters; must be less than or equal to (0.1mm) 0.004 in.
- (c) Average = average of D1, D2 and D3

Pitot Tube Calibration

Date: 3-Jul-26
Pbar (in.Hg): 29.94

Temp (R): 539
Dn (in.): 0.25

Pitot ID: **5A-1**

Reference Pitot (in H2O)	S-Type Pitot (in H2O)	Air Velocity (ft/s)	Pitot Coeff. Cp	Deviation (absolute)
0.080	0.110	18.9	0.8443	0.0033
0.155	0.210	26.3	0.8505	0.0030
0.250	0.340	33.4	0.8489	0.0014
0.350	0.475	39.5	0.8498	0.0022
0.560	0.770	49.9	0.8443	0.0033
Average :			0.8476	0.0026

Pitot ID: **5A-3**

Reference Pitot (in H2O)	S-Type Pitot (in H2O)	Air Velocity (ft/s)	Pitot Coeff. Cp	Deviation (absolute)
0.100	0.140	21.1	0.8367	0.0038
0.240	0.340	32.7	0.8318	0.0087
0.330	0.460	38.3	0.8385	0.0020
0.415	0.570	43.0	0.8447	0.0042
0.650	0.880	53.8	0.8508	0.0103
Average :			0.8405	0.0058

Pitot ID: **5A-2**

Reference Pitot (in H2O)	S-Type Pitot (in H2O)	Air Velocity (ft/s)	Pitot Coeff. Cp	Deviation (absolute)
0.085	0.120	19.5	0.8332	0.0051
0.150	0.210	25.8	0.8367	0.0016
0.225	0.320	31.7	0.8301	0.0082
0.365	0.500	40.3	0.8459	0.0075
0.540	0.740	49.0	0.8457	0.0074
Average :			0.8383	0.0060

Pitot ID: **5A-4**

Reference Pitot (in H2O)	S-Type Pitot (in H2O)	Air Velocity (ft/s)	Pitot Coeff. Cp	Deviation (absolute)
0.125	0.170	23.6	0.8489	0.0053
0.200	0.280	29.8	0.8367	0.0069
0.410	0.565	42.7	0.8433	0.0003
0.530	0.715	48.6	0.8524	0.0088
0.600	0.840	51.7	0.8367	0.0069
Average :			0.8436	0.0056

Pitot ID: **ST 5A**

Reference Pitot (in H2O)	S-Type Pitot (in H2O)	Air Velocity (ft/s)	Pitot Coeff. Cp	Deviation (absolute)
0.130	0.190	24.1	0.8189	0.0192
0.210	0.290	30.6	0.8425	0.0044
0.290	0.400	35.9	0.8430	0.0049
0.400	0.550	42.2	0.8443	0.0062
0.600	0.830	51.7	0.8417	0.0037
Average :			0.8381	0.0077

Pitot ID: **5A-5**

Reference Pitot (in H2O)	S-Type Pitot (in H2O)	Air Velocity (ft/s)	Pitot Coeff. Cp	Deviation (absolute)
0.115	0.160	22.6	0.8393	0.0033
0.230	0.320	32.0	0.8393	0.0033
0.330	0.460	38.3	0.8385	0.0041
0.470	0.650	45.8	0.8418	0.0008
0.640	0.860	53.4	0.8540	0.0114
Average :			0.8426	0.0046

Pitot ID: **ST 5B**

Reference Pitot (in H2O)	S-Type Pitot (in H2O)	Air Velocity (ft/s)	Pitot Coeff. Cp	Deviation (absolute)
0.040	0.055	13.3	0.8443	0.0007
0.180	0.250	28.3	0.8400	0.0050
0.360	0.490	40.0	0.8486	0.0036
0.570	0.780	50.4	0.8463	0.0013
0.730	1.000	57.0	0.8459	0.0008
Average :			0.8450	0.0023

Pitot ID:

Reference Pitot (in H2O)	S-Type Pitot (in H2O)	Air Velocity (ft/s)	Pitot Coeff. Cp	Deviation (absolute)
Average :				

* Average absolute deviation must not exceed 0.01.

Calibrated by: Christian De La O

Signature: 

Date: July 3, 2026

A.Lanfranco & Associates inc.

EPA Method 5

Meter Box Calibration

English Meter Box Units, English K' Factor

Model #: FE 18
Serial #: 0028-020118-1

Date: 2-Jul-26
Barometric Pressure: 29.91 (in. Hg)
Theoretical Critical Vacuum: 14.11 (in. Hg)

!!!!!!!
IMPORTANT For valid test results, the Actual Vacuum should be 1 to 2 in. Hg greater than the Theoretical Critical Vacuum shown above.
IMPORTANT The Critical Orifice Coefficient, K', must be entered in English units, (ft)³/(deg R)^{0.5}((in.Hg)*(min)).
!!!!!!!

----- DRY GAS METER READINGS -----									-CRITICAL ORIFICE READINGS-					
dH (in H2O)	Time (min)	Volume Initial (cu ft)	Volume Final (cu ft)	Volume Total (cu ft)	Initial Temps.		Final Temps.		Orifice Serial# (number)	K' Orifice Coefficient (see above)	Actual Vacuum (in Hg)	-- Ambient Temperature --		
					Inlet (deg F)	Outlet (deg F)	Inlet (deg F)	Outlet (deg F)				Initial (deg F)	Final (deg F)	Average (deg F)
3.80	15.00	841.112	856.615	15.503	66.0	66.0	68.0	68.0	73	0.8185	16.0	66.0	69.0	67.5
1.98	15.00	856.615	867.800	11.185	68.0	68.0	69.0	69.0	63	0.5956	17.0	69.0	70.0	69.5
1.20	15.00	867.800	876.529	8.729	69.0	69.0	70.0	70.0	55	0.4606	18.5	70.0	70.0	70.0
0.69	15.00	876.529	883.185	6.656	70.0	70.0	70.0	70.0	48	0.3560	19.5	71.0	72.0	71.5
0.34	15.00	883.185	887.759	4.574	70.0	70.0	71.0	71.0	40	0.2408	21.0	70.0	71.0	70.5

***** RESULTS *****											
--- DRY GAS METER ---		----- ORIFICE -----			-- DRY GAS METER --		----- ORIFICE -----				
VOLUME CORRECTED	VOLUME CORRECTED	VOLUME CORRECTED	VOLUME CORRECTED	VOLUME NOMINAL	CALIBRATION FACTOR Y		CALIBRATION FACTOR dH@				
Vm(std) (cu ft)	Vm(std) (liters)	Vcr(std) (cu ft)	Vcr(std) (liters)	Vcr (cu ft)	Value (number)	Variation (number)	Value (in H2O)	Value (mm H2O)	Variation (in H2O)	Ko (value)	
15.666	443.7	15.989	452.8	15.985	1.021	-0.011	1.884	47.86	0.011	0.704	
11.221	317.8	11.613	328.9	11.654	1.035	0.003	1.856	47.14	-0.017	0.702	
8.724	247.1	8.976	254.2	9.017	1.029	-0.003	1.879	47.73	0.006	0.702	
6.637	188.0	6.928	196.2	6.979	1.044	0.012	1.799	45.69	-0.074	0.708	
4.553	128.9	4.691	132.8	4.716	1.030	-0.001	1.946	49.43	0.073	0.690	
Average Y----->					1.0317	Average dH@----->	1.873	47.6	Average Ko---->	0.701	

TEMPERATURE CALIBRATION										
Calibration Standard -----> Omega Model CL23A S/N:T-218768										
Reference Set-Point	Stack		Hot Box		Temperature Device Reading Probe		Imp Out		Aux	
(deg F)	(deg F)	(% diff)	(deg F)	(% diff)	(deg F)	(% diff)	(deg F)	(% diff)	(deg F)	(% diff)
32	32	0.00%	30	-0.41%	33	0.20%	32	0.00%	32	0.00%
100	99	-0.18%	98	-0.36%	98	-0.36%	100	0.00%	99	-0.18%
300	299	-0.13%	298	-0.26%	298	-0.26%	300	0.00%	300	0.00%
500	499	-0.10%	498	-0.21%	498	-0.21%	499	-0.10%	499	-0.10%
1000	998	-0.14%	997	-0.21%	997	-0.21%	999	-0.07%	999	-0.07%

Note: For Calibration Factor Y, the ratio of the reading of the calibration meter to the dry gas meter, acceptable tolerance of individual values from the average is +/-0.02.
For Orifice Calibration Factor dH@, the orifice differential pressure in inches of H2O that equates to 0.75 cfm of air at 68 F and 29.92 inches of Hg, acceptable tolerance of individual values from the average is +/-0.2.
For Temperature Device, the reading must be within 1.5% of certified calibration standard (absolute temperature) to be acceptable.

Calibrated by: Liam Forrer

Signature: L Forrer

Date: July 2, 2026

BAROMETER CALIBRATION FORM

Device	Cal Date	Pbar Env Canada		Device (inches of Hg)		Difference
		(kPa)	(inches of Hg)	Reading	Elevation Corrected	(Env Can - Elv Corr)
LA		101.2	29.89	29.80	29.87	0.02
DS		101.2	29.89	29.75	29.82	0.07
CL		101.2	29.89	29.82	29.89	0.00
JC		101.2	29.89	29.78	29.85	0.04
LF		101.2	29.89	29.78	29.85	0.04
SV		101.2	29.89	29.77	29.84	0.05
CDO		101.2	29.89	29.78	29.85	0.04
JG		101.2	29.89	29.8	29.87	0.02
JD		101.2	29.89	29.55	29.62	0.27
BB			0.00		0.07	-0.07

Calibrated by: Christian De La O

Signature:



Date:

10-Jul-26

Performance Specification is

Device Corrected for Elevation must be +/- 0.1 " Hg of ENV CANADA SEA-LEVEL Pbar

Enter Environment Canada Pressure from their website for Vancouver (link below)
and the reading from your barometer on the ground floor of the office.

https://weather.gc.ca/city/pages/bc-74_metric_e.html

TEMPERATURE CALIBRATION FORM

Signature:

Daryl Sampson

Reference Device Model CL23A Calibrator			Temperature Settings (degrees F)													
			32		100		200		300		500		800		1700	
Device	ALA #	Serial #	Reading	Variation	Reading	Variation	Reading	Variation	Reading	Variation	Reading	Variation	Reading	Variation	Reading	Variation
TPI 341K	7	20314590036	31.2	-0.16%	99.2	-0.14%	198.9	-0.17%	297.8	-0.29%	498.6	-0.15%	798.6	-0.11%	1695	-0.23%
TPI 341K	8	20313490047	30.5	-0.31%	99.4	-0.11%	198.7	-0.20%	298.5	-0.20%	498.7	-0.14%	799.0	-0.08%	1696	-0.19%
TPI 341K	11	20345510024	31.6	-0.08%	99.7	-0.05%	199.5	-0.08%	299.1	-0.12%	499.6	-0.04%	799.2	-0.06%	1697	-0.14%
TPI 341K	12	20345510031	32.1	0.02%	99.6	-0.07%	199.6	-0.06%	299.4	-0.08%	499.3	-0.07%	798.4	-0.13%	1697	-0.14%
TPI 341K	20	20329480013	30.1	-0.39%	98.7	-0.23%	198.7	-0.20%	298.5	-0.20%	498.2	-0.19%	797.8	-0.17%	1695	-0.23%
TPI 341K	22	20329480041	30.3	-0.35%	98.8	-0.21%	198.4	-0.24%	298.7	-0.17%	498	-0.21%	796.7	-0.26%	1695	-0.23%
TPI 341K	24	20142030017	31.2	-0.16%	99.5	-0.09%	199.5	-0.08%	299.4	-0.08%	498.6	-0.15%	796.5	-0.28%	1694	-0.28%
TPI 341K	26	20345510036	30.3	-0.35%	99.2	-0.14%	199.2	-0.12%	299.1	-0.12%	498.3	-0.18%	798.6	-0.11%	1695	-0.23%
TPI 341K	28	20142030009	30.6	-0.28%	99.0	-0.18%	198.9	-0.17%	299.6	-0.05%	496.3	-0.39%	798.4	-0.13%	1696	-0.19%
TPI 341K	30	20345510023	31.8	-0.04%	99.6	-0.07%	198.4	-0.24%	299.4	-0.08%	499.3	-0.07%	798.2	-0.14%	1697	-0.14%
TPI 341K	32	20142030028	31.1	-0.18%	99.6	-0.07%	199.2	-0.12%	298.9	-0.14%	497.6	-0.25%	798.5	-0.12%	1698	-0.09%
Reference device is a NIST certified digital thermocouple calibrator																
Variation expressed as a percentage of the absolute temperature must be within 1.5 %																

CERTIFICATE OF BATCH ANALYSIS

Grade of Product: CEM-CAL ZERO

Customer: AIR LIQUIDE CANADA
Part Number: NI CZ15A
Cylinder Analyzed: CC744872
Laboratory: 124 - Plumsteadville - PA
Analysis Date: Jun 12, 2025
Lot Number: 160-403369131-1
Reference Number: 160-403369131-1
Cylinder Volume: 142.0 CF
Cylinder Pressure: 2000 PSIG
Valve Outlet: 580

Expiration Date: Jun 12, 2033

ANALYTICAL RESULTS

Component	Requested Purity	Certified Concentration
NITROGEN	99.9995 %	99.9995 %
NOx	0.1 PPM	<LDL 0.02 PPM
SO2	0.1 PPM	<LDL 0.02 PPM
THC	0.1 PPM	<LDL 0.1 PPM
CARBON MONOXIDE	0.5 PPM	< 0.04 PPM
CARBON DIOXIDE	1.0 PPM	< 0.01 PPM

Cylinders in Batch:

ALM066660, CC105224, CC118032, CC232672, CC273325, CC346685, CC349921, CC41295, CC45773, CC45831, CC46583, CC501937, CC744872, CC745027, EB0065495, EB0065860, SG861565NB, SG9114513, SG9139305BAL, SG9163549

Notes: Gross Weight: 27.4 Kg

Net Weight: 4.5 Kg

P/N: A0485344

PO# 89591890

Airgas certifies that the contents of this cylinder meet the requirements of 40 CFR 72.2

Impurities verified against analytical standards traceable to NIST by weight and/or analysis.



Approved for Release

CERTIFICATE OF ANALYSIS

Grade of Product: EPA PROTOCOL STANDARD

Customer: A. LANFRANCO &
ASSOC. INC.
Part Number: E03NI78E15A0225 Reference Number: 312-3160131-1
Cylinder Number: SA250268A Cylinder Volume: 152.0 CF
Laboratory: 129 - Calgary - AB Cylinder Pressure: 2015 PSIG
PGVP Number: AB2026 Valve Outlet: 590
Gas Code: CO2,O2,BALN Certification Date: Jun 12, 2026

Expiration Date: Jun 12, 2034

Certification performed in accordance with "EPA Traceability Protocol for Assay and Certification of Gaseous Calibration Standards (May 2012)" document EPA 600/R-12/531, using the assay procedures listed. Analytical Methodology does not require correction for analytical interference. This cylinder has a total analytical uncertainty as stated below with a confidence level of 95%. There are no significant impurities which affect the use of this calibration mixture. All concentrations are on a mole/mole basis unless otherwise noted. The results relate only to the items tested. The report shall not be reproduced except in full without approval of the laboratory. Do Not Use This Cylinder below 100 psig, i.e. 0.7 megapascals.

ANALYTICAL RESULTS					
Component	Requested Concentration	Actual Concentration	Protocol Method	Total Relative Uncertainty	Assay Dates
CARBON DIOXIDE	11.00 %	10.98 %	G1	+/- 0.5% NIST Traceable	06/12/2026
OXYGEN	11.00 %	10.90 %	G1	+/- 0.3% NIST Traceable	06/12/2026
NITROGEN	Balance				

CALIBRATION STANDARDS					
Type	Lot ID	Cylinder No	Concentration	Uncertainty	Expiration Date
NTRM	230609	6998164Y	11.15 % CARBON DIOXIDE/NITROGEN	+/-0.25%	Jun 12, 2029
NTRM	100106	K012714	9.967 % OXYGEN/NITROGEN	+/-0.3%	Mar 22, 2028

ANALYTICAL EQUIPMENT		
Instrument/Make/Model	Analytical Principle	Last Multipoint Calibration
MKS 112392589 CO2	FTIR	May 14, 2026
OXYMAT6 N1T8537	Paramagnetic	May 13, 2026

Triad Data Available Upon Request

NOTES:A1358979
T47D7XG




Approved for Release

CERTIFICATE OF ANALYSIS

Grade: EPA Protocol

Work Order Number:	2794145	Cylinder Number:	T357U1F
Part Number:	A1359011	Cylinder Size:	30AL
Laboratory:	SPG Calgary - AB	Cylinder Volume:	4.1 M3
Certification Date:	03/12/2026	Cylinder Pressure:	2000 PSI
Expiration Date:	03/12/2029	Valve Outlet Connection:	CGA 660

Certification performed in reference to EPA document 600/R-12/531 (EPA Traceability Protocol for Assay and Certification of Gaseous Calibration Standards and G1 protocol (AA for NOX is included in the NO G1 protocol method) – May 2012), using the assay procedures listed and NIST/NTRM traceable standards.
Do not use this cylinder below 100 psi.

ANALYTICAL RESULTS

Component	Nominal Concentration	Actual Concentration	Protocol Method	Total Relative Uncertainty	Assay Dates
CARBON MONOXIDE	250 ppm	255.4 ppm	G1	+/- 0.24 %	03/12/2026
SULFUR DIOXIDE	40 ppm	39.18 ppm	G1	+/- 0.62 %	03/12/2026
NITRIC OXIDE	45 ppm	44.03 ppm	G1	+/- 0.36 %	03/12/2026
NOX	45 ppm	44.03 ppm	G1	+/- 0.36 %	03/12/2026
NITROGEN	BALANCE				

TRACEABILITY

Type	Lot ID	Cylinder #	Composition	Uncertainty	Expiration Date
GMIS	1604029297171	CC114846	105.5 ppm CO in N2	+/- 0.5 %	04/16/2032
GMIS	X02A199M15W0003	CC517955	14.72 ppm NO2 in Air	+/- 2.0 %	01/14/2029
GMIS	160-403299476-1	XC030342B	99.42 ppm NO in N2	+/- 1.3 %	04/04/2033
NTRM	120602	CC350952	95.39 ppm SO2 in N2	+/- 0.84 %	08/31/2029

ANALYTICAL EQUIPMENT

Instrument	Analytical Principle	Last Multipoint Calibration
MKS 2031 FT-IR(A)	Fourier transform infrared spectroscopy	NO: 02/19/2026
MKS 2031 FT-IR(A)	Fourier transform infrared spectroscopy	CO: 02/19/2026
MKS 2031 FT-IR(A)	Fourier transform infrared spectroscopy	SO2: 02/19/2026

CERTIFIED BY:

STEVEN SHIEH
Lab Tech.

REVISED BY:

AYMEN OUESLATI
Lab Supervisor

AIR LIQUIDE CANADA INC.
1250, Boul. René-Lévesque
West, #1700 – Montréal, QC
H3B 5E6
Phone: (514) 933-0303



CERTIFICATE OF ANALYSIS

Grade: EPA Protocol

Work Order Number:	2065631	Cylinder Number:	T40KDK8
Part Number:	A1359010	Cylinder Size:	30AL
Laboratory:	SPG Calgary - AB	Cylinder Volume:	4.1 M3
Certification Date:	09/16/2025	Cylinder Pressure:	2000 PSI
Expiration Date:	09/16/2033	Valve Outlet Connection:	CGA 660

Certification performed in reference to EPA document 600/R-12/531 (EPA Traceability Protocol for Assay and Certification of Gaseous Calibration Standards and G1 protocol (AA for NOX is included in the NO G1 protocol method) – May 2012), using the assay procedures listed and NIST/NTRM traceable standards.
Do not use this cylinder below 100 psi.

ANALYTICAL RESULTS

Component	Nominal Concentration	Actual Concentration	Protocol Method	Total Relative Uncertainty	Assay Dates
CARBON MONOXIDE	500 PPM	493.3 PPM	G1	+/- 0.20 %	09/16/2025
SULFUR DIOXIDE	90 PPM	89.28 PPM	G1	+/- 0.46 %	09/16/2025
NITRIC OXIDE	90 PPM	87.40 PPM	G1	+/- 0.67 %	09/16/2025
NOX	90 PPM	87.41 PPM	G1	+/- 0.67 %	09/16/2025
NITROGEN	BALANCE				

TRACEABILITY

Type	Lot ID	Cylinder #	Composition	Uncertainty	Expiration Date
GMIS	160-402508921-1A	CC463893	751.8 PPM CO in N2	+/- 0.7 %	08/22/2030
GMIS	160-402508921-1A	CC463893	138.6 PPM SO2 in N2	+/- 0.7 %	08/22/2030
GMIS	160-402508921-1A	CC463893	601.0 PPM NO in N2	+/- 0.9 %	08/22/2030
PRIMARY	122-403300505-1	CC521584	3.200 PPM NO2 in N2	+/- 5.0 %	04/03/2028

ANALYTICAL EQUIPMENT

Instrument	Analytical Principle	Last Multipoint Calibration
MKS 2031 FT-IR(A)	Fourier transform infrared spectroscopy	CO: 09/03/2025
MKS 2031 FT-IR(A)	Fourier transform infrared spectroscopy	SO2: 09/03/2025
MKS 2031 FT-IR(A)	Fourier transform infrared spectroscopy	NO: 09/03/2025

CERTIFIED BY:

STEVEN SHIEH
Lab Tech.

REVISED BY:

AYMEN OUESLATI
Lab Supervisor

AIR LIQUIDE CANADA INC.
1250, Boul. René-Lévesque
West, #1700 – Montréal, QC
H3B 5E6
Phone: (514) 933-0303



CERTIFICATE OF ANALYSIS

Grade: EPA Protocol

Work Order Number:	1869642	Cylinder Number:	T2L7KA1
Part Number:	A0951315	Cylinder Size:	30AL
Laboratory:	SPG Calgary - AB	Cylinder Volume:	4.0 M3
Certification Date:	2/12/2024	Cylinder Pressure:	2000 PSI
Expiration Date:	2/12/2032	Valve Outlet Connection:	CGA 350

Certification performed in reference to EPA document 600/R-12/531 (EPA Traceability Protocol for Assay and Certification of Gaseous Calibration Standards – May 2012), using the assay procedures listed and NIST/NTRM traceable standards.
Do not use this cylinder below 100 psi.

ANALYTICAL RESULTS

Component	Nominal Concentration	Actual Concentration	Protocol Method	Total Relative Uncertainty	Assay Dates
METHANE NITROGEN	90 ppm BALANCE	91.98 ppm	G1	+/- 0.73 %	2/12/2024

TRACEABILITY

Type	Lot ID	Cylinder #	Composition	Uncertainty	Expiration Date
GMIS	54-124536832-6	CC473557	492.9 ppm CH ₄ in N ₂	+/- 1.0%	2/12/2024

ANALYTICAL EQUIPMENT

Instrument	Analytical Principle	Last Multipoint Calibration
MKS 2031 FT-IR	Fourier transform infrared spectroscopy	2/12/2021

CERTIFIED BY:

TOBI ERINLE
LabTech.

REVISED BY:

AYMEN OUESLATI
Lab Supervisor

MEPA METHANE 45PPM N2 BAL 152SZ/ MEPA MÉTHANE 45PPM N2 BAL 152SZ EPA PROTOCOL

Component Composant	Nominal Nominale	Certified Certifiée
Methane / MÉTHANE	45 PPM	45.05 PPM
Nitrogen / AZOTE	BAL	

Cylinder Details/ Détails - bouteille:

Cylinder Size/ Taille de la bouteille: 152 Contents/ Capacité: 4.000 M3 Valve Outlet/ Robinet de sortie: 350 Nominal
Pressure/Pression nominale: 2,000 PSG

Analytical Details/ Détails d'analyse:

Certification Accuracy $\pm 1\%$
Certification de précision $\pm 1\%$

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 exprimées 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: V24107503

Certificate Date (mm/dd/yy) / Date du certificat (mm/jj/aa) :02/07/2024

Use by / Utilisé par: 02/06/2032

Digitally signed and approved by/ signé électroniquement et approuvé par
Analyst/Analyste: Jed Verville

Canadian Association for Laboratory Accreditation Inc.

Certificate of Accreditation

A. Lanfranco and Associates Inc.
101 - 9488 - 189th Street
Surrey, British Columbia



This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017.
This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communiqué dated April 2017).



Accreditation No.: 1004232
Issued On: 5/15/2025
Accreditation Date: 2/5/2021
Expiry Date: 11/14/2027

A handwritten signature in black ink, appearing to read "K. McKinley", written over a horizontal line.

President and CEO



This certificate is the property of the Canadian Association for Laboratory Accreditation Inc. and must be returned on request; reproduction must follow policy in place at date of issue.
For the specific tests to which this accreditation applies, please refer to the laboratory's scope of accreditation at www.cala.ca.

ENVIRONMENTAL CAREERS ORGANIZATION OF CANADA

hereby certifies that

Louis Agassiz

has been awarded the title of

Environmental Professional

Air Quality

Ratified by the Canadian Environmental Certification Approvals Board (CECAB), and in accordance with the EP Code of Conduct and the current Occupational Standards, for a certification term of five(5) years, from:

June 16, 2022 to June 15, 2027

has been a certified member since

June 16, 2017



Chair, CECAB

Registrar

Walter Smith & Associates, Inc.

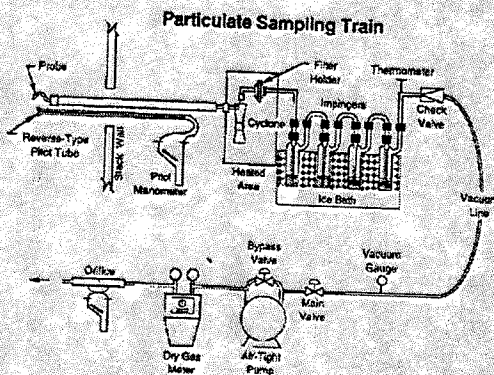
is hereby granted to:

Louis Agassiz

to certify that they have completed to satisfaction

Source Sampling & CEMS Workshop

Granted: March 11, 2011



Walter S. Smith

Walter S. Smith, PE, DEE 3.5 CEU

Declaration of Competency

The Ministry of Environment and Climate Change Strategy relies on the work, advice, recommendations and in some cases decision making of qualified professionals¹, under government's professional reliance regime. With this comes an assumption that professionals who undertake work in relation to ministry legislation, regulations and codes of practice have the knowledge, experience and objectivity necessary to fulfill this role.

1. Name of Qualified Professional Louis Agassiz
Title Senior Environmental Technician/Project Manager
2. Are you a registered member of a professional association in B.C.? ☒ Yes ☐ No
Name of Association: Environmental Careers Organization of Canada Registration # 21689
3. Brief description of professional services:
Environmental consulting, specializing in air and atmospheric sciences

This declaration of competency is collected under section 26(c) of the *Freedom of Information and Protection of Privacy Act* for the purposes of increasing government transparency and ensuring professional ethics and accountability. By signing and submitting this statement you consent to its publication and its disclosure outside of Canada. This consent is valid from the date submitted and cannot be revoked. If you have any questions about the collection, use or disclosure of your personal information please contact the Ministry of Environment and Climate Change Strategy Headquarters Office at 1-800-663-7867.

Declaration

I am a qualified professional with the knowledge, skills and experience to provide expert information, advice and/or recommendations in relation to the specific work described above.

Signature: 
X
Print Name: Louis Agassiz

Witnessed by: 
X
Print Name: Mark Lanfranco

Date signed: November 23, 2025

¹Qualified Professional, in relation to a duty or function under ministry legislation, means an individual who

- a) is registered in British Columbia with a professional association, is acting under that organization's code of ethics, and is subject to disciplinary action by that association, and
- b) through suitable education, experience, accreditation and knowledge, may reasonably be relied on to provide advice within his or her area of expertise, which area of expertise is applicable to the duty or function.

Conflict of Interest Disclosure Statement

A qualified professional ¹ providing services to either the Ministry of Environment and Climate Change Strategy ("ministry"), or to a regulated person for the purpose of obtaining an authorization from the ministry, or pursuant to a requirement imposed under the *Environmental Management Act*, the *Integrated Pest Management Act* or the *Park Act* has a real or perceived conflict of interest when the qualified professional, or their relatives, close associates or personal friends have a financial or other interest in the outcome of the work being performed.

A real or perceived conflict of interest occurs when a qualified professional has

- a) an ownership interest in the regulated person's business;
- b) an opportunity to influence a decision that leads to financial benefits from the regulated person or their business other than a standard fee for service (e.g. bonuses, stock options, other profit sharing arrangements);
- c) a personal or professional interest in a specific outcome;
- d) the promise of a long term or ongoing business relationship with the regulated person, that is contingent upon a specific outcome of work;
- e) a spouse or other family member who will benefit from a specific outcome; or
- f) any other interest that could be perceived as a threat to the independence or objectivity of the qualified professional in performing a duty or function.

Qualified professionals who work under ministry legislation must take care in the conduct of their work that potential conflicts of interest within their control are avoided or mitigated. Precise rules in conflict of interest are not possible and professionals must rely on guidance of their professional associations, their common sense, conscience and sense of personal integrity.

Declaration

I Louis Agassiz, as a member of ECO Canada
declare

Select one of the following:

☒ Absence from conflict of interest

Other than the standard fee I will receive for my professional services, I have no financial or other interest in the outcome of this project. I further declare that should a conflict of interest arise in the future during the course of this work, I will fully disclose the circumstances in writing and without delay to

Mr. Sajid Barlas, erring on the side of caution.

☐ Real or perceived conflict of interest

Description and nature of conflict(s):

I will maintain my objectivity, conducting my work in accordance with my Code of Ethics and standards of practice.

In addition, I will take the following steps to mitigate the real or perceived conflict(s) I have disclosed, to ensure the public interest remains paramount:

Further, I acknowledge that this disclosure may be interpreted as a threat to my independence and will be considered by the statutory decision maker accordingly.

This conflict of interest disclosure statement is collected under section 26(c) of the *Freedom of Information and Protection of Privacy Act* for the purposes of increasing government transparency and ensuring professional ethics and accountability. By signing and submitting this statement you consent to its publication and its disclosure outside of Canada. This consent is valid from the date submitted and cannot be revoked. If you have any questions about the collection, use or disclosure of your personal information please contact the Ministry of Environment and Climate Change Strategy Headquarters Office at 1-800-663-7867.

Signature:

X 

Print name: Louis Agassiz

Witnessed by:

X 

Print name: Mark Lanfranco

Date: Jan. 4, 2026

¹Qualified Professional, in relation to a duty or function under ministry legislation, means an individual who

- a) is registered in British Columbia with a professional association, is acting under that organization's code of ethics, and is subject to disciplinary action by that association, and
- b) through suitable education, experience, accreditation and knowledge, may reasonably be relied on to provide advice within his or her area of expertise, which area of expertise is applicable to the duty or function.

MOUNT ROYAL UNIVERSITY

Faculty of Continuing Education and Extension

Jeremy Shawn Gibbs

has successfully completed

Stack Sampling

35 Hours / 2019

May 22, 2019

Date

BUM
Dean

Faculty of Continuing Education and Extension



Declaration of Competency

The Ministry of Environment and Climate Change Strategy relies on the work, advice, recommendations and in some cases decision making of qualified professionals¹, under government's professional reliance regime. With this comes an assumption that professionals who undertake work in relation to ministry legislation, regulations and codes of practice have the knowledge, experience and objectivity necessary to fulfill this role.

1. Name of Qualified Professional

Title

Jeremy Gibbs
Environmental technician

2. Are you a registered member of a professional association in B.C.?

☐ Yes ☒ No

Name of Association: _____ Registration # _____

3. Brief description of professional services:

Environmental Consultant Specialize in air and
atmospheric sciences

This declaration of competency is collected under section 26(c) of the *Freedom of Information and Protection of Privacy Act* for the purposes of increasing government transparency and ensuring professional ethics and accountability. By signing and submitting this statement you consent to its publication and its disclosure outside of Canada. This consent is valid from the date submitted and cannot be revoked. If you have any questions about the collection, use or disclosure of your personal information please contact the Ministry of Environment and Climate Change Strategy Headquarters Office at 1-800-663-7867.

Declaration

I am a qualified professional with the knowledge, skills and experience to provide expert information, advice and/or recommendations in relation to the specific work described above.

Signature:

X

Print Name:

Jeremy Gibbs
Nov 1, 2020

Witnessed by:

X

Print Name:

Connor Laan

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Conflict of Interest Disclosure Statement

A qualified professional ¹ providing services to either the Ministry of Environment and Climate Change Strategy ("ministry"), or to a regulated person for the purpose of obtaining an authorization from the ministry, or pursuant to a requirement imposed under the *Environmental Management Act*, the *Integrated Pest Management Act* or the *Park Act* has a real or perceived conflict of interest when the qualified professional, or their relatives, close associates or personal friends have a financial or other interest in the outcome of the work being performed.

A real or perceived conflict of interest occurs when a qualified professional has

- a) an ownership interest in the regulated person's business;
- b) an opportunity to influence a decision that leads to financial benefits from the regulated person or their business other than a standard fee for service (e.g. bonuses, stock options, other profit sharing arrangements);
- c) a personal or professional interest in a specific outcome;
- d) the promise of a long term or ongoing business relationship with the regulated person, that is contingent upon a specific outcome of work;
- e) a spouse or other family member who will benefit from a specific outcome; or
- f) any other interest that could be perceived as a threat to the independence or objectivity of the qualified professional in performing a duty or function.

Qualified professionals who work under ministry legislation must take care in the conduct of their work that potential conflicts of interest within their control are avoided or mitigated. Precise rules in conflict of interest are not possible and professionals must rely on guidance of their professional associations, their common sense, conscience and sense of personal integrity.

Declaration

I Jeremy Gibbs, as a member of Air and Waste Management Association
declare

Select one of the following:

- ☒ Absence from conflict of interest

Other than the standard fee I will receive for my professional services, I have no financial or other interest in the outcome of this project. I further declare that should a conflict of interest arise in the future during the course of this work, I will fully disclose the circumstances in writing and without delay to

Mr. Sajid Barlas

, erring on the side of caution.

☐ Real or perceived conflict of interest

Description and nature of conflict(s):

I will maintain my objectivity, conducting my work in accordance with my Code of Ethics and standards of practice.

In addition, I will take the following steps to mitigate the real or perceived conflict(s) I have disclosed, to ensure the public interest remains paramount:

Further, I acknowledge that this disclosure may be interpreted as a threat to my independence and will be considered by the statutory decision maker accordingly.

This conflict of interest disclosure statement is collected under section 26(c) of the *Freedom of Information and Protection of Privacy Act* for the purposes of increasing government transparency and ensuring professional ethics and accountability. By signing and submitting this statement you consent to its publication and its disclosure outside of Canada. This consent is valid from the date submitted and cannot be revoked. If you have any questions about the collection, use or disclosure of your personal information please contact the Ministry of Environment and Climate Change Strategy Headquarters Office at 1-800-663-7867.

Signature:

X

Print name:

Jeremy G. B.S.S.

Witnessed by:

X

Print name:

Mark Lanfranco

Date: Dec. 16, 2020

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