RAIN CARBON INC.

REPORT

December 2022 Ambient Air Monitoring Report

Rain Carbon Canada Inc.

Submitted by:

Rain Carbon Canada Inc.

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January 2023

Distribution List

Electronic copy - Ontario Ministry of the Environment, Conservation and Parks

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1.0 INTRODUCTION

Rain Carbon Canada Inc. (Rain Carbon) is required to prepare monthly written summary reports of benzo(a)pyrene [B(a)P] and benzene ambient monitoring measurements for the coal tar and petroleum material processing plant located at 725 Strathearne Avenue N., Hamilton, Ontario (the Facility). This is the fifty third monthly report submitted as part of the Rain Carbon ambient monitoring program and summarizes the measurements taken in December 2022.

The ambient air monitoring measurements for December 2022 follow the December 12, 2019, Monitoring Plan for B(a)P and Benzene (the Plan) approved by the Ontario Ministry of the Environment, Conservation and Parks (MECP) on December 20, 2019. A copy of the Plan has been provided in Appendix A.

Rain Carbon operates the fence line monitors for benzene and B(a)P at the East, North, South, New West, and Old West environmental monitoring stations. Rain Carbon conducted monitoring for benzene and B(a)P monitoring off site at the HAMN station 29164 from April through September 2022 and resumed monitoring on December 7, 2022.

This report includes the following information for measurements taken in December 2022:

- Identification of each location at which a measurement was taken.
- For each location, the concentration of each measurement taken
- The date and time each measurement was taken.

2.0 AMBIENT MONITORING STATIONS

The monitoring program consists of setting up two types of sampling systems at five locations at the Facility. The two sampling systems included the polyurethane foam (PUF) polyaromatic hydrocarbon (PAH) sampling system for B(a)P and the SUMMA volatile organic carbon (VOC) canister sampling system for benzene. Samples were collected over a 24-hour period. The monitoring stations are listed below, and their locations are shown in Figure 1.

Table 1: Rain Carbon Ambient Air Quality Monitoring Stations

Station Location	Height Above Grade (m)
New North - Tank 91	4.1
New East - South of Tank-36	3.4
South - Berm	3.2
New West – West Fence line at Railcar Track 2 Spot 10.	4.0
Old West - Tank-77 Platform	13.0
Hamilton Area Monitoring Network (HAMN) Station 29164	4.0

The South berm monitor is placed just over three metres above grade by the berm located on the south side of the Facility as shown in Figure 2. The existing West monitor at Tank 77 is placed on the upper platform located on the west side of the Facility as shown in Figure 3. The platform is approximately 13 metres above grade. As shown in Figure 4, the North monitor is located at the north fence line, north of Tank 91, and placed 4.1 metres above grade and at least 2 metres away from any structure. The East monitor is at the east fence line, south of Tank 36, with an inlet height of 3.4 metres above grade. The New West monitor is located at the west fence line on a new dedicated stand-alone platform at approximately 4 metres above grade.

Air quality data acquisition and instrument performance were evaluated by Rotek Environmental Inc. personnel, who are familiar with the MECP guidelines (Operations Manual for Air Quality Monitoring in Ontario, April 2018) for ambient air monitoring and collection of monitoring data. The laboratory analysis was conducted by Bureau Veritas Laboratories, which is ISO17025 compliant and accredited. The following supporting documents are provided:

- Laboratory Analysis in Appendix B;
- Chain of custody forms in Appendix C;
- Laboratory Certificates of Analysis in Appendix D; and

- Field notes in Appendix E.

Figure 1: Monitor and Source Locations

Figure 2: Monitor Location on the South Side of the Facility

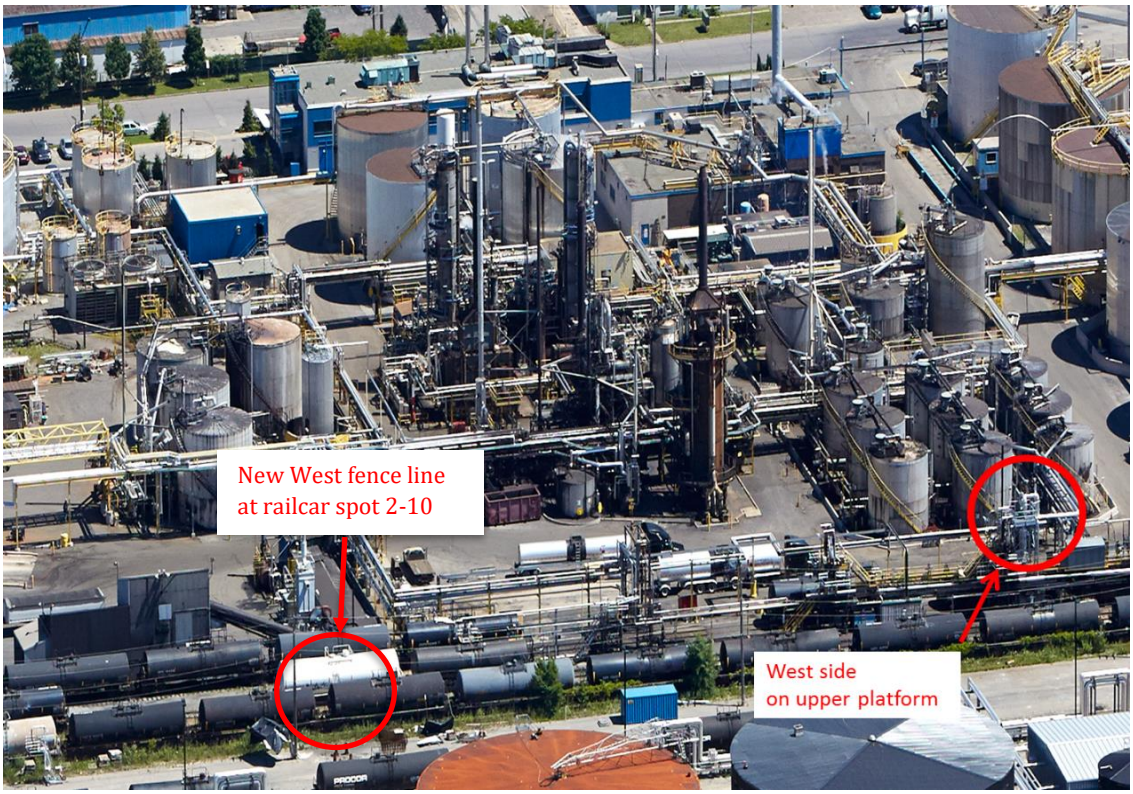


Figure 3: Monitor Locations on the West Side of the Facility

Figure 4: Monitor Locations on the North Side and East Side of the Facility

3.0 SUMMARY OF MONITORING EQUIPMENT CONDITIONS

The laboratory Certificate of Analysis for each monitoring event includes information on the volume of the sample collected for the PUF (B(a)P) monitoring system, and the residual vacuum pressures for the SUMMA canisters (benzene) monitoring equipment. For the PUF system, the MECP has flow requirements of 8 CFM +/- 10% which is equivalent to total volumes between 293.6 m^3 and 358.8 m^3 over 24 hours.

For the December 2022 monitoring results, all the recorded PUF volumes were inside the MECP specified range between 293.6 m^3 and 358.8 m^3 over 24 hours.

On the December 19, 2022 monitoring event, the north monitor SUMMA canisters pressure on receipt was 0.0 psig which was above the MECP maximum guideline pressure of – 2.0 psig likely due to VOC sampler timer leakage. The north monitor VOC sampler timer was serviced, calibrated, and returned to service.

On the December 19, 2022 monitoring event**,** the east monitor SUMMA canister "removal in the field off pressure" was 0 " Hg and above the MECP maximum guideline off pressure of – 5.0 " Hg likely due to VOC sampler timer leakage and the sample was not analysed. The east monitor VOC sampler timer was serviced, calibrated, and returned to service.

All the remaining benzene SUMMA canister pressures on receipt were at or below the MECP specified maximum pressure on receipt of – 2.0 psig. These pressures and volumes are presented below in Tables 2 and 3.

Table 2: Summa Canister Pressures on Receipt

Monitoring Event Date	Benzene SUMMA Canister Pressure on Receipt (psig)					
	East	North	Old West	New West	South	HAMN STN 29164
December 7, 2022	- 2.2	- 5.2	- 3.0	- 3.4	- 6.1	- 4.8
December 19, 2022	**Sampler failure****	**0.0***	- 2.2	- 2.2	- 5.0	-2.2
December 31, 2022	- 2.7	- 5.2	- 2.7	- 3.3	- 3.0	- 2.9

*SUMMA canister pressure on receipt was above the MECP maximum guideline pressure of – 2.0 psig.

** SUMMA canister removal in the field "off pressure" was – 30 " Hg and sample was not analysed.

Table 3: PUF Filter Total Volumes

Monitoring Event Date		+B(a)P PUF Total Volume [m³]				
	New	North	Old West	New West	South	HAMN STN 29164
December 7, 2022	336.6	317.4	325.9	341.6	321.3	320.2
December 19, 2022	339.0	313.5	343.9	337.6	329.0	327.8
December 31, 2022	334.1	303.4	337.5	320.1	317.7	317.5

4.0 SUMMARY OF BENZENE MEASUREMENTS

Three sets of benzene measurements were taken in December 2022. The measurements range from 0.481 µg/m^3 to **182.0 µg/m^3,** with the highest value being detected at the **south monitor** during the December 7, 2022, MECP monitoring event.

The benzene concentration of **182.0 µg/m^3, measured at the south monitor during the December 7, 2022 monitoring event** was above the 24-hour Upper Risk Threshold (URT) of 100 µg/m^3 benzene.

All the remaining benzene concentrations measured during the three December 2022 monitoring events were below the 24-hour Upper Risk Threshold (URT) of 100 µg/m^3 benzene.

On the December 19, 2022 monitoring event, the north monitor SUMMA canisters pressure on receipt was 0.0 psig which was above the MECP maximum guideline pressure of – 2.0 psig likely due to VOC sampler timer leakage and therefore the December 19, 2022 north monitor benzene result was invalid.

On the December 19, 2022 monitoring event**,** the east monitor SUMMA canister "removal in the field off pressure" was 0 " Hg and above the MECP maximum guideline off pressure of – 5.0 " Hg likely due to VOC sampler timer leakage and the sample was not analysed.

Table 4: Summary of December 2022 Benzene Measurements

Monitoring Event Date		Measured Concentration [µg/m³]				
	East	North	Old West	New West	South	HAMN STN 29164
December 7, 2022	84.9	1.82	7.55	1.83	**182.0**	1.49
December 19, 2022	**Sampler failure****	**Sampler failure***	0.491	0.576	0.905	3.70
December 31, 2022	55.4	14.0	20.0	10.2	6.26	1.60

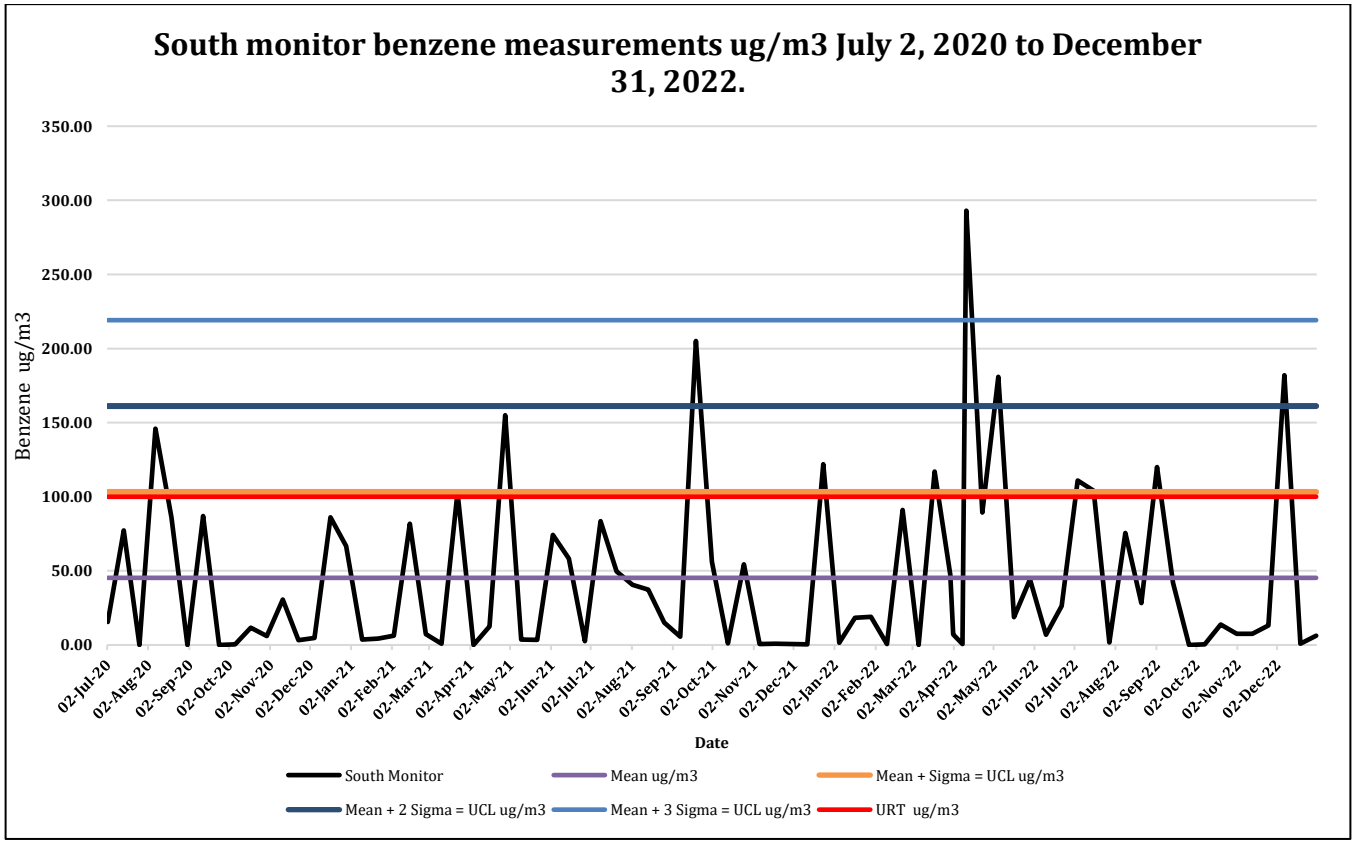
*SUMMA canister pressure on receipt was above the MECP maximum guideline pressure on receipt of – 2.0 psig.

** SUMMA canister removal in the field "off pressure" was above the MECP maximum guideline "off pressure" of – 5.0 "Hg.

December 7, 2022, MECP monitoring event

South monitor

The **182 µg/m^3 benzene measurement at the south monitor on the December 7, 2022, monitoring event** was above the 24-hour upper risk threshold (URT) of 100 µg/m^3 benzene which was determined statistically to be likely due (95 % confidence level) to a special cause variation event as the **182.0 µg/m^3** benzene measurement lies above the upper control limit (UCL) (mean + 2 sigma) of **161.19 µg/m^3 benzene** but below the upper control limit (UCL) (mean + 3 sigma) of **219.14 µg/m^3 benzene** for the south monitor.



Considering the overall wind directions from a general west north westerly direction on the December 7, 2022 MECP monitoring event, the likely sources that may have impacted the south monitor due to a west north westerly wind would have been one of the South Berm Area Tank PVRVs which are located at approximately 25 metres or greater in a WNW direction from the south monitor.

Three of these tank PVRVs (Tank 11, Tank 4 and Tank 8) have now been replaced with new Protectoseal "best in class" PVRVs since the December 7, 2022 MECP monitoring event under our Fugitive Emissions Abatement Plan.

5.0 SUMMARY OF B(A)P MEASUREMENTS

Three sets of B(a)P measurements were taken in December 2022. The B(a)P measurements ranged from <0.0029 µg/m^3 to **0.0153 µg/m^3**, with the highest value being detected at the **east monitor** during the December 19, 2022, monitoring event.

The MECP included a Measured Level Threshold for B(a)P as a trigger to evaluate progress on the B(a)P Action Plan. This level, set by the MECP, is not directly related to the ESDM Report results.

The B(a)P concentration of **0.00591 µg/m^3** measured at the new west monitor during the December 7, 2022, monitoring event was above the 0.00430 µg/m^3 Measured Level Threshold (MLT) which triggered the preparation of a December 2022 AML report. It was also above the 24-hr Upper Risk Threshold (URT) of 0.0050 µg/m^3 B(a)P.

The B(a)P concentration of **0.0153 µg/m^3** measured at the east monitor during the December 19, 2022, monitoring event was also above the 0.00430 µg/m^3 Measured Level Threshold (MLT) and also above the 24-hr Upper Risk Threshold (URT) of 0.0050 µg/m^3 B(a)P.

All the other B(a)P concentrations measured during the three December 2022 monitoring events were below the 0.0043 µg/m^3 Measured Level Threshold (MLT) and below the 24-hr Upper Risk Threshold (URT) of 0.0050 µg/m^3 B(a)P.

All the B(a)P measurements are summarized in Table 5 and copies of the laboratory analysis reports are provided in Appendix B.

Table 5: Summary of December 2022 B(a)P Measurements

Monitoring Event Date		Measured Concentration [µg/m³]				
	East	North	Old West	New West	South	HAMN STN 29164
December 7, 2022	0.00125	0.00088	0.00037	**0.00591**	0.00143	<0.00031
December 19, 2022	**0.0153**	0.00038	<0.00029	<0.00030	<0.00030	<0.00031
December 31, 2022	0.00114	0.00046	<0.00030	<0.00031	<0.00031	0.00082

6.0 CONCLUSIONS

The B(a)P concentration of **0.00591 µg/m^3 measured at the new west monitor during the December 7, 2022, monitoring event** was above the 0.00430 µg/m^3 Measured Level Threshold (MLT) which triggered the preparation of a December 2022 AML report. It was also above the 24-hr Upper Risk Threshold (URT) of 0.0050 µg/m^3 B(a)P.

The B(a)P concentration of **0.0153 µg/m^3 measured at the east monitor during the December 19, 2022, monitoring event** was also above the 0.00430 µg/m^3 Measured Level Threshold (MLT) and also above the 24-hr Upper Risk Threshold (URT) of 0.0050 µg/m^3 B(a)P.

All the remaining B(a)P concentrations measured during the three December 2022 monitoring events were below the 0.0043 µg/m^3 Measured Level Threshold (MLT) and below the 24-hr Upper Risk Threshold (URT) of 0.0050 µg/m^3 B(a)P.

The benzene concentration of **182.0 µg/m^3, measured at the south monitor during the December 7, 2022 monitoring event** was above the 24-hour Upper Risk Threshold (URT) of 100 µg/m^3 benzene and was was determined statistically to be likely due (95 % confidence level) to a special cause variation event.

The likely sources that may have impacted the south monitor due to a west north westerly wind would have been one of the South Berm Area Tank PVRVs which are located at approximately 25 metres or greater in an WNW direction from the south monitor.

All the remaining benzene concentrations measured during the three December 2022 monitoring events were below the 24-hour Upper Risk Threshold (URT) of 100 µg/m^3 benzene.

On the December 19, 2022 monitoring event, the north monitor SUMMA canister pressure on receipt was 0.0 psig which was above the MECP maximum guideline pressure of – 2.0 psig likely due to VOC sampler timer leakage and the east monitor SUMMA canister “removal in the field off pressure” was 0 “ Hg and above the MECP maximum guideline off pressure of - 5.0 “ Hg likely due to VOC sampler timer leakage and the sample was not analysed.

Signature Page

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APPENDIX A

Monitoring Plan

REPORT

Monitoring Plan for Benzo(a)pyrene and Benzene

Rain Carbon Canada Inc.

Submitted to:

Distribution List

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September 2020

Distribution List

1 PDF Copy - MECP, SDB, Toronto

1 PDF Copy - MECP, Hamilton District Office, Hamilton

1 PDF Copy - Golder Associates.

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1.0 INTRODUCTION

Rain Carbon Canada Inc. (Rain Carbon) prepared an amendment to the monitoring plan (the Plan) which was approved by the Ontario Ministry of Environment, Conservation and Parks (MECP) in November 2019 as part of the conditions of the Site-Specific Standard (SSS) approvals for B(a)P (no. 201-17-rv0) and benzene (no. 202-17-rv0) issued to the Facility on November 21, 2017.

This updated Plan has been prepared to incorporate the fact that the north, east and west monitoring stations have now all been relocated as described in the Plan issued in November 2019 and are now all operational .

(The Plan describes the current air monitoring program performed to monitor concentrations of B(a)P and benzene emissions from the Facility).

1.1 Description of the Facility

Rain Carbon operates a coal tar and petroleum material processing plant located at 725 Strathearne Avenue N., Hamilton, Ontario. The Facility employs 85 people. The size of the plant is about 14 acres and it is in an area zoned for industrial use. The location of the Facility is presented in Figure 1 – Site Location Plan.

1.2 Description of the Process

Rain Carbon processes coal tar and petroleum-based materials into products. The primary production line is to manufacture coal tar pitch and coal tar distillates (CTDs) by processing coal tar. The process is comprised of the following processes and equipment:

- Coal Tar Handling;
- Distillation Process;
- Product Storage Handling;
- Natural Gas Combustion Equipment;
- Fume Gathering and Incineration (FGI) System;
- Fume Scrubber System (FSS); and
- Wastewater Collection and Treatment.

1.3 Operating Schedule

The Facility operates continuously 24 hours a day, seven days a week and 52 weeks per year.

2.0 AIR QUALITY MONITORING PROGRAM

2.1 Sampling Systems and Methodology

As B(a)P and benzene require different sampling methods, two types of sampling systems will be installed at each monitoring location (described below in Section 2.2). A PUF PAH sampling system will be used to detect condensable and non-condensable fractions of B(a)P while a VOC canister system will be used to detect benzene.

Samples will be taken over 24-hour period every 12 days. This schedule will be matched to that of the Hamilton Air Monitoring Network (HAMN) to enable comparisons with background B(a)P and benzene levels.

Monitoring will be carried out in accordance with the standard procedures summarized in Table 2.1.

Table 2.1: Standard Operation Procedures for Monitoring

Pollutant	Reference Documents	Method
Benzene	USEPA Report EPA/625/R-96/010/b, USEPA Method TO-15. ASTM Method D5466-01 Standard Test Method for the Determination of VOCs (Canister Sampling Method) Environment Canada SOP for Passive Canister Sampling – Passive FCSOP05.	Determination of VOCs in Air Collected in Specially Prepared Canister.
B(a)P	SEPA Report EPA/625/R-96/010/b, USEPA Method TO-13A. ASTM Method D6209-98 (2004), Vol. 11.07 A Guide to Air Filter (TSP and PM¬10) Sampling and Submission, Ministry of the Environment, Conservation and Parks, May 2003.	Determination of PAHs in Ambient Air Using the hi-vol Method with Teflon-coated Glass Fiber Filter and Sorbent Cartridge; Quantitative GC/MS Detection.

Rain Carbon worked with Rotek Environmental Inc. (Rotek) and others to install the monitoring equipment. Samples are collected by Rain Carbon staff and sent to an accredited laboratory for analysis. Rain Carbon will prepare the monitoring reports as required by the orders.

2.1.1 Calibration

Calibrations will be carried out in accordance with MECP standard operating procedures stating that operators must perform an external performance check and calibration on continuous and non-continuous air monitoring and sampling equipment with a certified calibration unit. This requires that the calibration materials/gases and measurement devices, such as flow meters and pressure gauges, must be certified for accuracy against a reference or transfer standard traceable to a primary reference standard of the United States National Institute of Standards and Technology (NIST) or another equivalent international standards institute. This is to ensure consistency across the province and reproducibility. Calibration devices must also undergo an annual certification assessment.

The monitoring equipment is calibrated by Rotek.

2.2 Monitor Locations

The monitoring locations were selected based on input from the MECP. Based on experience gained through implementing the monitoring program, Rain Carbon relocated the original North, East, and West Monitoring Stations but not the South Monitoring Station. The descriptions of the monitoring station locations are summarized in Table 2.2 below. The monitoring station locations are shown in Figure 2.

Table 2.2: Monitoring Station Locations.

Monitoring Station	Location
North Monitor	This location is at the north fence line, north of Tank 91, with the inlet at an elevation of between 3 m and 15 m above grade and positioned at a distance of at least 2 m away from any structure.
East Monitor	This location is at the east fence line and east of Tank 36 with the inlet at a distance equal or greater than 2 m away from a structure and at an elevation of between 3 m and 15 m above grade.
Old West Monitor	This old west location, approximately 8 metres east of the property boundary, is on a platform above Tank 77 (approximately 13 above grade) is currently located relatively close to and above the railcar loading stations.
New West Monitor	This new west location is closer to ground level to be consistent with the other monitor locations, between the west fence line and the rail tracks, and north of the railcar track 2 spot 10 area with the inlet at an elevation of between 3 m and 15 m above grade and positioned far from any structure.
South Monitor	This location is at the south fence line, south of Tank 3, with the inlet at an elevation of between 3 m and 15 m above grade and positioned at a distance of at least 2 m away from any structure.

Detailed descriptions of the emission sources at the Facility are summarized in the Monitoring Plan approved by the MECP in April 2018.

2.2.1 Siting Criteria

A comparison of each monitoring location against the siting criteria set out in the MECP Operations Manual is provided in Table 2.3 below.

Table 2.3: Monitor Locations Comparison to MECP Siting Criteria.

Contaminant	Criteria			Monitor Location		
		North	East	Old West	New West	South
B(a)P and Benzene	Inlet height 3 to 15 m above grade	Inlet 3 to 15 m above grade	Inlet 3 to 15 m above grade	Inlet 3 to 15 m above grade	Inlet 3 to 15 m above grade	Inlet 3 to 15 m above grade
B(a)P and Benzene	Inlet at least 1 m (vertical) and 2 m (horizontal) away from structure	Yes	Yes	Yes	Yes	Yes
B(a)P and Benzene	No nearby furnace or incineration flues	None	None	None	None	None
B(a)P	Avoids nearby non-process PAH sources (asphalt rooftops, rooftop tarring and roadway/parking lot paving activities) and smoking areas	Yes	Yes	Yes	Yes	Yes
Benzene	Meets minimum separation distance from roadway (10 m)	Yes	Yes	Yes	Yes	Yes

2.3 Meteorological Data and Background Concentrations

The HAMN is used to document meteorological conditions during monitoring events. The previous closest meteorological station to the Facility was station STN29165; however, this station has not been operational since November 1, 2017. Meteorological conditions will be documented using the following nearby HAMN stations: STN29102, STN29180, and STN29565. When conditions are highly variable, the following stations may also be used to document meteorological conditions: STN29167, STN29171, and STN29567.

The background benzene and B(a)P concentrations in the vicinity of the Facility will be reviewed to evaluate the potential impact of nearby sources of emission on the Facility. Rain Carbon will use data from nearby HAMN monitoring stations, prepared by HAMN on a quarterly basis. The HAMN stations to be used

to inform background concentrations include the following HAMN stations: STN29567, STN29547, STN29102 and STN29180. Information on these stations is presented in Table 2.4.

Table 2.4: Meteorological Station Information

HAMN Station	29567	29180	29547	29102	29167	29171	29565
Wind Speed and Direction	✓	✓	—	✓	✓	✓	✓
B(a)P Concentration	✓	✓	✓	—	—	—	—
Benzene Concentration	✓	✓	—	✓	—	—	—
Approximate Distance from Facility [km]	3.9	2.4	1.0	1.5	1.7	2.3	1.3
Orientation from Facility	W	WSW	N	NNE	NNW	WNW	S

The background data assessment will be used to provide context for the Rain Carbon monitoring results should high values be measured. Please note that background values will not be subtracted from the Rain Carbon monitoring results.

2.4 Laboratory Analysis

Rain Carbon will continue to work with the same accredited laboratories that have been retained to analyse samples obtained from the HAMN. The proposed method detection limits and analytical methods are summarized below in Table 2-5.

Table 2.5: Analytical Methodology

Contaminant	Methodology	Method Detection Limit
B(a)P	Gas chromatography mass spectrometry	0.0001 µg/m³ (0.1 ng/m³)
Benzene	Mass spectrometry or other detector(s) such as flame ionization detector (FID) or electron capture detector (ECD)	0.16 µg/m³

2.5 Review of Monitoring Locations

As fees for monitoring equipment rental and/or purchase, sampling materials and laboratory analysis represent a significant, long-term capital expense, Rain Carbon will continue to review the effectiveness and value of each monitoring location. In consultation with the District Manager and the Environmental Monitoring Team, Rain Carbon will propose if any of the monitors can be removed.

3.0 REPORTING

Summary reports of B(a)P and benzene monitoring results will be submitted to the District Manager and the Environmental Monitoring Team as set out in the SSS approval documents.

3.1 Measured Level Threshold

Within 30 days of a B(a)P concentration measuring above the Measured Level threshold in the SSS approval, Rain Carbon will submit a report to the District Manager and SDB Director. The report will contain information such as an analysis of the cause of the measurement above the Measured Level threshold, the Facility production rate at the time and other items as required by Condition 2 of the B(a)P SSS approval.

4.0 CLOSURE

This monitoring plan describes the amended air monitoring program that will be performed in accordance with the Rain Carbon SSS approvals for B(a)P and benzene.

Signature Page

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Rain Carbon Canada Inc.

Figures

Figure 1: Site Plan

Figure 2: Environmental Monitor Locations

APPENDIX A

Site Photos

Figure A1: Site-Wide Aerial View 1

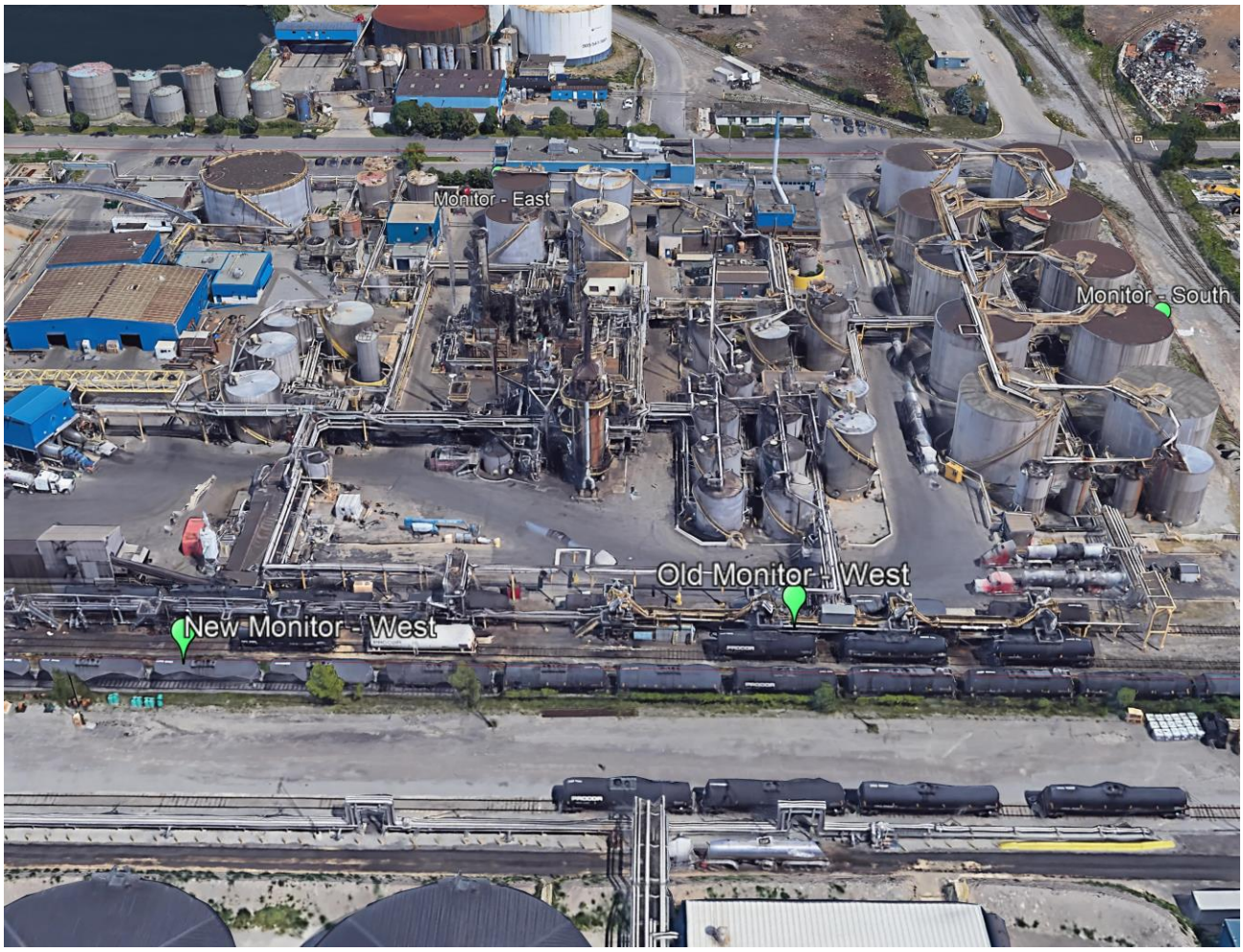
Figure A2: Site-Wide Aerial View 2

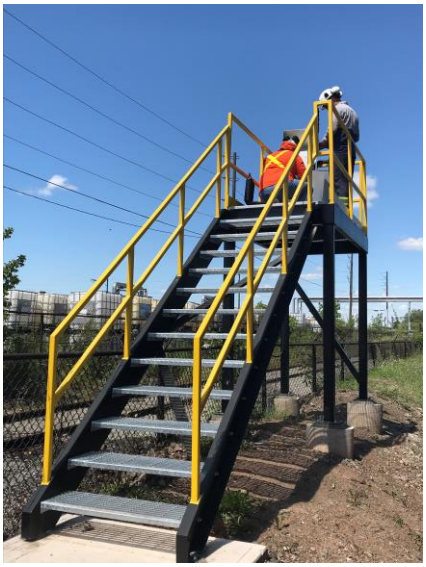
Figure A4: Aerial View 2 – North Monitoring Station.

North monitor

Figure A3: Aerial View 1 – Existing South Monitoring Station

Figure A3: Aerial View 3 – New and Old West Monitoring Stations





New West Monitor

East monitor

Figure A4: Aerial View 4 – East Monitoring Station

APPENDIX B

Laboratory Analysis

Rain Carbon Canada Inc. - Monthly BaP Sampling Report

Reporting Period : December 2022
Sampling Method : CARB429(ARBM1,M2) mod
Sampling Times : 24 hour duration starting at 00:00 EST on the Sample Date

Parameter	BaP
Units	ng/m^3
Analytical RDL	0.315
Annual Site Specific Standard	0.8

Sample Date	Location					
	East	North	Old West	South	New West	STN29164
07-Dec-22	1.25	0.88	0.37	1.43	5.91	0.16
19-Dec-22	15.30	0.38	0.15	0.15	0.15	0.16
31-Dec-22	1.14	0.46	0.15	0.16	0.16	0.82
Monthly Ave	5.90	0.57	0.22	0.58	2.07	0.38
Monthly Max	15.30	0.88	0.37	1.43	5.91	0.82
Monthly Min	1.14	0.38	0.15	0.15	0.15	0.16
No. of Samples >Standard	3	1	0	1	1	1
No. of Valid Samples	3	3	3	3	3	3
% Valid Data	100	100	100	100	100	100

Note: All non detectable results reported as ½ the Reportable Detection Limit (RDL).

Comments

Rain Carbon Canada Inc. - VOC Sampling Report

Reporting Period : December 2022
Sampling Methods : GC/MS (TO15)
Sampling Times : 24 hour duration starting at 00:00 EST on the Sample Date

Parameter	Benzene
Units	ug/m^3
Analytical RDL	0.319
Site Specific Standard	12.7

Sample Date	Location					
	East	**North**	**Old West**	**South**	**New West**	**STN29164**
07-Dec-22	84.90	1.82	7.55	171.00	1.83	1.49
19-Dec-22	INVLD	7.12	0.49	0.91	0.58	3.70
31-Dec-22	55.40	14.00	20.00	6.26	10.20	1.60
Monthly Ave	70.15	7.65	9.35	59.39	4.20	2.26
Monthly Max	84.90	14.00	20.00	171.00	10.20	3.70
Monthly Min	55.40	1.82	0.49	0.91	0.58	1.49
No. of Samples >Standard	2	1	1	1	0	0
No. of Valid Samples	2	3	3	3	3	3
% Valid Data	67	100	100	100	100	100

Note: All non detectable results reported as ½ the Reportable Detection Limit (RDL).

Comments
December 19, 2022 EAST VOC sample invalid.

Rain Carbon Canada Inc. - VOC Sampling Report

Reporting Period : December 2022
Sampling Methods : GC/MS (TO15)
Sampling Times : 24 hour duration starting at 00:00 EST on the Sample Date

Parameter	Benzene
Units	ug/m^3
Analytical RDL	0.319
Site Specific Standard	12.7

Sample Date	Location					
	East	**North**	**Old West**	**South**	**New West**	**STN29164**
07-Dec-22	77.30	---	---	182.00	---	---
19-Dec-22	---	---	0.51	1.27	---	---
31-Dec-22	---	---	---	INVLD	---	---
Monthly Ave	77.30	---	0.51	91.64	---	---
Monthly Max	77.30	0.00	0.51	182.00	0.00	0.00
Monthly Min	77.30	0.00	0.51	1.27	0.00	0.00
No. of Samples >Standard	1	0	0	1	0	0
No. of Valid Samples	1	0	1	2	0	0
% Valid Data	100	---	100	100	---	---

Note: All non detectable results reported as ½ the Reportable Detection Limit (RDL).

Comments
NOTE: The data reported here are the results for VOC duplicates ran during December 2022.
December 31, 2022 SOUTH VOC duplicate sample invalid.

APPENDIX C

Chain of Custody Forms

AIR

6740 Campobello Rd
Mississauga Ontario ,L5N 2L8
www.bvlabs.com
Toll Free: 1-800-668-0639
Phone: (905) 817-5700
Fax: (905) 817-5777

Chain of Custody Form - PUF / PAH

INVOICE INFORMATION

Company Name: Rotek Environmental Inc
Contact Name: Paul Daszko
Address: 15 Keefer Court Hamilton
ON L8E 4V4
E-mail: poore@rotekinc.com
Ph: daszko@rotekinc.com
Sampled by: Ryan German

REPORT INFORMATION

Company Name: Rotek Environmental
Project Manager: Paul Daszko
Address 15 Keefer Court Hamilton
ON L8E 4V4
E-mail: ruth.herron@rotekinc.com
Ph: 905-573-9533

ANALYSIS REQUESTED

Field Sample ID			BV PUF ID #	Flow Regulator Serial #	Retrieval Date	START VACUUM (inches of Hg)	END VACUUM (inches of Hg)	SOIL VAPOUR	AMBIENT/INDOOR AIR	AMBIENT/COMMERCIAL/INDUSTRIAL	SUB-SLAB GAS	FULL LIST OF VOCs (reference TO15A)	BTEX/Aromatic/Aliphatic Hydrocarbon Fractions	BTEX/F1 (C6-C10) and F2 (C10-C16)	Selected VOC's - please specify	PAHs on PUF by EPA TO13				CANISTERS NOT USED
East PAH	07-Dec	PUF #1	UJG074-01	---	08-Dec											X				
North PAH	07-Dec	PUF #2	UJG075-01	---	08-Dec											X				
New West PAH	07-Dec	PUF #3	UJG0761-01	---	08-Dec											X				
South PAH	07-Dec	PUF #4	UJG077-01	---	08-Dec											X				
Old West PAH	07-Dec	PUF #5	UJG078-01	---	08-Dec											X				
STN241164	07-DEC		UJG 107-01	---	08-DEC															

12-Dec-22 16:24
Cristina (Maria) Bacchus
C2AE616
AJH AIR-FRIDGE

TAT Requirement

STD 10 Business day ☑
Rush 5 Business day * ☐
Rush 2 Business day * ☐
Rush Other * ☐

* need approval from Bureau Veritas

PROJECT INFORMATION

Project #:
Name: Rain Carbon Canada Inc
PO #: 32669
Bureau Veritas Quote #:
Bureau Veritas Contac: Cristina Bacchus
Task Order/Line Item

REPORTING REQUIREMENTS

EDD ☐
Regulations ON 153 ☐
ON 419 ☐
BC CSR ☐
Other

Notes

1) please indicate on chain of custody if your samples are soil vapour or ambient air
2) please list all canisters on the chain of custody even if unused

PROJECT SPECIFIC COMMENTS

Analyse for BaP only in ng/m^3.
Please copy results to york.zhang@raincarbon.com, robin.hart@raincarbon.com, ruth.herron@rotekinc.com

PLEASE RETURN ALL UNUSED EQUIPMENT

Client Signature: : Ryan German
Date/Time: 12-Dec-22

Received by:
Date/Time: 12/12/22 1624

Unless otherwise agreed to in writing, work submitted on this Chain of Custody is subject to Bureau Veritas Laboratories' standard Terms and Conditions. Signing of this Chain of Custody document is acknowledgment and acceptance of our terms available at http://www.bvlabs.com/terms-and-conditions

ROTEK Environmental

15 Keefer Court
Hamilton, Ontario
L8E 4V4
Phone 905 573 9533
Fax 905 578 5167

PAH Sample Submission Sheet

Sample Date	07-Dec-22
Project ID	Rain Carbon Canada Inc
Sampler Model	TE-1000
Site Operator	York Zhang / Robin Hart

Purchase Order Number	**32669**
Results to:	ruth.herron@rotekinc.com
Results to:	daszko@rotekinc.com
Results to:	robin.hart@raincarbon.com
Results to:	york.zhang@raincarbon.com

Station No.	Sample Date	PUF Cartridge #	Maxxam Filter ID #	Install Date / Install Time	MAGN On inH2O	Removal Date / Removal Time	MAGN Off inH2O	Total Volume m3	Submission Date
EAST	07 Dec 2022	PUF#1 UJG074-01	UJG073-01	05-Dec-22 15:50	38.0	08-Dec-22 10:10	42.0	336.6	13-Dec-22
NORTH	07 Dec 2022	PUF#2 UJG075-01	UJG073-01	05-Dec-22 17:00	38.0	08-Dec-22 10:40	44.0	317.4	13-Dec-22
OLD WEST	07 Dec 2022	PUF#3 UJG076-01	UJG073-01	05-Dec-22 17:30	40.0	08-Dec-22 14:15	40.0	341.6	13-Dec-22
SOUTH	07 Dec 2022	PUF#4 UJG077-01	UJG073-01	05-Dec-22 16:15	40.0	08-Dec-22 10:50	40.0	321.3	13-Dec-22
NEW WEST	07 Dec 2022	PUF#5 UJG078-01	UJG073-01	05-Dec-22 17:10	40.0	08-Dec-22 14:00	40.0	325.9	13-Dec-22
STN29164*	07 Dec 2022	--- UMP107-01	UMO106-01	06-Dec-22 11:00	38.0	08-Dec-22 09:00	38.0	320.2	13-Dec-22

Comment 1 :	***STN29164 also labelled PUF#1. REFER to PUF cartrige ID when preparing samples for analysis.**
Comment 2 :	

ROTEK Environmental

15 Keefer Court
Hamilton, Ontario
L8E 4V4
Phone 905 573 9533
Fax 905 578 5167

PAH Sample Submission Sheet

Sample Date	19-Dec-22
Project ID	Rain Carbon Canada Inc
Sampler Model	TE-1000
Site Operator	York Zhang / Robin Hart

Purchase Order Number	**32669**
Results to:	ruth.herron@rotekinc.com
Results to:	daszko@rotekinc.com
Results to:	robin.hart@raincarbon.com
Results to:	york.zhang@raincarbon.com

Station No.	Sample Date	PUF Cartridge #	Maxxam Filter ID #	Install Date / Install Time	MAGN On inH2O	Removal Date / Removal Time	MAGN Off inH2O	Total Volume m3	Submission Date
EAST	19 Dec 2022	PUF#1 UJG089-01	UJG088-01	16-Dec-22 12:15	38.0	21-Dec-22 14:35	40.0	339.0	22-Dec-22
NORTH	19 Dec 2022	PUF#2 UJG090-01	UJG088-01	16-Dec-22 12:30	38.0	21-Dec-22 15:00	38.0	313.5	22-Dec-22
OLD WEST	19 Dec 2022	PUF#3 UJG6091-01	UJG088-01	16-Dec-22 17:00	38.0	21-Dec-22 16:30	40.0	343.9	22-Dec-22
SOUTH	19 Dec 2022	PUF#4 UJG092-01	UJG088-01	16-Dec-22 13:00	38.0	21-Dec-22 15:30	40.0	329.0	22-Dec-22
NEW WEST	19 Dec 2022	PUF#5 UJG093-01	UJG088-01	16-Dec-22 14:00	38.0	21-Dec-22 16:00	40.0	337.6	22-Dec-22
STN29164	19 Dec 2022	PUF#6 UMP384-01	UJG088-01	16-Dec-22 13:45	38.0	21-Dec-22 12:15	39.0	327.8	22-Dec-22

Comment 1 :	
Comment 2 :	

22-Dec-22 18:40

Cristina (Maria) Bacchus

C2AQ904

DSG AIR-FRIDGE

0 Campobello Rd
sissauga Ontario ,L5N 2L8
v.bvlabs.com
Toll Free: 1-800-668-0639
Phone: (905) 817-5700
Fax: (905) 817-5777

CAM FCD-01302 /3

Chain of Custody Form - PUF / PAH

REPORT INFORMATION

Company Name:	Rotek Environmental Inc
Contact Name:	Paul Daszko
Address:	15 Keefer Court Hamilton
	ON L8E 4V4
E-mail:	poore@rotekinc.com
Ph:	905 573 9533
Sampled by:	Robin Hart

Company Name:	Rotek Environmental
Project Manager:	Paul Daszko
Address	15 Keefer Court Hamilton
	ON L8E 4V4
E-mail:	ruth.herron@rotekinc.com
Ph:	905-573-9533

ANALYSIS REQUESTED

Field Sample ID			BV PUF ID #	Flow Regulator Serial #	Retrieval Date	START VACUUM (inches of Hg)	END VACUUM (inches of Hg)	SOIL VAPOUR	AMBIENT/INDOOR AIR	AMBIENT/COMMERCIAL/INDUSTRIAL	SUB-SLAB GAS	FULL LIST OF VOCs (reference TO15A)	BTEX/Aromatic/Aliphatic Hydrocarbon Fractions	BTEX/F1 (C6-C10) and F2 (C10-C16)	Selected VOC's - please specify	PAHs on PUF by EPA TO13				CANISTERS NOT USED
East PAH	19/12	PUF #1	UJG089-01	---	21-Dec											X				
North PAH	19/12	PUF #2	UJG090-01	---	21-Dec											X				
Old West PAH	19/12	PUF #3	UJG091-01	---	21-Dec											X				
South PAH	19/12	PUF #4	UJG092-01	---	21-Dec											X				
New West PAH	19/12	PUF #5	UJG093-01	---	21-Dec											X				
29164	19/12	PUF #6	UMP384-01	---	21-Dec											X				

TAT Requirement

- STD 10 Business day ☑
- Rush 5 Business day * ☐
- Rush 2 Business day * ☐
- Rush Other * ☐

* need approval from Bureau Veritas

PROJECT INFORMATION

- Project #:
- Name: Rain Carbon Canada Inc
- PO #: 32669
- Bureau Veritas Quote #:
- Bureau Veritas Contac: Cristina Bacchus
- Task Order/Line Item

REPORTING REQUIREMENTS

- EDD ☐
- Regulations ON 153 ☐
- ON 419 ☐
- BC CSR ☐
- Other

Notes

1) please indicate on chain of custody if your samples are soil vapour or ambient air

2) please list all canisters on the chain of custody even if unused

PROJECT SPECIFIC COMMENTS

Analyse for BaP only in ng/m^3.

Please copy results to york.zhang@raincarbon.com, robin.hart@raincarbon.com, ruth.herron@rotekinc.com

PLEASE RETURN ALL UNUSED EQUIPMENT

Client Signature: : Paul Daszko

Date/Time: 22-Dec-22

Received by: [signature] / NIRAL PATEL

Date/Time: 2022/12/22 · 18 : 46

Unless otherwise agreed to in writing, work submitted on this Chain of Custody is subject to Bureau Veritas Laboratories' standard Terms and Conditions. Signing of this Chain of Custody document is acknowledgment and acceptance of our terms available at http://www.bvlabs.com/terms-and-conditions

-4/-7/-3 ON ICE PACK

ROTEK Environmental

15 Keefer Court
Hamilton, Ontario
L8E 4V4
Phone 905 573 9533
Fax 905 578 5167

PAH Sample Submission Sheet

Sample Date	31-Dec-22
Project ID	Rain Carbon Canada Inc
Sampler Model	TE-1000
Site Operator	York Zhang / Robin Hart

Purchase Order Number	**32669**
Results to:	ruth.herron@rotekinc.com
Results to:	daszko@rotekinc.com
Results to:	robin.hart@raincarbon.com
Results to:	york.zhang@raincarbon.com

Station No.	Sample Date	PUF Cartridge #	Maxxam Filter ID #	Install Date / Install Time	MAGN On inH2O	Removal Date / Removal Time	MAGN Off inH2O	Total Volume m3	Submission Date
EAST	31 Dec 2022	PUF#1 UJG100-01	UJG099-01	30-Dec-22 11:15	38.0	03-Jan-23 13:30	40.0	334.1	04-Jan-23
NORTH	31 Dec 2022	PUF#2 UJG101-01	UJG099-01	30-Dec-22 12:45	38.0	21-Dec-22 14:10	38.0	303.4	04-Jan-23
OLD WEST	31 Dec 2022	PUF#3 UJG102-01	UJG099-01	30-Dec-22 12:00	38.0	21-Dec-22 15:27	40.0	337.5	04-Jan-23
SOUTH	31 Dec 2022	PUF#4 UJG103-01	UJG099-01	30-Dec-22 13:15	38.0	21-Dec-22 14:30	38.0	317.7	04-Jan-23
NEW WEST	31 Dec 2022	PUF#5 UJG104-01	UJG099-01	30-Dec-22 11:30	38.0	21-Dec-22 15:10	40.0	320.1	04-Jan-23
STN29164	31 Dec 2022	PUF#6 UMP458-01	UJG099-01	30-Dec-22 10:00	38.0	21-Dec-22 10:30	39.0	317.5	04-Jan-23
Comment 1 :									
Comment 2 :									

ROTEK Environmental

15 Keefer Court
Hamilton, Ontario
L8E 4V4
Phone 905 573 9533
Fax 905 578 5167

VOC Canister Sample Submission Sheet

Sample Date	31-Dec-22
Project Name	Rain Carbon Canada Inc.
Contact Name	Paul Daszko
Contact Number	905 531 2815

Purchase Order Number	**32669**
Results to:	ruth.herron@rotekinc.com
Results to:	daszko@rotekinc.com
Results to:	robin.hart@raincarbon.com
Results to:	york.zhang@raincarbon.com

Station Number	Canister ID Number	Sample Date	Installation Date	Installation Time	Initial Pressure	Time On	Time Off	Elapsed Time	Final Pressure	Retrieval Date	Retrieval Time
		dd/mm/yy	dd/mm/yy	EST	inHg	EST	EST	Hours	inHg	dd/mm/yy	EST
EAST	14509	31-Dec-22	30-Dec-22	14:00	-30.0	00:01	23:59	24.0	-8.0	03-Jan-23	13:45
NORTH	7845	31-Dec-22	30-Dec-22	12:33	-30.0	00:01	23:59	24.0	-13.0	03-Jan-23	14:10
OLD WEST	2620	31-Dec-22	30-Dec-22	12:00	-29.0	00:01	23:59	24.0	-9.0	03-Jan-23	15:40
SOUTH	32576	31-Dec-22	30-Dec-22	13:15	-29.0	00:01	23:59	24.0	-8.5	03-Jan-23	14:35
NEW WEST	2756	31-Dec-22	30-Dec-22	14:30	-28.0	00:01	23:59	24.0	-9.0	03-Jan-23	15:15
STN29164	1237	31-Dec-22	30-Dec-22	10:00	-30.0	00:01	23:59	24.0	-7.5	03-Jan-23	10:30
SOUTH DUP	1269	31-Dec-22	30-Dec-22	13:30	-29.0	00:01	23:59	24.0	0.0	03-Jan-23	14:40

Comment 1 :	**Do not analyze canister 1269 (SOUTH DUP), invalid sample.**
Comment 2 :	

04-Jan-23 14:15
Cristina (Maria) Bacchus
C301955

SBS AIR-FRIDGE

CAM FCD-01302 /3

mpobello Rd
uga Ontario ,L5N 2L8
abs.com
Toll Free: 1-800-668-0639
Phone: (905) 817-5700
Fax: (905) 817-5777

Chain of Custody Form - PUF / PAH

REPORT INFORMATION			
Company Name:	Rotek Environmental Inc	**Company Name:**	Rotek Environmental
Contact Name:	Paul Daszko	**Project Manager:**	Paul Daszko
Address:	15 Keefer Court Hamilton	**Address**	15 Keefer Court Hamilton
	ON L8E 4V4		ON L8E 4V4
E-mail:	poore@rotekinc.com	**E-mail:**	ruth.herron@rotekinc.com
Ph:	905 573 9533	**Ph:**	905-573-9533
Sampled by:	Robin Hart		

ANALYSIS REQUESTED

Field Sample ID			BV PUF ID #	Flow Regulator Serial #	Retrieval Date	START VACUUM (inches of Hg)	END VACUUM (inches of Hg)	SOIL VAPOUR	AMBIENT/INDOOR AIR	AMBIENT/COMMERCIAL/INDUSTRIAL	SUB-SLAB GAS	FULL LIST OF VOCs (reference TO15A)	BTEX/Aromatic/Aliphatic Hydrocarbon Fractions	BTEX/F1 (C6-C10) and F2 (C10-C16)	Selected VOC's - please specify	PAHs on PUF by EPA TO13				CANISTERS NOT USED
East PAH	31-Dec	PUF #1	UJG100-01	---	03-Jan											X				
North PAH	31-Dec	PUF #2	UJG101-01	---	03-Jan											X				
Old West PAH	31-Dec	PUF #3	UJG102-01	---	03-Jan											X				
South PAH	31-Dec	PUF #4	UJG103-01	---	03-Jan											X				
New West PAH	31-Dec	PUF #5	UJG104-01	---	03-Jan											X				
29164	31-Dec	PUF #6	UMP458-01	---	03-Jan											X				

TAT Requirement

- STD 10 Business day ☑
- Rush 5 Business day * ☐
- Rush 2 Business day * ☐
- Rush Other * ☐

* need approval from Bureau Veritas

PROJECT INFORMATION

- Project #:
- Name: Rain Carbon Canada Inc
- PO #: 32669
- Bureau Veritas Quote #:
- Bureau Veritas Contac: Cristina Bacchus
- Task Order/Line Item

REPORTING REQUIREMENTS

- EDD ☐
- Regulations ON 153 ☐
- ON 419 ☐
- BC CSR ☐
- Other

Notes

1) please indicate on chain of custody if your samples are soil vapour or ambient air .
2) please list all canisters on the chain of custody even if unused

PROJECT SPECIFIC COMMENTS

Analyse for BaP only in ng/m^3.
Please copy results to york.zhang@raincarbon.com, robin.hart@raincarbon.com, ruth.herron@rotekinc.com

PLEASE RETURN ALL UNUSED EQUIPMENT

Client Signature: : Paul Daszko
Date/Time: 04-Jan-23

Received by: JAGDEEP KAUR
Date/Time: 2023/01/04 14:15

Unless otherwise agreed to in writing, work submitted on this Chain of Custody is subject to Bureau Veritas Laboratories' standard Terms and Conditions. Signing of this Chain of Custody document is acknowledgment and acceptance of our terms available at http://www.bvlabs.com/terms-and-conditions

2|3|5 ice

ROTEK Environmental

15 Keefer Court
Hamilton, Ontario
L8E 4V4
Phone 905 573 9533
Fax 905 578 5167

VOC Canister Sample Submission Sheet

Sample Date	07-Dec-22
Project Name	Rain Carbon Canada Inc.
Contact Name	Paul Daszko
Contact Number	905 531 2815

Purchase Order Number	**32669**
Results to:	ruth.herron@rotekinc.com
Results to:	daszko@rotekinc.com
Results to:	robin.hart@raincarbon.com
Results to:	york.zhang@raincarbon.com

Station Number	Canister ID Number	Sample Date	Installation Date	Installation Time	Initial Pressure	Time On	Time Off	Elapsed Time	Final Pressure	Retrieval Date	Retrieval Time
		dd/mm/yy	dd/mm/yy	EST	inHg	EST	EST	Hours	inHg	dd/mm/yy	EST
EAST	14523	07-Dec-22	05-Dec-22	17:55	-30.0	00:01	00:01	24.0	-7.0	08-Dec-22	11:30
EAST	355731	07-Dec-22	05-Dec-22	17:55	-28.5	00:01	00:01	24.0	-7.0	08-Dec-22	11:30
NORTH	14534	07-Dec-22	05-Dec-22	16:45	-30.0	00:01	00:01	24.0	-12.0	08-Dec-22	10:45
OLD WEST	2772	07-Dec-22	05-Dec-22	17:30	-29.5	00:01	00:01	24.0	-9.0	08-Dec-22	14:20
SOUTH	2824	07-Dec-22	05-Dec-22	14:35	-28.5	00:01	00:01	24.0	-5.5	08-Dec-22	10:55
SOUTH	36578	07-Dec-22	05-Dec-22	16:25	-28.5	00:01	00:01	24.0	-13.0	08-Dec-22	11:00
NEW WEST	2801	07-Dec-22	05-Dec-22	17:15	-28.5	00:01	00:01	24.0	-9.0	08-Dec-22	14:05
STN29164	1268	07-Dec-22	06-Dec-22	11:00	-29.0	00:01	00:01	24.0	-9.8	08-Dec-22	09:00

Comment 1 :	**EAST SN:355731 is a EAST VOC duplicate.**
Comment 2 :	**SOUTH SN:36578 is a SOUTH VOC duplicate.**

AIR

6740 Campobello Rd
Mississauga Ontario ,L5N 2L8
www.bvlabs.com

Toll Free: 1-800-668-0639
Phone: (905) 817-5700
Fax: (905) 817-5777

Chain of Custody Form - Summa™ Canister

INVOICE INFORMATION

Company Name:	Rotek Environmental Inc
Contact Name:	Paul Daszko
Address:	15 Keefer Court Hamilton
	ON L8E 4V4
E-mail:	poore@rotekinc.com
Ph:	daszko@rotekinc.com
Sampled by:	Ryan German

REPORT INFORMATION

Company Name:	Rotek Environmental I
Project Manager:	Paul Daszko
Address:	15 Keefer Court Hamilton
	ON L8E 4V4
E-mail:	ruth.herron@rotekinc.com
Ph:	905-573-9533

ANALYSIS REQUESTED

Field Sample ID			Canister Serial #	Flow Regulator Serial #	Retrieval Date	START VACUUM (inches of Hg)	END VACUUM (inches of Hg)	SOIL VAPOUR	AMBIENT/INDOOR AIR	AMBIENT/COMMERCIAL/INDUSTRIAL	SUB-SLAB GAS	FULL LIST OF VOCs (reference TO15A)	BTEX/Aromatic/Aliphatic Hydrocarbon Fractions	BTEX/F1 (C6-C10) and F2 (C10-C16)	Selected VOC's - please specify	Other - Do Not Analyze				CANISTERS NOT USED
East VOC	07-Dec	14523	14523	---	08-Dec										X					
East VOC - Duplicate	07-Dec	355731	355731	---	08-Dec										X					
North VOC	07-Dec	14534	14534	---	08-Dec										X					
Old West VOC	07-Dec	2772	2772	---	08-Dec										X					
South VOC	07-Dec	2824	2824	---	08-Dec										X					
South VOC - Duplicate	07-Dec	36578	36578	---	08-Dec										X					
New West VOC	07-Dec	2801	2801	---	08-Dec										X					
STN29164	07-Dec	1268	1268	---	08-Dec										X					

12-Dec-22 16:24
Cristina (Maria) Bacchus
C2AE790
BSU AIR-001

TAT Requirement

STD 10 Business day	☑
Rush 5 Business day *	☐
Rush 2 Business day *	☐
Rush Other *	☐

* need approval from Bureau Veritas

PROJECT INFORMATION

Project #:	
Name:	Rain Carbon Canada Inc
PO #:	32669
Bureau Veritas Quote #:	
Bureau Veritas Contact:	Cristina Bacchus
Task Order/Line Item	

REPORTING REQUIREMENTS

EDD		☐
Regulations	ON 153	☐
	ON 419	☐
	BC CSR	☐
Other		

Notes

1) please indicate on chain of custody if your samples are soil vapour or ambient air
2) please list all canisters on the chain of custody even if unused

PROJECT SPECIFIC COMMENTS

Analyse for Benzene only in ug/m³.

Please copy results to york.zhang@raincarbon.com, robin.hart@raincarbon.com, ruth.herron@rotekinc.com

PLEASE RETURN ALL UNUSED EQUIPMENT

Client Signature: : Ryan German

Date/Time: 12 ~~13~~-Dec-22

Received by: [signature]

Date/Time: [illegible]

CAM FCD-01302 /3

BUREAU VERITAS

6740 Campobello Rd
Mississauga Ontario ,L5N 2L8
www.bvlabs.com

Toll Free: 1-800-668-0639
Phone: (905) 817-5700
Fax: (905) 817-5777

Chain of Custody Form - Summa™ Canister

ANALYSIS REQUESTED

INVOICE INFORMATION		REPORT INFORMATION	
Company Name:	Rotek Environmental Inc	**Company Name:**	Rotek Environmental I
Contact Name:	Paul Daszko	**Project Manager:**	Paul Daszko
Address:	15 Keefer Court Hamilton	**Address:**	15 Keefer Court Hamilton
	ON L8E 4V4		ON L8E 4V4
E-mail:	poore@rotekinc.com	**E-mail:**	ruth.herron@rotekinc.com
Ph:	905 573 9533	**Ph:**	905-573-9533
Sampled by:	Robin Hart		

Field Sample ID			Canister Serial #	Flow Regulator Serial #	Retrieval Date	START VACUUM (inches of Hg)	END VACUUM (inches of Hg)	SOIL VAPOUR	AMBIENT/INDOOR AIR	AMBIENT/COMMERCIAL/INDUSTRIAL	SUB-SLAB GAS	FULL LIST OF VOCs (reference TO15A)	BTEX/Aromatic/Aliphatic Hydrocarbon Fractions	BTEX/F1 (C6-C10) and F2 (C10-C16)	Selected VOC's - please specify	Other - Do Not Analyze				CANISTERS NOT USED
East VOC	19-Dec	1282	1282	---	21-Dec											X				
															X					
North VOC	19-Dec	23746	23746	---	21-Dec										X					
Old West VOC	19-Dec	7871	7871	---	21-Dec										X					
South VOC	19-Dec	2921	2921	---	21-Dec										X					
South VOC - Dup	19-Dec	1262	1262	---	21-Dec										X					
New West VOC	19-Dec	2926	2926	---	21-Dec										X					
STN29164	19-Dec	35569	35569	---	21-Dec										X					

22-Dec-22 18:46
Cristina (Maria) Bacchus
C2AQ987
BSU AIR-001

TAT Requirement

- STD 10 Business day ☑
- Rush 5 Business day * ☐
- Rush 2 Business day * ☐
- Rush Other * ☐

* need approval from Bureau Veritas

PROJECT INFORMATION

- Project #:
- Name: Rain Carbon Canada Inc
- PO #: 32669
- Bureau Veritas Quote #:
- Bureau Veritas Contact: Cristina Bacchus
- Task Order/Line Item

REPORTING REQUIREMENTS

- EDD ☐
- Regulations: ON 153 ☐; ON 419 ☐; BC CSR ☐
- Other

Notes

1) please indicate on chain of custody if your samples are soil vapour or ambient air
2) please list all canisters on the chain of custody even if unused

PROJECT SPECIFIC COMMENTS

Analyse for Benzene only in ug/m^3.

Please copy results to york.zhang@raincarbon.com, robin.hart@raincarbon.com, ruth.herron@rotekinc.com

**** EAST VOC SAMPLE (1282) IS INVALID, DO NOT ANALYSE***

PLEASE RETURN ALL UNUSED EQUIPMENT

Client Signature: Paul Daszko
Date/Time: 22-Dec-22

Received by: Rama / RAMANDEEP KAUR
Date/Time: 2022/12/22 18:48

Unless otherwise agreed to in writing, work submitted on this Chain of Custody is subject to Bureau Veritas Laboratories' standard Terms and Conditions. Signing of this Chain of Custody document is acknowledgment and acceptance of our terms available at http://www.bvlabs.com/terms-and-conditions

ROTEK Environmental

15 Keefer Court
Hamilton, Ontario
L8E 4V4
Phone 905 573 9533
Fax 905 578 5167

VOC Canister Sample Submission Sheet

Sample Date	19-Dec-22
Project Name	Rain Carbon Canada Inc.
Contact Name	Paul Daszko
Contact Number	905 531 2815

Purchase Order Number	**32669**
Results to:	ruth.herron@rotekinc.com
Results to:	daszko@rotekinc.com
Results to:	robin.hart@raincarbon.com
Results to:	york.zhang@raincarbon.com

Station Number	Canister ID Number	Sample Date	Installation Date	Installation Time	Initial Pressure	Time On	Time Off	Elapsed Time	Final Pressure	Retrieval Date	Retrieval Time
		dd/mm/yy	dd/mm/yy	EST	inHg	EST	EST	Hours	inHg	dd/mm/yy	EST
EAST	1282	19-Dec-22	16-Dec-22	12:20	-30.0	00:01	23:59	24.0	0.0	21-Dec-22	14:30
NORTH	23746	19-Dec-22	16-Dec-22	12:45	-28.5	00:01	23:59	24.0	-3.0	21-Dec-22	15:10
OLD WEST	7871	19-Dec-22	16-Dec-22	17:15	-29.0	00:01	23:59	24.0	-9.0	21-Dec-22	16:40
SOUTH	2921	19-Dec-22	16-Dec-22	13:15	-28.0	00:01	23:59	24.0	-4.5	21-Dec-22	15:30
NEW WEST	2926	19-Dec-22	16-Dec-22	14:10	-28.0	00:01	23:59	24.0	-8.0	21-Dec-22	14:05
STN29164	35569	19-Dec-22	16-Dec-22	10:30	-30.0	00:01	23:59	24.0	-7.0	21-Dec-22	11:00
SOUTH DUP	1262	19-Dec-22	16-Dec-22	13:30	-29.0	00:01	23:59	24.0	-13.0	21-Dec-22	15:38

Comment 1 :	**Do not analyze canister 1282 (EAST station), invalid sample.**
Comment 2 :	

Rawan/RAMANDEEP KAUR 2022/12/22 18:40

ROTEK Environmental

15 Keefer Court
Hamilton, Ontario
L8E 4V4
Phone 905 573 9533
Fax 905 578 5167

VOC Canister Sample Submission Sheet

Sample Date	31-Dec-22
Project Name	Rain Carbon Canada Inc.
Contact Name	Paul Daszko
Contact Number	905 531 2815

Purchase Order Number	**32669**
Results to:	ruth.herron@rotekinc.com
Results to:	daszko@rotekinc.com
Results to:	robin.hart@raincarbon.com
Results to:	york.zhang@raincarbon.com

Station Number	Canister ID Number	Sample Date	Installation Date	Installation Time	Initial Pressure	Time On	Time Off	Elapsed Time	Final Pressure	Retrieval Date	Retrieval Time
		dd/mm/yy	dd/mm/yy	EST	inHg	EST	EST	Hours	inHg	dd/mm/yy	EST
EAST	14509	31-Dec-22	30-Dec-22	14:00	-30.0	00:01	23:59	24.0	-8.0	03-Jan-23	13:45
NORTH	7845	31-Dec-22	30-Dec-22	12:33	-30.0	00:01	23:59	24.0	-13.0	03-Jan-23	14:10
OLD WEST	2620	31-Dec-22	30-Dec-22	12:00	-29.0	00:01	23:59	24.0	-9.0	03-Jan-23	15:40
SOUTH	32576	31-Dec-22	30-Dec-22	13:15	-29.0	00:01	23:59	24.0	-8.5	03-Jan-23	14:35
NEW WEST	2756	31-Dec-22	30-Dec-22	14:30	-28.0	00:01	23:59	24.0	-9.0	03-Jan-23	15:15
STN29164	1237	31-Dec-22	30-Dec-22	10:00	-30.0	00:01	23:59	24.0	-7.5	03-Jan-23	10:30
SOUTH DUP	1269	31-Dec-22	30-Dec-22	13:30	-29.0	00:01	23:59	24.0	0.0	03-Jan-23	14:40

Comment 1 :	**Do not analyze canister 1269 (SOUTH DUP), invalid sample.**
Comment 2 :	

ROTEK Environmental

15 Keefer Court
Hamilton, Ontario
L8E 4V4
Phone 905 573 9533
Fax 905 578 5167

VOC Canister Sample Submission Sheet

Sample Date	31-Dec-22
Project Name	Rain Carbon Canada Inc.
Contact Name	Paul Daszko
Contact Number	905 531 2815

Purchase Order Number	**32669**
Results to:	ruth.herron@rotekinc.com
Results to:	daszko@rotekinc.com
Results to:	robin.hart@raincarbon.com
Results to:	york.zhang@raincarbon.com

Station Number	Canister ID Number	Sample Date	Installation Date	Installation Time	Initial Pressure	Time On	Time Off	Elapsed Time	Final Pressure	Retrieval Date	Retrieval Time
		dd/mm/yy	dd/mm/yy	EST	inHg	EST	EST	Hours	inHg	dd/mm/yy	EST
EAST	14509	31-Dec-22	30-Dec-22	14:00	-30.0	00:01	23:59	24.0	-8.0	03-Jan-23	13:45
NORTH	7845	31-Dec-22	30-Dec-22	12:33	-30.0	00:01	23:59	24.0	-13.0	03-Jan-23	14:10
OLD WEST	2620	31-Dec-22	30-Dec-22	12:00	-29.0	00:01	23:59	24.0	-9.0	03-Jan-23	15:40
SOUTH	32576	31-Dec-22	30-Dec-22	13:15	-29.0	00:01	23:59	24.0	-8.5	03-Jan-23	14:35
NEW WEST	2756	31-Dec-22	30-Dec-22	14:30	-28.0	00:01	23:59	24.0	-9.0	03-Jan-23	15:15
STN29164	1237	31-Dec-22	30-Dec-22	10:00	-30.0	00:01	23:59	24.0	-7.5	03-Jan-23	10:30
SOUTH DUP	1269	31-Dec-22	30-Dec-22	13:30	-29.0	00:01	23:59	24.0	0.0	03-Jan-23	14:40

Comment 1 :	**Do not analyze canister 1269 (SOUTH DUP), invalid sample.**
Comment 2 :	

BUREAU VERITAS

6740 Campobello Rd
Mississauga Ontario ,L5N 2L8
www.bvlabs.com

Toll Free: 1-800-668-0639
Phone: (905) 817-5700
Fax: (905) 817-5777

CAM FCD-01302 /3

Chain of Custody Form - Summa™ Canister

INVOICE INFORMATION

Company Name: Rotek Environmental Inc
Contact Name: Paul Daszko
Address: 15 Keefer Court Hamilton
ON L8E 4V4
E-mail: poore@rotekinc.com
Ph: 905 573 9533
Sampled by: Robin Hart

REPORT INFORMATION

Company Name: Rotek Environmental I
Project Manager: Paul Daszko
Address: 15 Keefer Court Hamilton
ON L8E 4V4
E-mail: ruth.herron@rotekinc.com
Ph: 905-573-9533

ANALYSIS REQUESTED

Field Sample ID			Canister Serial #	Flow Regulator Serial #	Retrieval Date	START VACUUM (inches of Hg)	END VACUUM (inches of Hg)	SOIL VAPOUR	AMBIENT/INDOOR AIR	AMBIENT/COMMERCIAL/INDUSTRIAL	SUB-SLAB GAS	FULL LIST OF VOCs (reference TO15A)	BTEX/Aromatic/Aliphatic Hydrocarbon Fractions	BTEX/F1 (C6-C10) and F2 (C10-C16)	Selected VOC's - please specify	Other - Do Not Analyze				CANISTERS NOT USED
East VOC	19-Dec	14509	14509	---	03-Jan										X					
															X					
North VOC	19-Dec	7845	7845	---	03-Jan										X					
Old West VOC	19-Dec	2620	2620	---	03-Jan										X					
South VOC	19-Dec	32576	32576	---	03-Jan										X					
South VOC - Dup	19-Dec	1269	1269	---	03-Jan											X				
New West VOC	19-Dec	2756	2756	---	03-Jan										X					
STN29164	19-Dec	1237	1237	---	03-Jan										X					

04-Jan-23 11:30
Cristina (Maria) Bacchus
C302094
BSU AIR-001

TAT Requirement

- STD 10 Business day ☑
- Rush 5 Business day * ☐
- Rush 2 Business day * ☐
- Rush Other * ☐

* need approval from Bureau Veritas

PROJECT INFORMATION

Project #:
Name: Rain Carbon Canada Inc
PO #: 32669
Bureau Veritas Quote #:
Bureau Veritas Contact: Cristina Bacchus
Task Order/Line Item

REPORTING REQUIREMENTS

EDD ☐
Regulations ON 153 ☐
ON 419 ☐
BC CSR ☐
Other

Notes

1) please indicate on chain of custody if your samples are soil vapour or ambient air
2) please list all canisters on the chain of custody even if unused

PROJECT SPECIFIC COMMENTS

Analyse for Benzene only in ug/m^3.
Please copy results to york.zhang@raincarbon.com, robin.hart@raincarbon.com, ruth.herron@rotekinc.com
SOUTH VOC SAMPLE - DUP (1269) INVALID, DO NOT ANALYSE
PLEASE RETURN ALL UNUSED EQUIPMENT

Client Signature: Paul Daszko
Date/Time: 04-Jan-23

Received by: see page 1
Date/Time:

Unless otherwise agreed to in writing, work submitted on this Chain of Custody is subject to Bureau Veritas Laboratories' standard Terms and Conditions. Signing of this Chain of Custody document is acknowledgment and acceptance of our terms available at http://www.bvlabs.com/terms-and-conditions

2023/01/04 11:30

APPENDIX D

Certificates of Analysis

Your P.O. #: 32669
Your Project #: RAIN CARBON CANADA INC

Attention: Ruetgers list

Rotek Environmental Inc.
15 Keefer Court
Hamilton, ON
CANADA L8E 4V4

Report Date: 2022/12/29
Report #: R7446959
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C2AE616
Received: 2022/12/12, 16:24

Sample Matrix: Puf And Filter
Samples Received: 6

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Calculated Polyaromatic Hydrocarbons	4	2022/12/13	2022/12/13	BRL SOP-00201	
Calculated Polyaromatic Hydrocarbons	2	2022/12/13	2022/12/29	BRL SOP-00201	
PAH's in MM5 SamplingTrains (CARB429mod) (1)	1	2022/12/14	2022/12/22	BRL SOP-00201	CARB429(ARBM1,M2)mod
PAH's in MM5 SamplingTrains (CARB429mod) (1)	5	2022/12/14	2022/12/23	BRL SOP-00201	CARB429(ARBM1,M2)mod
Air Volume from HiVol Sampling	6	N/A	2022/12/13		

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

(1) Analysis was conducted according to Bureau Veritas' method BRL SOP-00201 and modified where applicable based on the sample matrix. Only the following parameters are accredited: Napthalene, 2-Methylnapthalene, Acenapthylene, Acenapthene, Anthracene, Benzo (a) anthracene, Dibenzo (a,h) anthracene, Fluorene, Benzo (e) pyrene, Benzo (a) pyrene, Benzo (k) fluoranthene, Benzo (b) fluoranthene, Benzo (g,h,i) perylene, Chrysene, Fluoranthene, Indeno (1,2,3 cd) pyrene. Additional parameters are not Standards Council of Canada accredited for this matrix.

Encryption Key

Bureau Veritas
29 Dec 2022 12:32:15

Please direct all questions regarding this Certificate of Analysis to:
Cristina (Maria) Bacchus, Project Manager
Email: maria.bacchus@bureauveritas.com
Phone# (905)817-5763

==========

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Bureau Veritas Job #: C2AE616
Report Date: 2022/12/29

Rotek Environmental Inc.
Client Project #: RAIN CARBON CANADA INC
Your P.O. #: 32669

RESULTS OF ANALYSES OF PUF AND FILTER

Bureau Veritas ID		UOH646	UOH647	UOH648	UOH649	
Sampling Date		2022/12/07	2022/12/07	2022/12/07	2022/12/07	
	UNITS	EAST PAH 07-DEC PUF#1 UJG074-01	NORTH PAH 07-DEC PUF#2 UJG075-01	NEW WEST PAH 07-DEC PUF#3 UJG076-01	SOUTH PAH 07-DEC PUF#4 UJG077-01	QC Batch
Volume	m3	336.6	317.4	341.6	321.3	ONSITE

QC Batch = Quality Control Batch

Bureau Veritas ID		UOH650	UOH651	
Sampling Date		2022/12/07	2022/12/07	
	UNITS	OLD WEST PAH 07-DEC PUF#5 UJG078-01	STN29164 07-DEC UMP107-01	QC Batch
Volume	m3	325.9	320.2	ONSITE

QC Batch = Quality Control Batch

Bureau Veritas 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.bvna.com

SEMI-VOLATILE ORGANICS BY GC-MS (PUF AND FILTER)

Bureau Veritas ID		UOH646	UOH647	UOH648	UOH649		
Sampling Date		2022/12/07	2022/12/07	2022/12/07	2022/12/07		
	UNITS	EAST PAH 07-DEC PUF#1 UJG074-01	NORTH PAH 07-DEC PUF#2 UJG075-01	NEW WEST PAH 07-DEC PUF#3 UJG076-01	SOUTH PAH 07-DEC PUF#4 UJG077-01	RDL	QC Batch
Semivolatile Organics							
Benzo(a)pyrene	ug	0.42	0.28	2.02	0.46	0.10	8402342
Surrogate Recovery (%)							
D10-2-Methylnaphthalene	%	76	84	76	78		8402342
D10-Fluoranthene	%	82	86	80	84		8402342
D10-Fluorene (FS)	%	74	78	74	74		8402342
D10-Phenanthrene	%	78	82	76	80		8402342
D12-Benzo(a)anthracene	%	88	88	88	90		8402342
D12-Benzo(a)pyrene	%	82	80	76	78		8402342
D12-Benzo(b)fluoranthene	%	88	88	86	88		8402342
D12-Benzo(ghi)perylene	%	86	86	84	86		8402342
D12-Benzo(k)fluoranthene	%	84	86	86	86		8402342
D12-Chrysene	%	82	82	82	82		8402342
D12-Indeno(1,2,3-cd)pyrene	%	86	88	86	88		8402342
D12-Perylene	%	86	86	84	86		8402342
D14-Dibenzo(a,h)anthracene	%	88	88	88	88		8402342
D14-Terphenyl (FS)	%	78	80	78	78		8402342
D8-Acenaphthylene	%	78	88	78	82		8402342
D8-Naphthalene	%	84	90	84	86		8402342

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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SEMI-VOLATILE ORGANICS BY GC-MS (PUF AND FILTER)

Bureau Veritas ID		UOH650	UOH651		
Sampling Date		2022/12/07	2022/12/07		
	UNITS	OLD WEST PAH 07-DEC PUF#5 UJG078-01	STN29164 07-DEC UMP107-01	RDL	QC Batch
Semivolatile Organics					
Benzo(a)pyrene	ug	0.12	<0.10	0.10	8402342
Surrogate Recovery (%)					
D10-2-Methylnaphthalene	%	84	60		8402342
D10-Fluoranthene	%	88	84		8402342
D10-Fluorene (FS)	%	82	74		8402342
D10-Phenanthrene	%	84	78		8402342
D12-Benzo(a)anthracene	%	90	84		8402342
D12-Benzo(a)pyrene	%	80	76		8402342
D12-Benzo(b)fluoranthene	%	90	86		8402342
D12-Benzo(ghi)perylene	%	88	84		8402342
D12-Benzo(k)fluoranthene	%	88	84		8402342
D12-Chrysene	%	82	78		8402342
D12-Indeno(1,2,3-cd)pyrene	%	88	86		8402342
D12-Perylene	%	86	82		8402342
D14-Dibenzo(a,h)anthracene	%	90	86		8402342
D14-Terphenyl (FS)	%	82	80		8402342
D8-Acenaphthylene	%	88	76		8402342
D8-Naphthalene	%	90	46 (1)		8402342

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Recovery below control limit. Minimal impact to data as labelled surrogate does not calculate native recovery and Napthalene is not a parameter of concern.

Bureau Veritas 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.bvna.com

CALCULATED SEMIVOLATILE ORGANICS (PUF AND FILTER)

Bureau Veritas ID		UOH646		UOH647		UOH648		
Sampling Date		2022/12/07		2022/12/07		2022/12/07		
	UNITS	EAST PAH 07-DEC PUF#1 UJG074-01	RDL	NORTH PAH 07-DEC PUF#2 UJG075-01	RDL	NEW WEST PAH 07-DEC PUF#3 UJG076-01	RDL	QC Batch
Calculated Parameters								
Benzo(a)pyrene	ng/m3	1.25	0.30	0.88	0.32	5.91	0.29	8399754

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Bureau Veritas ID		UOH649	UOH650	UOH651		
Sampling Date		2022/12/07	2022/12/07	2022/12/07		
	UNITS	SOUTH PAH 07-DEC PUF#4 UJG077-01	OLD WEST PAH 07-DEC PUF#5 UJG078-01	STN29164 07-DEC UMP107-01	RDL	QC Batch
Calculated Parameters						
Benzo(a)pyrene	ng/m3	1.43	0.37	<0.31	0.31	8399754

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Bureau Veritas 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.bvna.com

GENERAL COMMENTS

Results relate only to the items tested.

Bureau Veritas 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.bvna.com

QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
8402342	CTC	Spiked Blank	D10-2-Methylnaphthalene	2022/12/22		78	%	50 - 150
			D10-Fluoranthene	2022/12/22		84	%	50 - 150
			D10-Phenanthrene	2022/12/22		80	%	50 - 150
			D12-Benzo(a)anthracene	2022/12/22		82	%	50 - 150
			D12-Benzo(a)pyrene	2022/12/22		76	%	50 - 150
			D12-Benzo(b)fluoranthene	2022/12/22		88	%	50 - 150
			D12-Benzo(ghi)perylene	2022/12/22		84	%	50 - 150
			D12-Benzo(k)fluoranthene	2022/12/22		82	%	50 - 150
			D12-Chrysene	2022/12/22		80	%	50 - 150
			D12-Indeno(1,2,3-cd)pyrene	2022/12/22		86	%	50 - 150
			D12-Perylene	2022/12/22		82	%	50 - 150
			D14-Dibenzo(a,h)anthracene	2022/12/22		86	%	50 - 150
			D8-Acenaphthylene	2022/12/22		80	%	50 - 150
			D8-Naphthalene	2022/12/22		80	%	50 - 150
			Benzo(a)pyrene	2022/12/22		75	%	50 - 150
8402342	CTC	RPD	Benzo(a)pyrene	2022/12/22	0		%	50
8402342	CTC	Method Blank	D10-2-Methylnaphthalene	2022/12/22		80	%	50 - 150
			D10-Fluoranthene	2022/12/22		86	%	50 - 150
			D10-Phenanthrene	2022/12/22		82	%	50 - 150
			D12-Benzo(a)anthracene	2022/12/22		86	%	50 - 150
			D12-Benzo(a)pyrene	2022/12/22		76	%	50 - 150
			D12-Benzo(b)fluoranthene	2022/12/22		90	%	50 - 150
			D12-Benzo(ghi)perylene	2022/12/22		86	%	50 - 150
			D12-Benzo(k)fluoranthene	2022/12/22		86	%	50 - 150
			D12-Chrysene	2022/12/22		84	%	50 - 150
			D12-Indeno(1,2,3-cd)pyrene	2022/12/22		88	%	50 - 150
			D12-Perylene	2022/12/22		84	%	50 - 150
			D14-Dibenzo(a,h)anthracene	2022/12/22		86	%	50 - 150
			D8-Acenaphthylene	2022/12/22		84	%	50 - 150
			D8-Naphthalene	2022/12/22		82	%	50 - 150
			Benzo(a)pyrene	2022/12/22	<0.10		ug	

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

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.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

Bureau Veritas 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.bvna.com

Bureau Veritas Job #: C2AE616
Report Date: 2022/12/29

Rotek Environmental Inc.
Client Project #: RAIN CARBON CANADA INC
Your P.O. #: 32669

VALIDATION SIGNATURE PAGE

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

Cristina Bacchus

Cristina (Maria) Bacchus, Project Manager

M Di Grazia

Melissa DiGrazia, Operations Manager, HRMS Department

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Your P.O. #: 32669
Your Project #: RAIN CARBON CANADA INC
Your C.O.C. #: NA

Attention: Ruetgers list

Rotek Environmental Inc.
15 Keefer Court
Hamilton, ON
CANADA L8E 4V4

Report Date: 2023/01/10
Report #: R7459987
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C2AQ904
Received: 2022/12/22, 18:46

Sample Matrix: Puf And Filter
Samples Received: 6

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Calculated Polyaromatic Hydrocarbons	6	2022/12/22	2023/01/09	BRL SOP-00201	
PAH's in MM5 SamplingTrains (CARB429mod) (1)	5	2022/12/23	2023/01/06	BRL SOP-00201	CARB429(ARBM1,M2)mod
PAH's in MM5 SamplingTrains (CARB429mod) (1)	1	2022/12/23	2023/01/07	BRL SOP-00201	CARB429(ARBM1,M2)mod
Air Volume from HiVol Sampling	6	N/A	2022/12/22		

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

(1) Analysis was conducted according to Bureau Veritas' method BRL SOP-00201 and modified where applicable based on the sample matrix. Only the following parameters are accredited: Napthalene, 2-Methylnapthalene, Acenapthylene, Acenapthene, Anthracene, Benzo (a) anthracene, Dibenzo (a,h) anthracene, Fluorene, Benzo (e) pyrene, Benzo (a) pyrene, Benzo (k) fluoranthene, Benzo (b) fluoranthene, Benzo (g,h,i) perylene, Chrysene, Fluoranthene, Indeno (1,2,3 cd) pyrene. Additional parameters are not Standards Council of Canada accredited for this matrix.

Encryption Key

AUTHORIZED REPORT
RAPPORT AUTORISÉ

Bureau Veritas
10 Jan 2023 08:36:43

Please direct all questions regarding this Certificate of Analysis to:
Cristina (Maria) Bacchus, Project Manager
Email: maria.bacchus@bureauveritas.com
Phone# (905)817-5763

==========

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Bureau Veritas Job #: C2AQ904
Report Date: 2023/01/10

Rotek Environmental Inc.
Client Project #: RAIN CARBON CANADA INC
Your P.O. #: 32669
Sampler Initials: RH

RESULTS OF ANALYSES OF PUF AND FILTER

Bureau Veritas ID		URA669	URA670	URA671	URA672	
Sampling Date		2022/12/19	2022/12/19	2022/12/19	2022/12/19	
COC Number		NA	NA	NA	NA	
	UNITS	**EAST PAH 19/12 PUF#1**	**NORTH PAH 19/12 PUF#2**	**OLD WEST PAH 19/12 PUF#3**	**SOUTH PAH 19/12 PUF#4**	**QC Batch**
Volume	m3	339.0	313.5	343.9	329.0	ONSITE
QC Batch = Quality Control Batch						

Bureau Veritas ID		URA673	URA674	
Sampling Date		2022/12/19	2022/12/19	
COC Number		NA	NA	
	UNITS	**NEW WEST PAH 19/12 PUF#5**	**29164 19/12 PUF#6**	**QC Batch**
Volume	m3	337.6	327.8	ONSITE
QC Batch = Quality Control Batch				

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Bureau Veritas Job #: C2AQ904
Report Date: 2023/01/10

Rotek Environmental Inc.
Client Project #: RAIN CARBON CANADA INC
Your P.O. #: 32669
Sampler Initials: RH

SEMI-VOLATILE ORGANICS BY GC-MS (PUF AND FILTER)

Bureau Veritas ID		URA669	URA670	URA671		
Sampling Date		2022/12/19	2022/12/19	2022/12/19		
COC Number		NA	NA	NA		
	UNITS	EAST PAH 19/12 PUF#1	NORTH PAH 19/12 PUF#2	OLD WEST PAH 19/12 PUF#3	RDL	QC Batch
Benzo(a)pyrene	ug	5.20	0.12	<0.10	0.10	8420970
Surrogate Recovery (%)						
D10-2-Methylnaphthalene	%	64	64	68		8420970
D10-Fluoranthene	%	68	74	76		8420970
D10-Fluorene (FS)	%	62	70	68		8420970
D10-Phenanthrene	%	68	68	72		8420970
D12-Benzo(a)anthracene	%	82	70	72		8420970
D12-Benzo(a)pyrene	%	72	64	68		8420970
D12-Benzo(b)fluoranthene	%	80	72	74		8420970
D12-Benzo(ghi)perylene	%	76	70	72		8420970
D12-Benzo(k)fluoranthene	%	78	70	74		8420970
D12-Chrysene	%	76	64	68		8420970
D12-Indeno(1,2,3-cd)pyrene	%	78	72	74		8420970
D12-Perylene	%	76	68	72		8420970
D14-Dibenzo(a,h)anthracene	%	82	72	74		8420970
D14-Terphenyl (FS)	%	68	76	72		8420970
D8-Acenaphthylene	%	66	68	72		8420970
D8-Naphthalene	%	76	66	66		8420970

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Bureau Veritas Job #: C2AQ904
Report Date: 2023/01/10

Rotek Environmental Inc.
Client Project #: RAIN CARBON CANADA INC
Your P.O. #: 32669
Sampler Initials: RH

SEMI-VOLATILE ORGANICS BY GC-MS (PUF AND FILTER)

Bureau Veritas ID		URA672	URA673	URA674		
Sampling Date		2022/12/19	2022/12/19	2022/12/19		
COC Number		NA	NA	NA		
	UNITS	SOUTH PAH 19/12 PUF#4	NEW WEST PAH 19/12 PUF#5	29164 19/12 PUF#6	RDL	QC Batch
Benzo(a)pyrene	ug	<0.10	<0.10	<0.10	0.10	8420970
Surrogate Recovery (%)						
D10-2-Methylnaphthalene	%	68	64	70		8420970
D10-Fluoranthene	%	78	78	82		8420970
D10-Fluorene (FS)	%	68	70	70		8420970
D10-Phenanthrene	%	74	72	76		8420970
D12-Benzo(a)anthracene	%	74	76	74		8420970
D12-Benzo(a)pyrene	%	72	72	72		8420970
D12-Benzo(b)fluoranthene	%	76	78	76		8420970
D12-Benzo(ghi)perylene	%	74	76	74		8420970
D12-Benzo(k)fluoranthene	%	76	76	76		8420970
D12-Chrysene	%	70	70	70		8420970
D12-Indeno(1,2,3-cd)pyrene	%	76	78	76		8420970
D12-Perylene	%	76	72	74		8420970
D14-Dibenzo(a,h)anthracene	%	76	78	78		8420970
D14-Terphenyl (FS)	%	74	74	78		8420970
D8-Acenaphthylene	%	74	70	76		8420970
D8-Naphthalene	%	68	64	68		8420970

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Bureau Veritas Job #: C2AQ904
Report Date: 2023/01/10

Rotek Environmental Inc.
Client Project #: RAIN CARBON CANADA INC
Your P.O. #: 32669
Sampler Initials: RH

CALCULATED SEMIVOLATILE ORGANICS (PUF AND FILTER)

Bureau Veritas ID		URA669		URA670		URA671		
Sampling Date		2022/12/19		2022/12/19		2022/12/19		
COC Number		NA		NA		NA		
	UNITS	EAST PAH 19/12 PUF#1	RDL	NORTH PAH 19/12 PUF#2	RDL	OLD WEST PAH 19/12 PUF#3	RDL	QC Batch
Benzo(a)pyrene	ng/m3	15.3	0.30	0.38	0.32	<0.29	0.29	8420767

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Bureau Veritas ID		URA672	URA673		URA674		
Sampling Date		2022/12/19	2022/12/19		2022/12/19		
COC Number		NA	NA		NA		
	UNITS	SOUTH PAH 19/12 PUF#4	NEW WEST PAH 19/12 PUF#5	RDL	29164 19/12 PUF#6	RDL	QC Batch
Benzo(a)pyrene	ng/m3	<0.30	<0.30	0.30	<0.31	0.31	8420767

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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GENERAL COMMENTS

Results relate only to the items tested.

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Bureau Veritas Job #: C2AQ904
Report Date: 2023/01/10

Rotek Environmental Inc.
Client Project #: RAIN CARBON CANADA INC
Your P.O. #: 32669
Sampler Initials: RH

QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
8420970	CTC	Spiked Blank	D10-2-Methylnaphthalene	2023/01/06		70	%	50 - 150
			D10-Fluoranthene	2023/01/06		84	%	50 - 150
			D10-Phenanthrene	2023/01/06		74	%	50 - 150
			D12-Benzo(a)anthracene	2023/01/06		76	%	50 - 150
			D12-Benzo(a)pyrene	2023/01/06		66	%	50 - 150
			D12-Benzo(b)fluoranthene	2023/01/06		74	%	50 - 150
			D12-Benzo(ghi)perylene	2023/01/06		76	%	50 - 150
			D12-Benzo(k)fluoranthene	2023/01/06		74	%	50 - 150
			D12-Chrysene	2023/01/06		66	%	50 - 150
			D12-Indeno(1,2,3-cd)pyrene	2023/01/06		78	%	50 - 150
			D12-Perylene	2023/01/06		70	%	50 - 150
			D14-Dibenzo(a,h)anthracene	2023/01/06		78	%	50 - 150
			D8-Acenaphthylene	2023/01/06		70	%	50 - 150
			D8-Naphthalene	2023/01/06		74	%	50 - 150
			Benzo(a)pyrene	2023/01/06		68	%	50 - 150
8420970	CTC	RPD	Benzo(a)pyrene	2023/01/06	7.7		%	50
8420970	CTC	Method Blank	D10-2-Methylnaphthalene	2023/01/06		60	%	50 - 150
			D10-Fluoranthene	2023/01/06		76	%	50 - 150
			D10-Phenanthrene	2023/01/06		74	%	50 - 150
			D12-Benzo(a)anthracene	2023/01/06		68	%	50 - 150
			D12-Benzo(a)pyrene	2023/01/06		72	%	50 - 150
			D12-Benzo(b)fluoranthene	2023/01/06		74	%	50 - 150
			D12-Benzo(ghi)perylene	2023/01/06		76	%	50 - 150
			D12-Benzo(k)fluoranthene	2023/01/06		74	%	50 - 150
			D12-Chrysene	2023/01/06		64	%	50 - 150
			D12-Indeno(1,2,3-cd)pyrene	2023/01/06		76	%	50 - 150
			D12-Perylene	2023/01/06		74	%	50 - 150
			D14-Dibenzo(a,h)anthracene	2023/01/06		76	%	50 - 150
			D8-Acenaphthylene	2023/01/06		68	%	50 - 150
			D8-Naphthalene	2023/01/06		62	%	50 - 150
			Benzo(a)pyrene	2023/01/06	<0.10		ug	

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

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.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

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Bureau Veritas Job #: C2AQ904
Report Date: 2023/01/10

Rotek Environmental Inc.
Client Project #: RAIN CARBON CANADA INC
Your P.O. #: 32669
Sampler Initials: RH

VALIDATION SIGNATURE PAGE

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

M Di Grazia

Melissa DiGrazia, Operations Manager, HRMS Department

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Your P.O. #: 32669
Your Project #: RAIN CARBON CANADA INC
Your C.O.C. #: n/a

Attention: Ruetgers list

Rotek Environmental Inc.
15 Keefer Court
Hamilton, ON
CANADA L8E 4V4

Report Date: 2023/01/18
Report #: R7475332
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C301955
Received: 2023/01/04, 14:15

Sample Matrix: Puf And Filter
Samples Received: 6

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Calculated Polyaromatic Hydrocarbons	6	2023/01/04	2023/01/17	BRL SOP-00201	
PAH's in MM5 SamplingTrains (CARB429mod) (1)	6	2023/01/06	2023/01/17	BRL SOP-00201	CARB429(ARBM1,M2)mod
Air Volume from HiVol Sampling	6	N/A	2023/01/04		

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

(1) Analysis was conducted according to Bureau Veritas' method BRL SOP-00201 and modified where applicable based on the sample matrix. Only the following parameters are accredited: Napthalene, 2-Methylnapthalene, Acenapthylene, Acenapthene, Anthracene, Benzo (a) anthracene, Dibenzo (a,h) anthracene, Fluorene, Benzo (e) pyrene, Benzo (a) pyrene, Benzo (k) fluoranthene, Benzo (b) fluoranthene, Benzo (g,h,i) perylene, Chrysene, Fluoranthene, Indeno (1,2,3 cd) pyrene. Additional parameters are not Standards Council of Canada accredited for this matrix.

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Bureau Veritas
18 Jan 2023 16:52:43

Please direct all questions regarding this Certificate of Analysis to:
Cristina (Maria) Bacchus, Project Manager
Email: maria.bacchus@bureauveritas.com
Phone# (905)817-5763

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Bureau Veritas Job #: C301955
Report Date: 2023/01/18

Rotek Environmental Inc.
Client Project #: RAIN CARBON CANADA INC
Your P.O. #: 32669
Sampler Initials: RH

RESULTS OF ANALYSES OF PUF AND FILTER

Bureau Veritas ID		USL081	USL082	USL083	USL084	
Sampling Date		2022/12/31	2022/12/31	2022/12/31	2022/12/31	
COC Number		n/a	n/a	n/a	n/a	
	UNITS	EAST PAH 31-DEC PUF#1 UJG100-01	NORTH PAH 31-DEC PUF#2 UJG101-01	OLD WEST PAH 31-DEC PUF#3 UJG102-01	SOUTH PAH 31-DEC PUF#4 UJG103-01	QC Batch
Volume	m3	334.1	303.4	337.5	317.7	ONSITE
QC Batch = Quality Control Batch						

Bureau Veritas ID		USL085	USL086	
Sampling Date		2022/12/31	2022/12/31	
COC Number		n/a	n/a	
	UNITS	NEW WEST PAH 31-DEC PUF#5 UJG104-01	29164 31-DEC PUF#6 UMP458-01	QC Batch
Volume	m3	320.1	317.5	ONSITE
QC Batch = Quality Control Batch				

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SEMI-VOLATILE ORGANICS BY GC-MS (PUF AND FILTER)

Bureau Veritas ID		USL081	USL082	USL083	USL084		
Sampling Date		2022/12/31	2022/12/31	2022/12/31	2022/12/31		
COC Number		n/a	n/a	n/a	n/a		
	UNITS	EAST PAH 31-DEC PUF#1 UJG100-01	NORTH PAH 31-DEC PUF#2 UJG101-01	OLD WEST PAH 31-DEC PUF#3 UJG102-01	SOUTH PAH 31-DEC PUF#4 UJG103-01	RDL	QC Batch
Benzo(a)pyrene	ug	0.38	0.14	<0.10	<0.10	0.10	8436268
Surrogate Recovery (%)							
D10-2-Methylnaphthalene	%	84	90	84	88		8436268
D10-Fluoranthene	%	92	98	90	100		8436268
D10-Fluorene (FS)	%	80	88	84	88		8436268
D10-Phenanthrene	%	88	96	88	98		8436268
D12-Benzo(a)anthracene	%	108	108	104	106		8436268
D12-Benzo(a)pyrene	%	90	94	86	86		8436268
D12-Benzo(b)fluoranthene	%	104	104	102	106		8436268
D12-Benzo(ghi)perylene	%	94	96	92	96		8436268
D12-Benzo(k)fluoranthene	%	98	98	94	98		8436268
D12-Chrysene	%	100	100	100	102		8436268
D12-Indeno(1,2,3-cd)pyrene	%	98	98	94	98		8436268
D12-Perylene	%	96	98	94	96		8436268
D14-Dibenzo(a,h)anthracene	%	100	100	96	100		8436268
D14-Terphenyl (FS)	%	90	98	92	96		8436268
D8-Acenaphthylene	%	84	92	84	94		8436268
D8-Naphthalene	%	82	90	98	84		8436268

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Bureau Veritas 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.bvna.com

SEMI-VOLATILE ORGANICS BY GC-MS (PUF AND FILTER)

Bureau Veritas ID		USL085	USL086		
Sampling Date		2022/12/31	2022/12/31		
COC Number		n/a	n/a		
	UNITS	NEW WEST PAH 31-DEC PUF#5 UJG104-01	29164 31-DEC PUF#6 UMP458-01	RDL	QC Batch
Benzo(a)pyrene	ug	<0.10	0.26	0.10	8436268
Surrogate Recovery (%)					
D10-2-Methylnaphthalene	%	86	90		8436268
D10-Fluoranthene	%	94	96		8436268
D10-Fluorene (FS)	%	84	86		8436268
D10-Phenanthrene	%	92	94		8436268
D12-Benzo(a)anthracene	%	106	100		8436268
D12-Benzo(a)pyrene	%	88	84		8436268
D12-Benzo(b)fluoranthene	%	104	100		8436268
D12-Benzo(ghi)perylene	%	94	92		8436268
D12-Benzo(k)fluoranthene	%	98	92		8436268
D12-Chrysene	%	100	94		8436268
D12-Indeno(1,2,3-cd)pyrene	%	96	92		8436268
D12-Perylene	%	94	90		8436268
D14-Dibenzo(a,h)anthracene	%	96	94		8436268
D14-Terphenyl (FS)	%	90	94		8436268
D8-Acenaphthylene	%	88	92		8436268
D8-Naphthalene	%	86	90		8436268

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Bureau Veritas 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.bvna.com

CALCULATED SEMIVOLATILE ORGANICS (PUF AND FILTER)

Bureau Veritas ID		USL081		USL082		USL083		
Sampling Date		2022/12/31		2022/12/31		2022/12/31		
COC Number		n/a		n/a		n/a		
	UNITS	EAST PAH 31-DEC PUF#1 UJG100-01	RDL	NORTH PAH 31-DEC PUF#2 UJG101-01	RDL	OLD WEST PAH 31-DEC PUF#3 UJG102-01	RDL	QC Batch
Benzo(a)pyrene	ng/m3	1.14	0.30	0.46	0.33	<0.30	0.30	8433145

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Bureau Veritas ID		USL084	USL085		USL086		
Sampling Date		2022/12/31	2022/12/31		2022/12/31		
COC Number		n/a	n/a		n/a		
	UNITS	SOUTH PAH 31-DEC PUF#4 UJG103-01	NEW WEST PAH 31-DEC PUF#5 UJG104-01	RDL	29164 31-DEC PUF#6 UMP458-01	RDL	QC Batch
Benzo(a)pyrene	ng/m3	<0.31	<0.31	0.31	0.82	0.32	8433145

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Bureau Veritas 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.bvna.com

GENERAL COMMENTS

Results relate only to the items tested.

Bureau Veritas 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.bvna.com

Bureau Veritas Job #: C301955
Report Date: 2023/01/18

Rotek Environmental Inc.
Client Project #: RAIN CARBON CANADA INC
Your P.O. #: 32669
Sampler Initials: RH

QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
8436268	CTC	Spiked Blank	D10-2-Methylnaphthalene	2023/01/16		90	%	50 - 150
			D10-Fluoranthene	2023/01/16		98	%	50 - 150
			D10-Phenanthrene	2023/01/16		92	%	50 - 150
			D12-Benzo(a)anthracene	2023/01/16		100	%	50 - 150
			D12-Benzo(a)pyrene	2023/01/16		80	%	50 - 150
			D12-Benzo(b)fluoranthene	2023/01/16		104	%	50 - 150
			D12-Benzo(ghi)perylene	2023/01/16		100	%	50 - 150
			D12-Benzo(k)fluoranthene	2023/01/16		100	%	50 - 150
			D12-Chrysene	2023/01/16		98	%	50 - 150
			D12-Indeno(1,2,3-cd)pyrene	2023/01/16		102	%	50 - 150
			D12-Perylene	2023/01/16		94	%	50 - 150
			D14-Dibenzo(a,h)anthracene	2023/01/16		102	%	50 - 150
			D8-Acenaphthylene	2023/01/16		92	%	50 - 150
			D8-Naphthalene	2023/01/16		92	%	50 - 150
			Benzo(a)pyrene	2023/01/16		78	%	50 - 150
8436268	CTC	RPD	Benzo(a)pyrene	2023/01/17	0		%	50
8436268	CTC	Method Blank	D10-2-Methylnaphthalene	2023/01/17		90	%	50 - 150
			D10-Fluoranthene	2023/01/17		100	%	50 - 150
			D10-Phenanthrene	2023/01/17		90	%	50 - 150
			D12-Benzo(a)anthracene	2023/01/17		100	%	50 - 150
			D12-Benzo(a)pyrene	2023/01/17		78	%	50 - 150
			D12-Benzo(b)fluoranthene	2023/01/17		106	%	50 - 150
			D12-Benzo(ghi)perylene	2023/01/17		102	%	50 - 150
			D12-Benzo(k)fluoranthene	2023/01/17		100	%	50 - 150
			D12-Chrysene	2023/01/17		104	%	50 - 150
			D12-Indeno(1,2,3-cd)pyrene	2023/01/17		104	%	50 - 150
			D12-Perylene	2023/01/17		96	%	50 - 150
			D14-Dibenzo(a,h)anthracene	2023/01/17		104	%	50 - 150
			D8-Acenaphthylene	2023/01/17		94	%	50 - 150
			D8-Naphthalene	2023/01/17		96	%	50 - 150
			Benzo(a)pyrene	2023/01/17	<0.10		ug	

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

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.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

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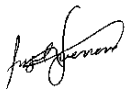
Bureau Veritas Job #: C301955
Report Date: 2023/01/18

Rotek Environmental Inc.
Client Project #: RAIN CARBON CANADA INC
Your P.O. #: 32669
Sampler Initials: RH

VALIDATION SIGNATURE PAGE

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



Angel Guerrero, Supervisor, Ultra Trace Analysis, HRMS and SVOC

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Bureau Veritas 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.bvna.com

Your P.O. #: 32669
Your Project #: RAIN CARBON CANADA INC
Your C.O.C. #: na

Attention: Ruetgers list

Rotek Environmental Inc.
15 Keefer Court
Hamilton, ON
CANADA L8E 4V4

Report Date: 2022/12/22
Report #: R7441144
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C2AE790
Received: 2022/12/12, 16:24

Sample Matrix: Air
Samples Received: 8

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Canister Pressure (TO-15)	5	N/A	2022/12/19	BRL SOP-00304	EPA TO-15 m
Canister Pressure (TO-15)	3	N/A	2022/12/20	BRL SOP-00304	EPA TO-15 m
Volatile Organics in Air (TO-15) (1)	5	N/A	2022/12/19	BRL SOP-00304	EPA TO-15 m
Volatile Organics in Air (TO-15) (1)	3	N/A	2022/12/20	BRL SOP-00304	EPA TO-15 m

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

(1) Air sampling canisters have been cleaned in accordance with U.S. EPA Method TO15. At the end of the cleaning, evacuation, and pressurization cycles, one canister was selected and was pressurized with Zero Air. This canister was then analyzed via TO15 on a GC/MS. The canister must have been found to contain <0.2 ppbv concentration of all target analytes in order for the batch to have been considered clean. Each canister also underwent a leak check prior to shipment.

Please Note: SUMMA® canister samples will be retained by Bureau Veritas for a period of 5 calendar days or as contractually agreed from the date of this report, after which time they will be cleaned for reuse. If you require a longer sample storage period, please contact your service representative.

Encryption Key

AUTHORIZED REPORT
RAPPORT AUTORISÉ

Bureau Veritas
22 Dec 2022 14:01:57

Please direct all questions regarding this Certificate of Analysis to:
Cristina (Maria) Bacchus, Project Manager
Email: maria.bacchus@bureauveritas.com
Phone# (905)817-5763

==========

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Bureau Veritas Job #: C2AE790
Report Date: 2022/12/22

Rotek Environmental Inc.
Client Project #: RAIN CARBON CANADA INC
Your P.O. #: 32669
Sampler Initials: RG

RESULTS OF ANALYSES OF AIR

Bureau Veritas ID		UOI905	UOI906	UOI907	UOI908	
Sampling Date		2022/12/07	2022/12/07	2022/12/07	2022/12/07	
COC Number		na	na	na	na	
	UNITS	EAST VOC 07-DEC 14523	NORTH VOC 07-DEC 14534	OLD WEST VOC 07-DEC 2772	SOUTH VOC 07-DEC 2824	QC Batch
Pressure on Receipt	psig	(-2.2)	(-5.2)	(-3.0)	(-1.7)	8412100
QC Batch = Quality Control Batch						

Bureau Veritas ID		UOI909		UOI910	UON555	
Sampling Date		2022/12/07		2022/12/07	2022/12/07	
COC Number		na		na	na	
	UNITS	NEW WEST VOC 07-DEC 2801	QC Batch	STN29164 07-DEC 1268	EAST VOC-DUPLICATE 355731	QC Batch
Pressure on Receipt	psig	(-3.4)	8412100	(-4.8)	(-2.5)	8414389
QC Batch = Quality Control Batch						

Bureau Veritas ID		UON557	
Sampling Date		2022/12/07	
COC Number		na	
	UNITS	SOUTH VOC-DUPLICATE 36578	QC Batch
Pressure on Receipt	psig	(-6.1)	8414389
QC Batch = Quality Control Batch			

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Bureau Veritas Job #: C2AE790
Report Date: 2022/12/22

Rotek Environmental Inc.
Client Project #: RAIN CARBON CANADA INC
Your P.O. #: 32669
Sampler Initials: RG

VOLATILE ORGANICS BY GC/MS (AIR)

Bureau Veritas ID		UOI905			UOI906				
Sampling Date		2022/12/07			2022/12/07				
COC Number		na			na				
	UNITS	EAST VOC 07-DEC 14523	ug/m3	DL (ug/m3)	NORTH VOC 07-DEC 14534	RDL	ug/m3	DL (ug/m3)	QC Batch
Benzene	ppbv	26.6	84.9	0.319	0.57	0.10	1.82	0.319	8411321
Surrogate Recovery (%)									
Bromochloromethane	%	94	N/A	N/A	90		N/A	N/A	8411321
D5-Chlorobenzene	%	87	N/A	N/A	84		N/A	N/A	8411321
Difluorobenzene	%	93	N/A	N/A	88		N/A	N/A	8411321

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

Bureau Veritas ID		UOI907			UOI908				
Sampling Date		2022/12/07			2022/12/07				
COC Number		na			na				
	UNITS	OLD WEST VOC 07-DEC 2772	ug/m3	DL (ug/m3)	SOUTH VOC 07-DEC 2824	RDL	ug/m3	DL (ug/m3)	QC Batch
Benzene	ppbv	2.36	7.55	0.319	53.6	0.10	171	0.319	8411321
Surrogate Recovery (%)									
Bromochloromethane	%	93	N/A	N/A	91		N/A	N/A	8411321
D5-Chlorobenzene	%	86	N/A	N/A	85		N/A	N/A	8411321
Difluorobenzene	%	91	N/A	N/A	90		N/A	N/A	8411321

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

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Rotek Environmental Inc.
Client Project #: RAIN CARBON CANADA INC
Your P.O. #: 32669
Sampler Initials: RG

VOLATILE ORGANICS BY GC/MS (AIR)

Bureau Veritas ID		UOI909				
Sampling Date		2022/12/07				
COC Number		na				
	UNITS	**NEW WEST VOC 07-DEC 2801**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
Benzene	ppbv	0.57	0.10	1.83	0.319	8411321
Surrogate Recovery (%)						
Bromochloromethane	%	90		N/A	N/A	8411321
D5-Chlorobenzene	%	84		N/A	N/A	8411321
Difluorobenzene	%	89		N/A	N/A	8411321

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

Bureau Veritas ID		UOI910			UON555				
Sampling Date		2022/12/07			2022/12/07				
COC Number		na			na				
	UNITS	**STN29164 07-DEC 1268**	**ug/m3**	**DL (ug/m3)**	**EAST VOC-DUPLICATE 355731**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
Benzene	ppbv	0.47	1.49	0.319	24.2	0.10	77.3	0.319	8413694
Surrogate Recovery (%)									
Bromochloromethane	%	97	N/A	N/A	97		N/A	N/A	8413694
D5-Chlorobenzene	%	91	N/A	N/A	90		N/A	N/A	8413694
Difluorobenzene	%	95	N/A	N/A	96		N/A	N/A	8413694

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

VOLATILE ORGANICS BY GC/MS (AIR)

Bureau Veritas ID		UON557				
Sampling Date		2022/12/07				
COC Number		na				
	UNITS	**SOUTH VOC-DUPLICATE 36578**	**RDL**	**ug/m3**	**DL (ug/m3)**	**QC Batch**
Benzene	ppbv	56.9	0.10	182	0.319	8413694
Surrogate Recovery (%)						
Bromochloromethane	%	93		N/A	N/A	8413694
D5-Chlorobenzene	%	88		N/A	N/A	8413694
Difluorobenzene	%	92		N/A	N/A	8413694

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

Bureau Veritas 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.bvna.com

GENERAL COMMENTS

Results relate only to the items tested.

Bureau Veritas 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.bvna.com

Bureau Veritas Job #: C2AE790
Report Date: 2022/12/22

Rotek Environmental Inc.
Client Project #: RAIN CARBON CANADA INC
Your P.O. #: 32669
Sampler Initials: RG

QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
8411321	NS2	Spiked Blank	Bromochloromethane	2022/12/19		100	%	60 - 140
			D5-Chlorobenzene	2022/12/19		100	%	60 - 140
			Difluorobenzene	2022/12/19		100	%	60 - 140
			Benzene	2022/12/19		98	%	70 - 130
8411321	NS2	Method Blank	Bromochloromethane	2022/12/19		95	%	60 - 140
			D5-Chlorobenzene	2022/12/19		88	%	60 - 140
			Difluorobenzene	2022/12/19		94	%	60 - 140
			Benzene	2022/12/19	<0.10		ppbv	
8413694	NS2	Spiked Blank	Bromochloromethane	2022/12/20		101	%	60 - 140
			D5-Chlorobenzene	2022/12/20		100	%	60 - 140
			Difluorobenzene	2022/12/20		101	%	60 - 140
			Benzene	2022/12/20		100	%	70 - 130
8413694	NS2	Method Blank	Bromochloromethane	2022/12/20		93	%	60 - 140
			D5-Chlorobenzene	2022/12/20		88	%	60 - 140
			Difluorobenzene	2022/12/20		93	%	60 - 140
			Benzene	2022/12/20	<0.10		ppbv	
8413694	NS2	RPD	Benzene	2022/12/20	NC		%	25

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

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.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

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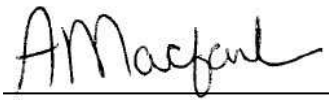
Bureau Veritas Job #: C2AE790
Report Date: 2022/12/22

Rotek Environmental Inc.
Client Project #: RAIN CARBON CANADA INC
Your P.O. #: 32669
Sampler Initials: RG

VALIDATION SIGNATURE PAGE

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



Anke Macfarlane, Laboratory Manager, VOC

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Your P.O. #: 32669
Your Project #: RAIN CARBON CANADA INC
Your C.O.C. #: na

Attention: Ruetgers list

Rotek Environmental Inc.
15 Keefer Court
Hamilton, ON
CANADA L8E 4V4

Report Date: 2023/01/10
Report #: R7460212
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C2AQ987
Received: 2022/12/22, 18:46

Sample Matrix: Air
Samples Received: 6

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Canister Pressure (TO-15)	6	N/A	2022/12/30	BRL SOP-00304	EPA TO-15 m
Volatile Organics in Air (TO-15) (1)	6	N/A	2022/12/30	BRL SOP-00304	EPA TO-15 m

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

(1) Air sampling canisters have been cleaned in accordance with U.S. EPA Method TO15. At the end of the cleaning, evacuation, and pressurization cycles, one canister was selected and was pressurized with Zero Air. This canister was then analyzed via TO15 on a GC/MS. The canister must have been found to contain <0.2 ppbv concentration of all target analytes in order for the batch to have been considered clean. Each canister also underwent a leak check prior to shipment.

Please Note: SUMMA® canister samples will be retained by Bureau Veritas for a period of 5 calendar days or as contractually agreed from the date of this report, after which time they will be cleaned for reuse. If you require a longer sample storage period, please contact your service representative.

Encryption Key

AUTHORIZED REPORT
RAPPORT AUTORISÉ

Bureau Veritas
10 Jan 2023 12:31:39

Please direct all questions regarding this Certificate of Analysis to:
Cristina (Maria) Bacchus, Project Manager
Email: maria.bacchus@bureauveritas.com
Phone# (905)817-5763

==========

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Bureau Veritas Job #: C2AQ987
Report Date: 2023/01/10

Rotek Environmental Inc.
Client Project #: RAIN CARBON CANADA INC
Your P.O. #: 32669
Sampler Initials: RH

RESULTS OF ANALYSES OF AIR

Bureau Veritas ID		URB525	URB526	URB527	URB528	
Sampling Date		2022/12/19	2022/12/19	2022/12/19	2022/12/19	
COC Number		na	na	na	na	
	UNITS	NORTHVOC 19-DEC 23746	OLD WEST VOC 19-DEC 7871	SOUTHVOC 19-DEC 2921	SOUTHVOC- DUP 19-DEC 1262	QC Batch
Pressure on Receipt	psig	0	(-2.2)	0	(-5.0)	8429773

QC Batch = Quality Control Batch

Bureau Veritas ID		URB529	URB530	
Sampling Date		2022/12/19	2022/12/19	
COC Number		na	na	
	UNITS	NEW WEST VOC 19-DEC 2926	STN29164 19-DEC 35569	QC Batch
Pressure on Receipt	psig	(-2.2)	(-2.2)	8429773

QC Batch = Quality Control Batch

Bureau Veritas 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.bvna.com

Bureau Veritas Job #: C2AQ987
Report Date: 2023/01/10

Rotek Environmental Inc.
Client Project #: RAIN CARBON CANADA INC
Your P.O. #: 32669
Sampler Initials: RH

VOLATILE ORGANICS BY GC/MS (AIR)

Bureau Veritas ID		URB525			URB526				
Sampling Date		2022/12/19			2022/12/19				
COC Number		na			na				
	UNITS	NORTHVOC 19-DEC 23746	ug/m3	DL (ug/m3)	OLD WEST VOC 19-DEC 7871	RDL	ug/m3	DL (ug/m3)	QC Batch
Benzene	ppbv	2.23	7.12	0.319	0.15	0.10	0.491	0.319	8428067
Surrogate Recovery (%)									
Bromochloromethane	%	100	N/A	N/A	86		N/A	N/A	8428067
D5-Chlorobenzene	%	83	N/A	N/A	71		N/A	N/A	8428067
Difluorobenzene	%	101	N/A	N/A	82		N/A	N/A	8428067

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

Bureau Veritas ID		URB526			URB527				
Sampling Date		2022/12/19			2022/12/19				
COC Number		na			na				
	UNITS	OLD WEST VOC 19-DEC 7871 Lab-Dup	ug/m3	DL (ug/m3)	SOUTHVOC 19-DEC 2921	RDL	ug/m3	DL (ug/m3)	QC Batch
Benzene	ppbv	0.16	0.510	0.319	0.28	0.10	0.905	0.319	8428067
Surrogate Recovery (%)									
Bromochloromethane	%	81	N/A	N/A	77		N/A	N/A	8428067
D5-Chlorobenzene	%	76	N/A	N/A	73		N/A	N/A	8428067
Difluorobenzene	%	77	N/A	N/A	73		N/A	N/A	8428067

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable

Bureau Veritas 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.bvna.com

Bureau Veritas Job #: C2AQ987
Report Date: 2023/01/10

Rotek Environmental Inc.
Client Project #: RAIN CARBON CANADA INC
Your P.O. #: 32669
Sampler Initials: RH

VOLATILE ORGANICS BY GC/MS (AIR)

Bureau Veritas ID		URB528			URB529				
Sampling Date		2022/12/19			2022/12/19				
COC Number		na			na				
	UNITS	SOUTHVOC- DUP 19-DEC 1262	ug/m3	DL (ug/m3)	NEW WEST VOC 19-DEC 2926	RDL	ug/m3	DL (ug/m3)	QC Batch
Benzene	ppbv	0.40	1.27	0.319	0.18	0.10	0.576	0.319	8428067
Surrogate Recovery (%)									
Bromochloromethane	%	76	N/A	N/A	74		N/A	N/A	8428067
D5-Chlorobenzene	%	70	N/A	N/A	71		N/A	N/A	8428067
Difluorobenzene	%	72	N/A	N/A	70		N/A	N/A	8428067

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

Bureau Veritas ID		URB530				
Sampling Date		2022/12/19				
COC Number		na				
	UNITS	STN29164 19-DEC 35569	RDL	ug/m3	DL (ug/m3)	QC Batch
Benzene	ppbv	1.16	0.10	3.70	0.319	8428067
Surrogate Recovery (%)						
Bromochloromethane	%	75		N/A	N/A	8428067
D5-Chlorobenzene	%	69		N/A	N/A	8428067
Difluorobenzene	%	69		N/A	N/A	8428067

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

Bureau Veritas 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.bvna.com

GENERAL COMMENTS

Results relate only to the items tested.

Bureau Veritas 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.bvna.com

Bureau Veritas Job #: C2AQ987
Report Date: 2023/01/10

Rotek Environmental Inc.
Client Project #: RAIN CARBON CANADA INC
Your P.O. #: 32669
Sampler Initials: RH

QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
8428067	NKR	Spiked Blank	Bromochloromethane	2022/12/30		117	%	60 - 140
			D5-Chlorobenzene	2022/12/30		120	%	60 - 140
			Difluorobenzene	2022/12/30		110	%	60 - 140
			Benzene	2022/12/30		96	%	70 - 130
8428067	NKR	Method Blank	Bromochloromethane	2022/12/30		118	%	60 - 140
			D5-Chlorobenzene	2022/12/30		104	%	60 - 140
			Difluorobenzene	2022/12/30		120	%	60 - 140
			Benzene	2022/12/30	<0.10		ppbv	
8428067	NKR	RPD [URB526-01]	Benzene	2022/12/30	3.7		%	25

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

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.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

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Bureau Veritas Job #: C2AQ987
Report Date: 2023/01/10

Rotek Environmental Inc.
Client Project #: RAIN CARBON CANADA INC
Your P.O. #: 32669
Sampler Initials: RH

VALIDATION SIGNATURE PAGE

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

Melanie Mabini, Team Leader

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 {0}, {1} responsible for {2} {3} laboratory operations.

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Your P.O. #: 32669
Your Project #: RAIN CARBON CANADA INC.
Your C.O.C. #: na

Attention: Ruetgers list

Rotek Environmental Inc.
15 Keefer Court
Hamilton, ON
CANADA L8E 4V4

Report Date: 2023/01/16
Report #: R7472028
Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C302094
Received: 2023/01/04, 11:30

Sample Matrix: Air
Samples Received: 6

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Canister Pressure (TO-15)	6	N/A	2023/01/05	BRL SOP-00304	EPA TO-15 m
Volatile Organics in Air (TO-15) (1)	6	N/A	2023/01/05	BRL SOP-00304	EPA TO-15 m

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

(1) Air sampling canisters have been cleaned in accordance with U.S. EPA Method TO15. At the end of the cleaning, evacuation, and pressurization cycles, one canister was selected and was pressurized with Zero Air. This canister was then analyzed via TO15 on a GC/MS. The canister must have been found to contain <0.2 ppbv concentration of all target analytes in order for the batch to have been considered clean. Each canister also underwent a leak check prior to shipment.

Please Note: SUMMA® canister samples will be retained by Bureau Veritas for a period of 5 calendar days or as contractually agreed from the date of this report, after which time they will be cleaned for reuse. If you require a longer sample storage period, please contact your service representative.

Encryption Key

Cristina (Maria) Bacchus
Project Manager
16 Jan 2023 12:59:41

Please direct all questions regarding this Certificate of Analysis to:
Cristina (Maria) Bacchus, Project Manager
Email: maria.bacchus@bureauveritas.com
Phone# (905)817-5763

==========

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 Rodney Major, General Manager responsible for Ontario Environmental laboratory operations.

Bureau Veritas 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.bvna.com

Bureau Veritas Job #: C302094
Report Date: 2023/01/16

Rotek Environmental Inc.
Client Project #: RAIN CARBON CANADA INC.
Your P.O. #: 32669
Sampler Initials: RH

RESULTS OF ANALYSES OF AIR

Bureau Veritas ID		USL774	USL775	USL776	USL777	
Sampling Date		2022/12/31	2022/12/31	2022/12/31	2022/12/31	
COC Number		na	na	na	na	
	UNITS	EASTVOC 31-DEC 14509	NORTHVOC 31-DEC 7845	OLD WEST VOC 31-DEC 2620	SOUTH VOC 31-DEC 32576	QC Batch
Pressure on Receipt	psig	(-2.7)	(-5.2)	(-2.7)	(-3.0)	8434277
QC Batch = Quality Control Batch						

Bureau Veritas ID		USL779	USL780	
Sampling Date		2022/12/31	2022/12/31	
COC Number		na	na	
	UNITS	NEW WEST VOC 31-DEC 2756	STN29164 31-DEC 1237	QC Batch
Pressure on Receipt	psig	(-3.3)	(-2.9)	8434277
QC Batch = Quality Control Batch				

Bureau Veritas 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.bvna.com

VOLATILE ORGANICS BY GC/MS (AIR)

Bureau Veritas ID		USL774			USL775				
Sampling Date		2022/12/31			2022/12/31				
COC Number		na			na				
	UNITS	EASTVOC 31-DEC 14509	ug/m3	DL (ug/m3)	NORTHVOC 31-DEC 7845	RDL	ug/m3	DL (ug/m3)	QC Batch
Benzene	ppbv	17.3	55.4	0.319	4.39	0.10	14.0	0.319	8434273
Surrogate Recovery (%)									
Bromochloromethane	%	78	N/A	N/A	78		N/A	N/A	8434273
D5-Chlorobenzene	%	74	N/A	N/A	73		N/A	N/A	8434273
Difluorobenzene	%	76	N/A	N/A	76		N/A	N/A	8434273

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

Bureau Veritas ID		USL776			USL777				
Sampling Date		2022/12/31			2022/12/31				
COC Number		na			na				
	UNITS	OLD WEST VOC 31-DEC 2620	ug/m3	DL (ug/m3)	SOUTH VOC 31-DEC 32576	RDL	ug/m3	DL (ug/m3)	QC Batch
Benzene	ppbv	6.27	20.0	0.319	1.96	0.10	6.26	0.319	8434273
Surrogate Recovery (%)									
Bromochloromethane	%	83	N/A	N/A	78		N/A	N/A	8434273
D5-Chlorobenzene	%	75	N/A	N/A	73		N/A	N/A	8434273
Difluorobenzene	%	82	N/A	N/A	76		N/A	N/A	8434273

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

Bureau Veritas ID		USL779			USL780				
Sampling Date		2022/12/31			2022/12/31				
COC Number		na			na				
	UNITS	NEW WEST VOC 31-DEC 2756	ug/m3	DL (ug/m3)	STN29164 31-DEC 1237	RDL	ug/m3	DL (ug/m3)	QC Batch
Benzene	ppbv	3.18	10.2	0.319	0.50	0.10	1.60	0.319	8434273
Surrogate Recovery (%)									
Bromochloromethane	%	78	N/A	N/A	82		N/A	N/A	8434273
D5-Chlorobenzene	%	76	N/A	N/A	74		N/A	N/A	8434273
Difluorobenzene	%	76	N/A	N/A	80		N/A	N/A	8434273

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

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GENERAL COMMENTS

1/16/23 - report amended. Sample IDs corrected.

Results relate only to the items tested.

Bureau Veritas 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.bvna.com

Bureau Veritas Job #: C302094
Report Date: 2023/01/16

Rotek Environmental Inc.
Client Project #: RAIN CARBON CANADA INC.
Your P.O. #: 32669
Sampler Initials: RH

QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
8434273	DVP	Spiked Blank	Bromochloromethane	2023/01/05		100	%	60 - 140
			D5-Chlorobenzene	2023/01/05		96	%	60 - 140
			Difluorobenzene	2023/01/05		100	%	60 - 140
			Benzene	2023/01/05		99	%	70 - 130
8434273	DVP	Method Blank	Bromochloromethane	2023/01/05		106	%	60 - 140
			D5-Chlorobenzene	2023/01/05		100	%	60 - 140
			Difluorobenzene	2023/01/05		105	%	60 - 140
			Benzene	2023/01/05	<0.10		ppbv	

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.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

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Bureau Veritas Job #: C302094
Report Date: 2023/01/16

Rotek Environmental Inc.
Client Project #: RAIN CARBON CANADA INC.
Your P.O. #: 32669
Sampler Initials: RH

VALIDATION SIGNATURE PAGE

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

Melanie Mabini, Team Leader

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APPENDIX E

Field Notes

RAIN CARBON INC.

PUF - Station Logs

Station : East 36
Location : 725 Strathearne Avenue N, Hamilton
Period : 01 October, to 31 December 2022
Quarter : Q4

Sample Date (dd-mmm-yy)	PUF Cartridge # Maxxam ID#	Maxxam Filter ID #	Installation (Date) (Time EST)	MAGN On	ETI On	MAGN Off	ETI Off	Removal (Date) (Time EST)	Calculated Sample Volume (293.6 - 358.8 m^3)	Sample Duration (21.6 - 26.4 Hrs)	Technician Initial	Comments
08-Oct-22	PUF #1	TTW998-01	07-Oct-22	38	3290.22	38	3313.63	13-Oct-22	324.7	23.41	RH	
	TTW999-01		12:00					17:00				
20-Oct-22	PUF #1	TTX011-01	19-Oct-22	38	3313.63	38	3336.81	24-Oct-22	321.2	23.18	RH	
	TTX012-01		16:45					13:30				
01-Nov-22	PUF #1	TTX027-01	31-Oct-22	38	3336.81	38	3360.10	02-Nov-22	320.0	23.29	RH	
	TTX028-01		11:00					11:50				
13-Nov-22	PUF #1	UBF211-01	11-Nov-22	38	3372.72	42	3396.11	16-Nov-22	333.0	23.39	RH	Sampler ran Tuesday November 8 with no PUF unit installed for 12 hours so ETI increased from 3360.10 to 3372.72
	UBF215-01		11:00					15:23				
25-Nov-22	PUF #1	UBF316-01	24-Nov-22	40	3396.11	40	3419.41	28-Nov-22	329.3	23.30	RG	
	UBF317-01		14:15					12:50				
07-Dec-22	PUF #1	UJG073-01	05-Dec-22	38	3419.47	42	3442.64	08-Dec-22		23.17	RH	Changed brushes and calibrated unit on Nov 28.
	UJG074-01		15:50					10:10				
19-Dec-22	PUF #1		16-Dec-22	38	3465.81	40	3489.10	21-Dec-22		23.29	RH	Sampler ran Wednesday December 14 with no PUF unit installed for 24 hours so ETI increased from 3442.64 to
			12:15					14:35				
31-Dec-22	PUF #1		30-Dec-22	38	3489.19	40	3512.53	03-Jan-23		23.34	PD/RH	
			11:15					13:30				

RAIN CARBON INC.

PUF - Station Logs

Station : North 91
Location : 725 Strathearne Avenue N, Hamilton
Period : 01 October, to 31 December 2022
Quarter : Q4

Sample Date (dd-mmm-yy)	PUF Cartridge # Maxxam ID#	Maxxam Filter ID #	Installation (Date) (Time EST)	MAGN On	ETI On	MAGN Off	ETI Off	Removal (Date) (Time EST)	Calculated Sample Volume (293.6 - 358.8 m^3)	Sample Duration (21.6 - 26.4 Hrs)	Technician Initial	Comments
08-Oct-22	PUF #2	TTW998-01	07-Oct-22	38	1481.91	38	1505.36	13-Oct-22	311.8	23.45	RH	
	TTX000-01		12:45					17:20				
20-Oct-22	PUF #2	TTX011-01	19-Oct-22	38	1505.36	38	1528.77	24-Oct-22	311.0	23.41	RH	
	TTX013-01		17:18					13:45				
01-Nov-22	PUF #2	TTX027-01	31-Oct-22	38	1528.77	40	1552.11	02-Nov-22	307.3	23.34	RH	
	TTX029-01		11:30					12:05				
13-Nov-22	PUF #2	UBF211-01	11-Nov-22	38	1575.41	40	1598.90	16-Nov-22	317.6	23.49	RH	Sampler ran Tuesday November 8 with no PUF unit installed for 24 hours so ETI increased from 1552.11 to 1575.41
	UBF214-01		11:45					15:45				
25-Nov-22	PUF #2	UBF316-01	24-Nov-22	42	1598.90	42	1622.33	28-Nov-22	324.0	23.43	RG	
	UBF318-01		14:35					15:00				
07-Dec-22	PUF #2	UJG073-01	05-Dec-22	38	1622.37	44	1645.69	08-Dec-22		23.32	RH	Changed brushes and calibrated unit on Nov 28.
	UJG075-01		17:00					10:40				
19-Dec-22	PUF #2		16-Dec-22	38	1669.03	38	1692.48	21-Dec-22		23.45	RH	Sampler ran Wednesday December 14 with no PUF unit installed for 24 hours so ETI increased from 1645.69 to
			12:30					15:00				
31-Dec-22	PUF #2		30-Dec-22	38	1692.48	38	1715.63	03-Jan-23		23.15	RH	
			12:45					14:10				

RAIN CARBON INC.

PUF - Station Logs

Station : Tank 77
Location : 725 Strathearne Avenue N, Hamilton
Period : 01 October, to 31 December 2022
Quarter : Q4

Sample Date (dd-mmm-yy)	PUF Cartridge # Maxxam ID#	Maxxam Filter ID #	Installation (Date) (Time EST)	MAGN On	ETI On	MAGN Off	ETI Off	Removal (Date) (Time EST)	Calculated Sample Volume (293.6 - 358.8 m^3)	Sample Duration (21.6 - 26.4 Hrs)	Technician Initial	Comments
08-Oct-22	PUF #3	TTW998-01	07-Oct-22	38	3238.93	36	3262.69	13-Oct-22	328.8	23.76	RH	
	TTX001-01		17:00					18:30				
20-Oct-22	PUF #3	TTX011-01	19-Oct-22	38	3262.69	40	3286.36	24-Oct-22	333.5	23.67	RH	
	TTX014-01		18:30					14:35				
01-Nov-22	PUF #3	TTX027-01	31-Oct-22	38	3286.36	40	3310.11	02-Nov-22	331.9	23.75	RH	
	TTX030-01		12:15					13:15				
13-Nov-22	PUF #3	UBF211-01	11-Nov-22	38	3310.11	40	3333.92	16-Nov-22	337.6	23.81	RH	
	UBF213-01		14:46					16:45				
25-Nov-22	PUF #3	UBF316-01	24-Nov	40	3333.92	40	3357.64	28-Nov-22	337.1	23.72	RG	
	UBF319-01		14:52					14:00				
07-Dec-22	PUF #3	UJG073-01	05-Dec-22	38	3357.67	42	3381.34	11-Dec-22		23.67	RH	Changed brushes and calibrated unit on Nov 28.
	UJG076-01		17:30					14:15				
19-Dec-22	PUF #3		16-Dec-22	38	3381.34	40	3405.12	21-Dec-22		23.78	RH	
			17:00					16:30				
31-Dec-22	PUF #3		30-Dec-22	38	3405.12	40	3428.88	03-Jan-23		23.76	RH	
			12:00					15:27				

RAIN CARBON INC.

PUF - Station Logs

Station : BERM
Location : 725 Strathearne Avenue N, Hamilton
Period : 01 October, to 31 December 2022
Quarter : Q4

Sample Date (dd-mmm-yy)	PUF Cartridge # Maxxam ID#	Maxxam Filter ID #	Installation (Date) (Time EST)	MAGN On	ETI On	MAGN Off	ETI Off	Removal (Date) (Time EST)	Calculated Sample Volume (293.6 - 358.8 m^3)	Sample Duration (21.6 - 26.4 Hrs)	Technician Initial	Comments
08-Oct-22	PUF #4	TTW998-01	07-Oct-22	38	3175.05	38	3197.97	13-Oct-22	315.7	22.92	RH	
	TTX002-01		13:25					17:45				
20-Oct-22	PUF #4	TTX011-01	19-Oct-22	38	3197.97	38	3220.91	24-Oct-22	315.6	22.94	RH	
	TTX015-01		17:38					13:50				
01-Nov-22	PUF #4	TTX027-01	31-Oct-22	38	3220.91	38	3243.86	02-Nov-22	312.7	22.95	RH	
	TTX031-01		11:45					12:30				
13-Nov-22	PUF #4	UBF211-01	11-Nov-22	38	3243.86	40	3266.81	16-Nov-22	321.9	22.95	RH	
	UBF217-01		11:45					16:00				
25-Nov-22	PUF #4	UBF316-01	24-Nov-22	40	3266.82	40	3289.73	28-Nov-22	322.5	22.91	RG	
	UBF320-01		14:35					13:23				
07-Dec-22	PUF #4	UJG073-01	05-Dec-22	38	3289.77	38	3312.74	08-Dec-22		22.97	RH	Changed brushes and calibrated unit on Nov 28.
	UJG077-01		16:15					10:50				
19-Dec-22	PUF #4		16-Dec-22	38	3312.74	40	3335.69	21-Dec-22		22.95	RH	
			13:00					15:30				
31-Dec-22	PUF #4		30-Dec-22	38	3335.69	38	3358.60	03-Jan-23		22.91	RH	
			13:15					14:30				

RAIN CARBON INC.

PUF - Station Logs

Station : WEST
Location : 725 Strathearne Avenue N, Hamilton
Period : 01 October, to 31 December 2022
Quarter : Q4

Sample Date (dd-mmm-yy)	PUF Cartridge # Maxxam ID#	Maxxam Filter ID #	Installation (Date) (Time EST)	MAGN On	ETI On	MAGN Off	ETI Off	Removal (Date) (Time EST)	Calculated Sample Volume (293.6 - 358.8 m^3)	Sample Duration (21.6 - 26.4 Hrs)	Technician Initial	Comments
08-Oct-22	PUF #5	TTW998-01	07-Oct-22	38	2836.72	38	2862.33	13-Oct-22	346.3	25.61	RH	
	TTX003-01		16:44					18:10				
20-Oct-22	PUF #5	TTX011-01	19-Oct-22	38	2862.33	40	2885.71	24-Oct-22	319.7	23.38	RH	
	TTX016-01		18:15					14:15				
01-Nov-22	PUF #5	TTX027-01	31-Oct-22	38	2885.11	38	2909.45	02-Nov-22	325.2	24.34	RH	
	TTX032-01		12:00					12:45				
13-Nov-22	PUF #5	UBF211-01	11-Nov-22	38	2909.45	40	2932.90	16-Nov-22	323.4	23.45	RH	
	UBF216-01		14:00					16:30				
25-Nov-22	PUF #5	UBF316-01	24-Nov-22	40	2932.94	40	2956.62	28-Nov-22	331.6	23.68	RG	
	UBF321-01		15:05					14:30				
07-Dec-22	PUF #5	UJG073-01	05-Dec-22	38	2980.37	40	3003.91	11-Dec-22		23.54	RH	Changed brushes and calibrated unit on Nov 28.
	UJG078-01		17:10					14:00				
19-Dec-22	PUF #5		16-Dec-22	38	3003.91	40	3027.95	21-Dec-22		24.04	RH	
			14:00					16:00				
31-Dec-22	PUF #5		30-Dec-22	38	3027.95	40	3051.27	03-Jan-23		23.32	RH	
			11:30					15:10				

RAIN CARBON INC.

VOC - Station Logs

Station : East 36
Location : 725 Strathearne Avenue N, Hamilton
Period : 01 October, to 31 December 2022
Quarter : Q4

Sample Date (dd-mmm-yy)	VOC ID Canister #	Installation (Date) (Time EST)	On Flow (mL/min)	On Pressure ("Hg)	Off Flow (mL/min)	Off Pressure ("Hg)	Removal (Date) (Time EST)	Average On/Off Sample Flow (3.15 - 3.85 mL/Min)	Sample Duration (21.6 - 26.4 Hrs)	Technician Initial	Leak Pressure (As Left) (As Found)	Comments
08-Oct-22	18179	07-Oct-22		-29.0		-3.0	13-Oct-22		24.0	RH	-	
		12:10					17:10				-	
20-Oct-22	2921	19-Oct-22		-28.0		-3.0	24-Oct-22		24.0	RH	-	
		16:50					13:35				-	
01-Nov-22	7866	31-Oct-22		-28.5		-5.0	02-Nov-22		24.0	RH	-	
		11:10					12:00				-	
13-Nov-22	18235	11-Nov-22		-28.5		-4.0	16-Nov-22		24.0	RH	-	
		11:10					15:26				-	
25-Nov-22	17179	24-Nov-22		-29.0		-6.0	28-Nov-22		24.0	RG	-	
		14:15					12:50				-	
07-Dec-22	14523	05-Dec-22		-30.0		-7.0	08-Dec-22		24.0	PD/RSH	-	Replaced 2701 Timer and MFC. Flow set to 2.9 cc/m.
		16:00					10:15				-	
07-Dec-22	355731	05-Dec-22		-28.5		-7.0	08-Dec-22		24.0	PD/RSH	-	Duplicate December 7, 2022 sample
		16:03					10:20				-	
19-Dec-22	1282	16-Dec-22		-30.0		0.0	21-Dec-22		24.0	RH	-	Canister off pressure at 0 " Hg and above the - 5 " Hg maximum MECP guidance pressure.
		12:20					14:30				-	
31-Dec-22	14509	30-Dec-22		-30.0		-8.0	03-Jan-23		24.0	PD/RH	-	Detected a leak in the VOC sampler external piping which was repaired through a series of leak tests. The MFC flow was set to 2.95 cc/m.
		14:00					13:45				-	

RAIN CARBON INC.

VOC - Station Logs

Station : North 91
Location : 725 Strathearne Avenue N, Hamilton
Period : 01 October, to 31 December 2022
Quarter : Q4

Sample Date (dd-mmm-yy)	VOC ID Canister #	Installation (Date) (Time EST)	On Flow (mL/min)	On Pressure ("Hg)	Off Flow (mL/min)	Off Pressure ("Hg)	Removal (Date) (Time EST)	Average On/Off Sample Flow (3.15 - 3.85 mL/Min)	Sample Duration (21.6 - 26.4 Hrs)	Technician Initial	Leak Pressure (As Left) (As Found)	Comments
08-Oct-22	281	07-Oct-22		-30.0		-6.5	13-Oct-22		24.0	RH	-	
		12:50					17:30				-	
20-Oct-22	7871	19-Oct-22		-30.0		-7.0	24-Oct-22		24.0	RH	-	
		17:30					13:45				-	
01-Nov-22	1238	31-Oct-22		-30.0		-30.0	02-Nov-22		24.0	RH	-	
		11:30					12:15				-	
13-Nov-22	14938	16-Nov-22		-30.0		-9.0	18-Nov-22		24.0	RH	-	VOC sampler timer off pressure of -30" Hg on the November 13 MECP monitoring day so sampler ran again on November 17.
		15:55					10:30				-	
25-Nov-22	27688	24-Nov-22		-30.0		-9.5	28-Nov-22		24.0	RG	-	
		15:15					15:00				-	
07-Dec-22	14534	05-Dec-22		-30.0		-12.0	08-Dec-22		24.0	PD/RH	-	MFC Flow set to 2.9 cc/m.
		16:45					10:45				-	
19-Dec-22	23746	16-Dec-22		-28.5		-3.0	21-Dec-22		24.0	RH	-	North VOC sampler timer valve would not pass the valve opne test so used a back up VOC sampler timer. North VOC sampler timer needs a servivce and repair. Canister off pressure at -3 " Hg and above the - 5 "
		12:45					15:10				-	
31-Dec-22	7845	30-Dec-22		-30.0		-13.0	03-Jan-23		24.0	PD/RH	-	Replaced with east duplicate VOC sampler timer as north VOC sampler timer was leaking and could not be repaired. The MFC flow was set to 2.9 cc/m.
		12:33					14:10				-	

RAIN CARBON INC.

VOC - Station Logs

Station : Tank 77
Location : 725 Strathearne Avenue N, Hamilton
Period : 01 October, to 31 December 2022
Quarter : Q4

Sample Date (dd-mmm-yy)	VOC ID Canister #	Installation (Date) (Time EST)	On Flow (mL/min)	On Pressure ("Hg)	Off Flow (mL/min)	Off Pressure ("Hg)	Removal (Date) (Time EST)	Average On/Off Sample Flow (3.15 - 3.85 mL/Min)	Sample Duration (21.6 - 26.4 Hrs)	Technician Initial	Leak Pressure (As Left) (As Found)	Comments
08-Oct-22	2754	07-Oct-22		-30.0		-6.0	13-Oct-22		24.0	RH	-	
		17:10					18:40				-	
20-Oct-22	2604	19-Oct-22		-29.0		-7.0	24-Oct-22		24.0	RH	-	
		18:40					14:45				-	
01-Nov-22	2751	31-Oct-22		-29.5		-8.5	02-Nov-22		24.0	RH	-	
		12:20					13:20				-	
13-Nov-22	2909	11-Nov-22		-29.0		-9.0	16-Nov-22		24.0	RH	-	
		14:50					16:56				-	
25-Nov-22	27651	24-Nov-22		-29.5		-8.5	28-Nov-22		24.0	RG	-	
		14:52					14:00				-	
07-Dec-22	2772	05-Dec-22		-29.5		-9.0	11-Dec-22		24.0	RH	-	MFC Flow set to 2.9 cc/m.
		17:30					14:20				-	
19-Dec-22	7871	16-Dec-22		-29.0		-9.0	21-Dec-22		24.0	RH	-	
		17:15					16:40				-	
31-Dec-22	2620	30-Dec-22		-29.0		-9.0	03-Jan-23		24.0	PD/RH	-	MFC Flow set to 2.9 cc/m.
		12:00					15:40				-	

RAIN CARBON INC.

VOC - Station Logs

Station : BERM
Location : 725 Strathearne Avenue N, Hamilton
Period : 01 October, to 31 December 2022
Quarter : Q4

Sample Date (dd-mmm-yy)	VOC ID Canister #	Installation (Date) (Time EST)	On Flow (mL/min)	On Pressure ("Hg)	Off Flow (mL/min)	Off Pressure ("Hg)	Removal (Date) (Time EST)	Average On/Off Sample Flow (3.15 - 3.85 mL/Min)	Sample Duration (21.6 - 26.4 Hrs)	Technician Initial	Leak Pressure (As Left) (As Found)	Comments
08-Oct-22	1268	07-Oct-22 18:15		-30.0		-4.0	13-Oct-22 17:45		24.0	RH	- -	
20-Oct-22	2815	19-Oct-22 17:45		-30.0		-30.0	24-Oct-22 13:55		24.0	RH	- -	Can did not run.
01-Nov-22	2774	31-Oct-22 14:36		-28.5		-4.5	02-Nov-22 12:45		24.0	RG	- -	
13-Nov-22	27641	11-Nov-22 11:45		-29.0		-5.0	16-Nov-22 16:10		24.0	RH	- -	
25-Nov-22	23742	24-Nov-22 14:35		-29.5		-5.5	28-Nov-22 13:23		24.0	RG	- -	
07-Dec-22	2824	05-Dec-22 16:25		-28.5		-5.5	08-Dec-22 10:55		24.0	PD/RH	- -	Replaced 2701 Timer and MFC. Flow set to 2.9 cc/m.
07-Dec-22	36578	05-Dec 16:25		-28.5		-13.0	08-Dec-22 11:00		24.0	PD/RH	- -	Duplicate December 7, 2022 sample
19-Dec-22	2921	16-Dec-22 13:15		-28.0		-4.5	21-Dec-22 15:30		24.0	RH	- -	
19-Dec-22	1262	16-Dec-22 13:30		-29.0		-13.0	21-Dec-22 15:38		24.0	RH	- -	Duplicate December 19, 2022 sample
31-Dec-22	32576	30-Dec-22 13:15		-29.0		-8.5	03-Jan-23 14:35		24.0	PD/RH	- -	MFC flow reduced from 3.1 cc/min to 2.9 cc/min.
31-Dec-22	1269	16-Dec-22 13:30		-29.0		0.0	03-Jan-23 14:40		24.0	PD/RH	- -	Duplicate December 31, 2022 sample. MFC flow increased from 2.2 cc/min to 2.8 cc/min.

RAIN CARBON INC.

VOC - Station Logs

Station : WEST
Location : 725 Strathearne Avenue N, Hamilton
Period : 01 October, to 31 December 2022
Quarter : Q4

Sample Date (dd-mmm-yy)	VOC ID Canister #	Installation (Date) (Time EST)	On Flow (mL/min)	On Pressure ("Hg)	Off Flow (mL/min)	Off Pressure ("Hg)	Removal (Date) (Time EST)	Average On/Off Sample Flow (3.15 - 3.85 mL/Min)	Sample Duration (21.6 - 26.4 Hrs)	Technician Initial	Leak Pressure (As Left) (As Found)	Comments
08-Oct-22	2763	07-Oct-22		-27.5		-6.0	13-Oct-22		24.0	RH	-	
		16:45					18:20				-	
20-Oct-22	1282	19-Oct-22		-28.0		-6.5	24-Oct-22		24.0	RH	-	
		18:25					14:30				-	
01-Nov-22	2590	31-Oct-22		-27.5		-8.0	02-Nov-22		24.0	RH	-	
		12:10					13:00				-	
13-Nov-22	2741	11-Nov-22		-28.0		-8.0	16-Nov-22		24.0	RH	-	
		14:30					16:30				-	
25-Nov-22	14902	24-Nov-22		-28.5		-8.5	28-Nov-22		24.0	RG	-	
		15:05					14:30				-	
07-Dec-22	2801	05-Dec-22		-28.5		-9.0	11-Dec-22		24.0	PD/RH	-	MFC Flow set to 2.9 cc/m.
		17:15					14:05				-	
19-Dec-22	2926	16-Dec		-28.0		-8.0	21-Dec-22		24.0	RH	-	
		14:10					14:05				-	
31-Dec-22	2756	30-Dec-22		-28.0		-9.0	03-Jan-23		24.0	PD/RH	-	Replacement VOC sampler timer as new west VOC sampler timer internal valve would not open. MFC flow set to 2.9 cc/m.
		14:30					15:15				-	