



REPORT

February 2023 Ambient Air Monitoring Report Rain Carbon Canada Inc.

Submitted by:

Rain Carbon Canada Inc.

725 Strathearne Avenue North Hamilton, Ontario L8H 5L3

March 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 fifth monthly report submitted as part of the Rain Carbon ambient monitoring program and summarizes the measurements taken in February 2023.

The ambient air monitoring measurements for February 2023 follow the November 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 November 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 2022 through September 2022 and resumed monitoring on December 7, 2022.

This report includes the following information for measurements taken in February 2023:

- 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)
North - Tank 91	4.1
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 Old 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 \pm 10% which is equivalent to total volumes between 293.6 m³ and 358.8 m³ over 24 hours.

For the February 2023 monitoring results, all the recorded PUF volumes were inside the MECP specified range between 293.6 m³ and 358.8 m³ over 24 hours. However, no February 17, 2023 MECP monitoring event B(a)P sample new west monitor was obtained due to the PUF unit sampler power switch being inadvertently left switched off by the contractor during PUF unit installation.

For February 2023, the benzene samples SUMMA canister pressures on receipt at the laboratory for analysis had acceptable pressures of receipt between -1.6 "Hg and -13.4 "Hg except for the south berm sampler on the February 5, 2023 MECP monitoring event, which had a pressure on receipt of -18.73 "Hg which is below the MECP minimum guideline pressure on receipt of – 13.4 "Hg. The south monitor VOC sampler timer was serviced, calibrated, and returned to service.

These pressures and volumes are presented below in Tables 2 and 3.

Table 2: Summa Canister Pressures on Receipt ("Hg)

	Benzene S	JMMA Canister				
Monitoring Event Date	East	North	Old West	New West	South	HAMN STN 29164
February 5, 2023	- 4.48**	- 9.16	- 5.50	- 6.72	- 18.73*	- 2.85**
February 17, 2023	- 6.11	- 9.98	- 5.29	- 6.92	-7.53	- 5.90

^{*}Sample is invalid as the final vacuum pressure is outside the MECP acceptable range of -1.6 to -13.4 inches Hg

^{**} Sample is acceptable but has a final vacuum pressure that is outside the MECP recommended vacuum pressure range of -5 to -10 inches Hg.

Table 3: PUF Filter Total Volumes

Manitarina						
Monitoring Event Date	New	North	Old West	New West	South	HAMN STN 29164
February 5, 2023	336.4	308.9	337.1	333.7	324.4	329.5
February 17, 2023	324.6	301.0	331.6	Sampler failure**	309.7	324.5

^{**}No new west monitor sample obtained due to the new west PUF unit sampler power being inadvertently left switched off by the contractor during PUF unit installation.

4.0 SUMMARY OF BENZENE MEASUREMENTS

Two sets of benzene measurements were taken in February 2023. The measurements range from 0.808 $\mu g/m^3$ to **46.6** $\mu g/m^3$, with the highest value being detected at the **east monitor** during the February 5, 2023, MECP monitoring event.

All the benzene concentrations measured during the two February 2023 monitoring events were below the 24-hour Upper Risk Threshold (URT) of $100 \, \mu g/m^3$ benzene.

Table 4: Summary of February 2023 Benzene Measurements

Manitaging		М				
Monitoring Event Date	East	North	Old West	New West	South	HAMN STN 29164
February 5, 2023	46.6	7.29	0.986	0.895	Sampler failure*	1.23
February 17, 2023	9.79	2.17	1.02	1.81	25.3	0.803

^{*}Sample is invalid as the final vacuum pressure is outside the MECP acceptable range of -1.6 to -13.4 inches Hg

5.0 SUMMARY OF B(A)P MEASUREMENTS

Two sets of B(a)P measurements were taken in February 2023. The B(a)P measurements ranged from <0.00030 μ g/m³ to **0.00123 \mug/m³**, with the highest value being detected at the **east monitor** during the February 17, 2023, monitoring event.

However, no February 17, 2023 PUF unit sample was obtained at the new west monitor due to the PUF unit sampler power being inadvertently left switched off by the contractor during PUF unit installation.

All the B(a)P concentrations measured during the two February 2023 monitoring events were below the $0.0043~\mu g/m^3$ Measured Level Threshold (MLT) and below the 24-hr Upper Risk Threshold (URT) of $0.0050~\mu g/m^3$ 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 February 2023 B(a)P Measurements.

Manakantan		N				
Monitoring Event Date	East	North	Old West	New West	South	HAMN STN 29164
February 5, 2023	0.00113	0.00058	<0.00030	<0.00030	<0.00031	<0.00030
February 17, 2023	0.00123	0.00033	<0.00030	Sampler failure**	0.00116	<0.00031

^{**}No new west monitor sample obtained due to the new west PUF unit sampler power being inadvertently left switched off by the contractor during PUF unit installation.

6.0 CONCLUSIONS

All the B(a)P concentrations measured during the two February 2023 monitoring events were below the $0.0043~\mu g/m^3$ Measured Level Threshold (MLT) and below the 24-hr Upper Risk Threshold (URT) of $0.0050~\mu g/m^3$ B(a)P.

However, there was no February 17, 2023 MECP monitoring day event B(a)P new west monitor sample obtained due to the PUF unit sampler power being inadvertently left switched off by the contractor during PUF unit installation.

All the benzene concentrations measured during the two February 2023 monitoring events were below the 24-hour Upper Risk Threshold (URT) of $100 \mu g/m^3$ benzene.

However, the February 5, 2023 benzene south berm sample was invalid as the final vacuum pressure was outside the MECP acceptable vacuum pressure range -1.6 to -13.4 "Hg. The south monitor VOC sampler timer was therefore serviced, calibrated, and returned to service.

All the remaining benzene SUMMA canisters had acceptable vacuum pressures on receipt at the laboratory for analysis.

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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APPENDIX A

Site Photos

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.

				N	Ionitor Locatio	n
Contaminant	Criteria	North	East	Old West	New West	South
B(a)P and Benzene	Inlet height 3 to 15 m above grade	Inlet 3 to 15 Inlet 3 to 3 m above grade 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	✓	✓	1	✓	✓	✓	√
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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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.





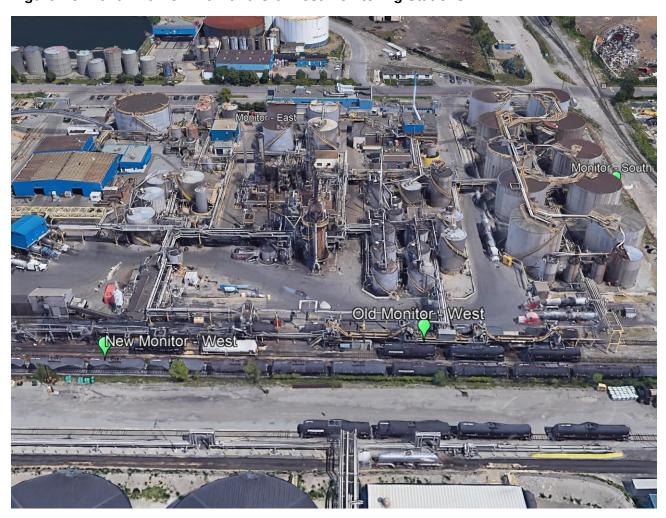
North monitor

Figure A3: Aerial View 1 – Existing South Monitoring Station

South

Google Earth

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





New West Monitor

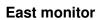




Figure A4: Aerial View 4 – East Monitoring Station



Laboratory Analysis

Rain Carbon Canada Inc. - Monthly BaP Sampling Report

Reporting Period : February 2023

Sampling Method : CARB429(ARBM1,M2) mod

Sampling Times : 24 hour duration starting at 00:00 EST on the Sample Date

Parameter	ВаР
Units	ng/m³
Analytical RDL	0.315
Annual Site Specific Standard	0.8

Sample Date	Location					
Sample Date	East	North	Old West	South	New West	STN29164
05-Feb-23	1.13	0.58	0.15	0.16	0.15	0.15
17-Feb-23						
Monthly Ave	1.13	0.58	0.15	0.16	0.15	0.15
Monthly Max	1.13	0.58	0.15	0.16	0.15	0.15
Monthly Min	1.13	0.58	0.15	0.16	0.15	0.15
No. of Samples >Standard	1	0	0	0	0	0
No. of Valid Samples	1	1	1	1	1	1
% Valid Data	100	100	100	100	100	100

 $\textbf{Note:} \ \textbf{All non detectable results reported as } 1\!\!/_{\!\!2} \ \textbf{the Reportable Detection Limit (RDL)}.$

Comments

PLEASE NOTE: Still awaiting results for the February 17, 2023 sample date. A revised copy will be provided.

Rain Carbon Canada Inc. - VOC Sampling Report

Reporting Period : February 2023 **Sampling Methods** : GC/MS (TO15)

Sampling Times : 24 hour duration starting at 00:00 EST on the Sample Date

Parameter	Benzene
Units	ug/m³
Analytical RDL	0.319
Site Specific Standard	12.7

Sample Date	Location					
Sample Date	East	North	Old West	South	New West	STN29164
05-Feb-23	46.60	7.29	0.99		0.90	1.23
17-Feb-23	9.79	2.17	1.28	25.30	1.02	0.80
Monthly Ave	28.20	4.73	1.13	25.30	0.96	1.02
Monthly Max	46.60	7.29	1.28	25.30	1.02	1.23
Monthly Min	9.79	2.17	0.99	25.30	0.90	0.80
No. of Samples >Standard	1	0	0	1	0	0
No. of Valid Samples	2	2	2	1	2	2
% Valid Data	100	100	100	50	100	100

 $\textbf{Note:} \ \textbf{All non detectable results reported as } \% \ \textbf{the Reportable Detection Limit (RDL)}.$

Comments			

Rain Carbon Canada Inc. - VOC Sampling Report (Duplicates and Special Survey)

Reporting Period : February 2023 **Sampling Methods** : GC/MS (TO15)

Sampling Times : 24 hour duration starting at 00:00 EST on the Sample Date

Parameter	Benzene
Units	ug/m³
Analytical RDL	0.319
Site Specific Standard	12.7

Sample Date	Location					
Sample Date	East	North	Old West	South	New West	PH #2
05-Feb-23				0.15		
17-Feb-23				24.00		38.40
Monthly Ave				12.07		38.40
Monthly Max	0.00	0.00	0.00	24.00	0.00	38.40
Monthly Min	0.00	0.00	0.00	0.15	0.00	38.40
No. of Samples >Standard	0	0	0	1	0	1
No. of Valid Samples	0	0	0	2	0	1
% Valid Data	0	0	0	100	0	100

 $\textbf{Note:} \ \textbf{All non detectable results reported as } 1\!\!/\!_2 \ \text{the Reportable Detection Limit (RDL)}.$

Comments NOTE: This report includes duplicates, as well as special survey results.	



Chain of Custody Forms

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08-F	eb-23 12	2:49	-																CAM F	CD-013	02 /3	
Cristina (N C337:	10118101111		Campol sauga ovlabs.c	Ontario	,L5N 2L8	Phone: Fax:	1-800-668- (905) 817- (905) 817-	5700		Cha	in of	Cus	tody	Form	- PUF	/ PAI		YSIS RI		Page _		_2_
ZHnpany MA	IR-FRID	GE Rotek Enviror	nmental Inc Co	ompan	REPORT IN	Rotek Env						RIAL		FULL LIST OF VOCs (reference TO15A)	pou	C16)						
Contact Name		Paul Daszko				Paul Dasz		START VACUUM (inches of Hg)	(BH Jo			AMBIENT/COMMERCIAL/INDUSTRIAL		ference	BTEX/Aromatic/Aliphatic Hydrocarbon Fractions	BTEX/F1 (C6-C10) and F2 (C10-C16)	Selected VOC's - please specify	TO13				•
Address:	15 Keefer	Court Hamilto	n A	ddress	15 Keefer C	inche	hes		AIR	CIAL		s (re	atic	and	leas	EPA T				JSEC		
	ON L8E 4	V4			ON L8E 4V	4		JIM ((inc	1 31	DOR	MER	S	000	Aliph	10)	g- S					OTI
E-mail:	poore@ro	tekinc.com	E	-mail:	ruth.herron	@rotekinc.	com	CUL	JUM	OUR	IND	COM	3 GA	9	atic//	295	000	J.			- 1	SS
Ph:	905 573 9	533	PI	h:	905-573-95	33		TVA	ACI	/AP	TN.	/TN	LAE	LIST	Arom	F	ed \	on P			- 1	TEF
Sampled by:	Robin Ha	rt						STAR	END VACUUM (inches of Hg)	SOIL VAPOUR	AMBIENT/INDOOR AIR	AMBIE	SUB-SLAB GAS	FULL	BTEX!!	BTEX	Select	PAHs on PUF by				CANISTERS NOT USED
	Field Sample ID					Flow Regulator Serial #	Retrieval Date															
East P	East PAH 05-Feb				UPL913-01		07-Feb	II.										Х				
	North PAH 05-Feb																					
North F	PAH	05-Feb	PUF#	2	UPL914-01		07-Feb						45					X				
Old Wes	t PAH	05-Feb	PUF#	3	UPL915-01		07-Feb											Х				
South	PAH	05-Feb	PUF#	4	UPL916-01		07-Feb		100									Х				
New Wes	st PAH	05-Feb	PUF#	5	UPL917-01		07-Feb		91		10	2						X				
STN29		05-Feb	PUF #		UPL924-01		07-Feb	NG RE	OUIRE	MEN.	rs		Note	19				Х				
TAT Requirement STD 10 Business day Rush 5 Business day* Rush 2 Business day* Rush Other* PROJECT INFO Project #: Name: Rain PO #: 3266 Bureau Veritas Qu Bureau Veritas Co					rbon Canada #:		EDD	ations	ON 1 ON 4 BC 0	153 119		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/m³.							d			
* need approval from Bureau Veritas Task Order/Line It						0	1											ing@ra	incarbo	n.com,		
Client Signature: : Paul Daszko					Received by	fare	111	w		hu			robi	n.hart(@rainca	rbon.c	om, ru	th.herro	on@rot	ekinc.c	om	
Date/Time:	08-Feb-23 Date/Time: 2013					3/01/0			: 40					RETUR								
Unless otherwise available at http://				of Custo	dy is subject to	Bureau Veriti	s Laboratories	standa	ard Term	s and Co	ondition	s, Sign	ing of t	his Chair	of Custo	dy docur	nent is ac	cknowledg	gment an	d acceptai	ice of our	terms

17/12/20 - ON Supulls.



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

PAH Sample Submission Sheet

Sample Date	05-Feb-23
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	Maxxam	Install Date	MAGN On	Removal Date	MAGN Off	Total Volume	Submission
		Cartridge #	Filter ID #	Install Time	inH2O	Removal Time	inH2O	m3	Date
EAST	05 Feb 2023	PUF #1	UPL912-01	02-Feb-23		07-Feb-23			
		UPL913-01	0, 23, 2-01	16:00	38	12:24	40	336.4	08-Feb-23
NORTH	05 Feb 2023	PUF #2	UPL912-01	02-Feb-23		07-Feb-23			
		UPL914-01	OFL912-01	16:15	38	12:45	38	m3 m	08-Feb-23
OLD WEST	05 Feb 2023	PUF #3	UPL912-01	02-Feb-23		07-Feb-23			
	31 1/31 3/51	UPL915-01	OF L912-01	17:15	5 14:47	14:47	40	337.1	08-Feb-23
SOUTH	05 Feb 2023	PUF #4	UPL912-01	02-Feb-23		07-Feb-23		NAME OF THE OWNER OWNER OF THE OWNER OWNE	
		UPL916-01	01 12-01	16:30	38	12:50	38	324.4	08-Feb-23
NEW WEST	05 Feb 2023	PUF #5	UPL912-01	02-Feb-23	20	07-Feb-23			
		UPL917-01	01 2312-01	17:00	38	14:30	40	333.7	08-Feb-23
STN29164	05 Feb 2023	PUF #5	UPL912-01	02-Feb-23	40	07-Feb-23			
		UPL924-01	O1 E312-01	11:30	40	10:30	39	329.5	08-Feb-23
Comr	ment 1 :								
Comr	ment 2 :								



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

PAH Sample Submission Sheet

Sample Date	17-Feb-23
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	Maxxam	Install Date	MAGN On	Removal Date	MAGN Off	Total Volume	Submission
		Cartridge #	Filter ID #	Install Time	inH2O	Removal Time	inH2O	m3	Date
EAST	05 Feb 2023	PUF #1	UUS032-01	15-Feb-23	38	22-Feb-23	42	324.6	22 Eab 22
EAST	05 Feb 2025	UUS033-01	003032-01	12:00	38	09:30	42	324.6	22-Feb-23 22-Feb-23 22-Feb-23 22-Feb-23
NORTH	05 Feb 2023	PUF #2	UUS032-01	15-Feb-23	20	22-Feb-23	20	204.0	00 Feb 00
NORTH	05 Feb 2023	UUS034-01	005032-01	13:15	38	10:00	38	301.0	
OLD WEST	05 Feb 2023	PUF #3	UUS032-01	15-Feb-23	38	22-Feb-23			22 5-1- 22
OLD WEST	05 Feb 2023	UUS035-01	003032-01	11:45	38	11:10	40	331.6	22-Feb-23
SOUTH	05 Feb 2023	PUF #4	UUS032-01	15-Feb-23	38	22-Feb-23	40	309.7	22 Feb 22
300111	05 Feb 2025	UUS036-01	003032-01	12:45	36	10:20	40	309.7	22-Feb-23 22-Feb-23 22-Feb-23 22-Feb-23
NEW WEST	05 Feb 2023	PUF #5	UUS032-01	15-Feb-23	38	22-Feb-23	40	N/A	22 Eab 23
TEN WEST	00 1 60 2020	UUS037-01	000002-01	11:15	30	10:45	40	DVA.	22-1 60-23
STN29164	05 Feb 2023	PUF #6	UUS032-01	16-Feb-23	40	21-Feb-23	40	324.5	21_Feb_23
011123104	55 . 55 2525	UUS044-01	00000201	14:45	40	12:00	-40	024.0	21-160-20
	ment 1 :	DO NOT ANALYZ	E NEW WEST PA	н					
Com	ment 2 :								

23-Feb-23 12:09 Cristina (Maria) Bacchus CAM FCD-01302 /3 Chain of Custody Form - PUF / PAH Campobello Rd Toll Free: 1-800-668-0639 Page _1_ of __2_ Phone: (905) 817-5700 ssauga Ontario ,L5N 2L8 C352665 Fax: (905) 817-5777 bylabs.com ANALYSIS REQUESTED REPORT INFORMATION KSS AIR-FRIDGE Rote ence TO15A) (C10-C16) Rotek Environmental Inc Company Name: Rotek Environmental IDUSTRIAL pecify of Hg) Project Manager: Paul Daszko Contact Name: Paul Daszko

Address:	15 Keefer C	Court Hamilto	n	Address	15 Keefer C	ourt Hamil	ton	ches	END VACUUM (inches of		AIR	IALIIN		refe	tic Hy	BTEX/F1 (C6-C10) and F2	ase :	A TO				SED
	ON L8E 4V	4			ON L8E 4V	4		M (in	(inch		OR /	MERC	60	/0Cs	Nipha	10) a	- ple	y EPA	YZE			DT US
E-mail:	poore@rote	ekinc.com		E-mail:	ruth.herron(@rotekinc.	com	START VACUUM (inches	MOC	OUR	INDO	COM	3 GA	. OF	atic/A	O-90	Selected VOC's - please	PAHs on PUF by	ANALYZE			CANISTERS NOT USED
Ph:	905 573 95	33		Ph:	905-573-95	33		T VA	VACI	VAPOUR	ENT/	ENT/	SLAE	LIST	/Arom	JF1 (ted V	on F	NOT A			STER
Sampled by:	Robin Hart							STAR	END	SOIL	AMBIENT/INDOOR	AMBIENT/COMMERCIAL/IN	SUB-SLAB GAS	FULL LIST OF VOCs (refe	BTEX/Aromatic/Aliphatic Hy Fractions	втех	Selec	PAHs	DO N			CANI
	Field	Sample ID			BV PUF ID	Flow Regulator Serial #	Retrieval Date															
East F	PAH	17-Feb	PUF	#1	UUS033-01		22-Feb											Х				
North	North PAH 17-Feb PUF #2						22-Feb											х				
Old West PAH 17-Feb PUF #3					UUS035-01	-	22-Feb											х				
South PAH 17-Feb PUF #4				#4	UUS036-01	-	22-Feb											х				
New We	st PAH	17-Feb	PUF	#5	UUS037-01		22-Feb												х			
STN29		17-Feb	PUF		UUS044-01		21-Feb			100								Х				
STD 10 Busin Rush 5 Busin Rush 2 Busin Rush Other *	IATION Irbon Canada	ı Inc	EDD Regulations ON 153 ON 419 BC CSR						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 unuse PROJECT SPECIFIC COMMENTS							d						
* need appro	oval from Bure	itas Conta r/Line Ite	c <u>Cristina Ba</u> m	cchus		Other			_				r BaP o	Add of the last		ng@ra	incarbo	on.com,				
Client Signature: : Paul Daszko Recei						<u>~</u>	19	40/1	N	1511		_			@rainca					tekinc.co H	om	
Date/Time: 22-Feb-23 Date/Time: Unless otherwise agreed to in writing, work submitted on this Chain of Custody is subject to Burea						215/0	11	1	(1)	09	. 0/-	_		RETUR	_	-			National Con-			
Unless otherwise available at http:		ody is subject to	Bureau Verit	as Laboratorie	S' Standa	apd Term	s and C	ondition	is. Sigi	ning of	tnis Chai	in of Custo	ay docui	ment is a	cknowled	gment ar	nd acceptar	ice of our	rterms			

6740 Campobello Rd Toll Free: 1-800-668-0639										CAM FCD-01302 /3 Chain of Custody Form - Summa™ Canister Page 2 of 3												1											
			Mississau	ga Ontario	L5N 2L8	Phone	e: (905) 817 x: (905) 817	-5700		Chi	ain o	r Cu	stod	y Forr	n - Su	mma"					_2 of	2_											
-	INVOICE	INFORMAT	ION		REPORT	INFORMAT	TION	1				T					ANAL	YSIS F	REQUES	STED													
.y Nam	ne:	Rotek Envi	ronmental Inc	Company			vironmental					AL.		015A)	ç	(9																	
untact Name:		Paul Daszk	0	Project M	anager:	Paul Das	zko	of Hg)				USTRI		nce T	ocarbo	10-C1	specify																
Address:	15 Keefer	Court Hami	lton	Address:	15 Keefer Court Hamilton		s: 15 Keefer Court Hamilton		ss: 15 Keefer Court Hamilton				ourt Hamilton			r Court Hamilton				2	AL/IND		(refere	Hydro	F2 (C	eds es					0		
1	ON L8E 4	V4		ON L8E 4V4				(inc	che		RAI	RCIA		CS (hatic	and	leas	llyze				USED											
E-mail:	poore@ro	tekinc.com		E-mail:	ruth.herron		com	SUUM	UM (ir	NR UR	0000	OMME	SAS	JF VO	ic/Alip	-C10)	C's - p	Not Analyze				NOT U											
Ph:	905 573 9	533		Ph:	905-573-95	533	231.211.0	YA.	וכת	P. P.	E	TIC	AB	STO	omat	90)	9	Do N				RS											
Sampled by:	Robin Har	rt			3			START VACUUM	END VA	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	Other - D				CANISTERS											
	Fie	eld Sample I	D		Canister Serial #	Flow Regulator Serial #	Retrieval Date			0,			- O		000	Ω	ď	ō				3											
East VO	C	05 5-1																															
Lust vo		05-Feb		14294	14294		07-Feb				12						Х																
North VO	OC.	05-Feb								0																							
		03-гев		32589	32589		07-Feb				No. 10	-					х																
Old West V	OC.	05-Feb		2040				70													0.0	Eeb.	-23 12:49										
		00100		2818	2818	***	07-Feb										Х			7	770	-1 017	in Docch	118									
South VO	C	05-Feb		2599	2599															Cri	stina	(MAI	ria) Bacch IIIIIIIIII	Uso									
South VOC-DUP	PLICATE	05-Feb		35570	35570	(444)	07-Feb	20202										х		1: 11 1 11	C33	271	6										
New West V	/OC	05-Feb		1259	1259		07-Feb										Х					() & 1	**	\circ									
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TAT Requiremen	nt		PROJECT IN	NFORMATI			25-Jan REPORTIN	GREO	HIDEN	MENITO							Х																
STD 10 Business Rush 5 Business Rush 2 Business	day *		Project #: Name: R PO #: 3		Canada Inc		E	EDD Regulati	ons (ON 15	3	5	SOIL VE	ase ind apour oi	icate on r ambier all canis	nt air																	
Rush Other *	.13		Bureau Veritas Bureau Veritas	S Quote #: S Contact:	t: Cristina Bacchus					ON 41 BC CS		5	PRO.	JECT S	SPECIF Benzen	IC CO	MMEN	ITS															
	need approval from Bureau Veritas Task Order/Line Item														results																		
ent Signature: Paul Daszko Rece				Received by:_	Arel	du / F	RS	UDO	EF	0		robin.	hart@r	aincarb	on cor	n ruth	borron	arbon.	com,														
ate/Time: 08-Feb-23					Date/Time: 2023/02/08 / 128					100	49		DO NO	ANA TO	LYZE 2	2599. 11	NVALIE	SAMP	LE.		n												
Inless otherwise agree wailable at http://www	ed to in writin	g, work submit	led on this Chain o	of Custody is	subject to Burea	u Veritas Lab			ns and C			ing of	this Ch	ain of Cur	ETURN	MOST !	JNUSE	ED EQI	UIPME	NT	Hiteracous .												





VOC Canister Sample Submission Sheet

Sample Date	05-Feb-23
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 EST	Initial Pressure inHg	Time On EST	Time Off	Elapsed Time Hours	Final Pressure inHg	Retrieval Date	Retrieval Time			
		dd/mm/yy	dd/mm/yy				EST			dd/mm/yy	EST			
EAST	14294	05-Feb-23	02-Feb-23	16:20	-30.0	00:01	00:01	24.0	-7.0	07-Feb-23	12:30			
NORTH	32589	05-Feb-23	02-Feb-23	17:30	-30.0	00:01	00:01	24.0	-11.5	07-Feb-23	12:45			
OLD WEST	2818	05-Feb-23	02-Feb-23	17:30	-28.0	00:01	00:01	24.0	-8.5	07-Feb-23	14:50			
SOUTH	2599	05-Feb-23	02-Feb-23	17:10	-28.0	00:01	00:01	24.0	0.0	07-Feb-23	13:05			
SOUTH	35570	05-Feb-23	02-Feb-23	11:10	-30.0	00:01	00:01	24.0	-20.0	07-Feb-23	13:00			
NEW WEST	1259	05-Feb-23	02-Feb-23	17:10	-28.0	00:01	00:01	24.0	-8.5	07-Feb-23	14:30			
STN29164	2768	05-Feb-23	02-Feb-23	11:30	-28.0	00:01	00:01	24.0	-6.5	07-Feb-23	10:45			
	Comment 1 :			DO NOT ANALYZE SOUTH VOC CANNISTER SN:2599.										
	Comment 2	:	SOUTH VOC C	ANNISTER 35	570 IS A DU	PLICATE. P	LEASE ANA	LYZE.						

SOR!											-							-	CAM	FCD-01	302 /3	
EUAESU VERITAS			6740 Cam Mississaug	ga Ontario ,L	.5N 2L8	Phone:	1-800-668 (905) 817- (905) 817-	5700		Cha	in of	Cus	tody	Form	ı - Sur	nma™			EQUE	ve-arress	_2 of	_2_
	INVOICE II	NFORMATIC	PROPERTY AND ADDRESS OF THE PARTY AND ADDRESS		REPORT II	NFORMATI			131					2			1.10.12	I		T		City
Company Na	me: <u>i</u>	Rotek Enviro	nmental Inc	Company	Name:	Rotek Env	ironmental					RIAL		FULL LIST OF VOCs (reference TO15A)	pou	C16)						
Contact Name	e:	Paul Daszko		Project Ma	nager:	Paul Daszl	(O	START VACUUM (inches of Hg)	(BH			AMBIENT/COMMERCIAL/INDUSTRIAL		erence	drocar	BTEX/F1 (C6-C10) and F2 (C10-C16)	Selected VOC's - please specify	1	-			
Address:	15 Keefer (Court Hamilto	on	Address:	15 Keefer (Court Hamil	ton	nches	tes of		AIR	CIALIN		s (refe	atic Hy	nd F2	ease	lyze				SED
	ON L8E 4V	/4			ON L8E 4V	4		M (ii	incl		S.	MER	-	8	lg.	0)	ig.	Ana				10
E-mail:	poore@rote	ekinc.com		E-mail:	ruth.herron	@rotekinc.c	T VACUUM () VAPOUR ENT/INDOC			3 GAS	P.	natic/A	C6-C1	\$,00/	- Do Not Analyze				S NO			
Ph:	905 573 95	i33		Ph:	905-573-95	33		3	ACI	AP	E	IN.	3	LIS]	Tron Ins	E	P6	å				TEF
Sampled by:	Robin Hart							STAR	END VACUUM (inches of Hg)	SOIL	AMBIENT/INDOOR AIR	AMBIE	SUB-SLAB GAS	FULL	BTEX/Aromatic/Aliphatic Hydrocarbon Fractions	BTEX	Select	Other				CANISTERS NOT USED
	Fie	ld Sample ID)		Canister Serial #	Flow Regulator Serial #	Retrieval Date		III IB	31/92												
East V	/oc	17-Feb		14545	14545		22-Feb					-23				-	х					
North \	VOC	17-Feb		14118	14118		22-Feb	-, ,,	Crist	ina (IIIII	Mar	ia) I 	3acc I##	hus		-	X		-			
							LL 1 CD		(352	280	2				-			1			
Old Wes	st VOC	17-Feb		27647	27647		22-Feb	-w	KK		AH	R- 00	1			ļ	x					1464
South '	VOC	17-Feb		143	143		22 5-5		+	1	1		+	 	+-	1	x	+-	-	-		
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New Wes		17-Feb		1240	1240		22-Feb				-				1		X	+	+	-		
Pump Ho	NEW TAXABLE IN	17-Feb		313	313				-		-				_		X	-	+	-	-	
STN29	-	17-Feb		2774	2774		22-Feb		-		-			_	+		X	-	+	1		
TAT Requirer	SHARRY	11-1-00	PROJECT	INFORMA	THE SHAPE OF THE SAME OF THE S		21-Feb REPORTI	NG RE	QUIRE	MENT	rs		Note	s			_ ^					
STD 10 Busine Rush 5 Busine Rush 2 Busine Rush Other *	ess day * ess day *		PO #: Bureau Ver Bureau Ver	Rain Carbo 32669 itas Quote #: itas Contact:	on Canada In			EDD Regula		ON 1 ON 4 BC 0	19		soil (2) pl	vapour ease lis OJEC1 lyse fo	or ambi st all cal SPEC Benze	ent air nisters CIFIC C	OMME	chain oi ENTS Im³.	f custoo	mples a	if unuse	nd
* need approv			Trask Orde	er/Line Item		w		M	71		11	~	1 =		St.					on.com		
Client Signature	e: Paul Dasz	ko			Received by			7	17	M	الاول) _	robii	n.hart(@rainca	irbon.c	om, rut	th.herr	on@ro	tekinc.c	om	
Date/Time:	22-F	eb-23			Date/Time:	101	3100	V		11.	19		PLE	ASE	RETU	RN AL	L UNU	SED E	QUIP	MENT		
Unless otherwise available at http://				ain of Custody	is subject to Bui	reau Ventas La	aboratories' sta	andard T	erms an	a Condi	tions. S	Signing	of this (Chain of	Custody o	locument	is acknow	wledgme	nt and a	ceptance	of our ten	ms





VOC Canister Sample Submission Sheet

Sample Date	17-Feb-23
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
Number	Number	dd/mm/yy	dd/mm/yy	EST	inHg	EST	EST	Hours	inHg	dd/mm/yy	EST
EAST	14545	17-Feb-23	15-Feb-23	12:00	-29.5	00:01	00:01	24.0	-8.0	22-Feb-23	09:35
NORTH	14118	17-Feb-23	15-Feb-23	13:15	-29.5	00:01	00:01	24.0	-12.0	22-Feb-23	10:05
OLD WEST	27647	17-Feb-23	15-Feb-23	11:45	-29.0	00:01	00:01	24.0	-8.5	22-Feb-23	11:15
SOUTH	143	17-Feb-23	15-Feb-23	12:30	-29.0	00:01	00:01	24.0	-9.5	22-Feb-23	10:23
SOUTH	18244	17-Feb-23	15-Feb-23	12:30	-29.0	00:01	00:01	24.0	-11.0	22-Feb-23	10:25
NEW WEST	1240	17-Feb-23	15-Feb-23	11:13	-27.5	00:01	00:01	24.0	-9.0	22-Feb-23	10:55
STN29164	2774	17-Feb-23	16-Feb-23	12:00	-29.0	00:01	00:01	24.0	-8.0	21-Feb-23	11:00
PumpHouse	313	17-Feb-23	15-Feb-23	13:40	-28.5	00:01	00:01	24.0	-9.0	22-Feb-23	10:30

Comment 1:

SOUTH VOC CANNISTER 18244 IS A DUPLICATE. PLEASE ANALYZE.

Comment 2:



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: 2023/02/23

Report #: R7519873 Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C337316 Received: 2023/02/08, 12:49

Sample Matrix: Puf And Filter # Samples Received: 6

		Date	Date		
Analyses	Quantity	Extracted	Analyzed	Laboratory Method	Analytical Method
Calculated Polyaromatic Hydrocarbons	6	2023/02/08	2023/02/21	BRL SOP-00201	
PAH's in MM5 SamplingTrains (CARB429mod) (1)	6	2023/02/10	2023/02/14	BRL SOP-00201	CARB429(ARBM1,M2)mod
Air Volume from HiVol Sampling	6	N/A	2023/02/08		

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 (b) 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
23 Feb 2023 10:03:18

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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Total Cover Pages : 1 Page 1 of 8



Report Date: 2023/02/23

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		UZV970	UZV971	UZV972	UZV973						
Sampling Date		2023/02/05	2023/02/05	2023/02/05	2023/02/05						
	UNITS	EAST PAH 05-FEB PUF # 1 UPL913-01	NORTH PAH 05-FEB PUF # 2 UPL914-01	OLD WEST PAH 05-FEB PUF # 3 UPL915-01	SOUTH PAH 05-FEB PUF # 4 UPL916-01	QC Batch					
Volume	m3	336.4	308.9	337.1	324.4	ONSITE					
QC Batch = Quality Control Ba	QC Batch = Quality Control Batch										

Bureau Veritas ID		UZV974	UZV975							
Sampling Date		2023/02/05	2023/02/05							
	UNITS	NEW WEST 05-FEB PUF # 5 UPL917-01	STN29164 05-FEB PUF # 6 UPL924-01	QC Batch						
Volume	m3	333.7	329.5	ONSITE						
QC Batch = Quality Control Batch										



ureau Veritas Job #: C337316 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		UZV970	UZV971	UZV972	UZV973		
Sampling Date		2023/02/05	2023/02/05	2023/02/05	2023/02/05		
	UNITS	EAST PAH 05-FEB PUF # 1 UPL913-01	NORTH PAH 05-FEB PUF # 2 UPL914-01	OLD WEST PAH 05-FEB PUF # 3 UPL915-01	SOUTH PAH 05-FEB PUF # 4 UPL916-01	RDL	QC Batch
Benzo(a)pyrene	ug	0.38	0.18	<0.10	<0.10	0.10	8497446
Surrogate Recovery (%)						•	
D10-2-Methylnaphthalene	%	82	80	84	78		8497446
D10-Fluoranthene	%	96	104	108	108		8497446
D10-Fluorene (FS)	%	82	86	88	86		8497446
D10-Phenanthrene	%	94	98	100	100		8497446
D12-Benzo(a)anthracene	%	110	110	108	106		8497446
D12-Benzo(a)pyrene	%	90	94	90	88		8497446
D12-Benzo(b)fluoranthene	%	106	106	108	106		8497446
D12-Benzo(ghi)perylene	%	100	100	102	100		8497446
D12-Benzo(k)fluoranthene	%	104	106	106	102		8497446
D12-Chrysene	%	108	106	106	106		8497446
D12-Indeno(1,2,3-cd)pyrene	%	102	102	104	102		8497446
D12-Perylene	%	98	100	100	98		8497446
D14-Dibenzo(a,h)anthracene	%	102	102	102	100		8497446
D14-Terphenyl (FS)	%	92	98	102	102		8497446
D8-Acenaphthylene	%	84	86	88	82		8497446
D8-Naphthalene	%	114	86	82	76		8497446

RDL = Reportable Detection Limit QC Batch = Quality Control Batch



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		UZV974	UZV975		
Sampling Date		2023/02/05	2023/02/05		
	UNITS	NEW WEST 05-FEB PUF # 5 UPL917-01	STN29164 05-FEB PUF # 6 UPL924-01	RDL	QC Batch
Benzo(a)pyrene	ug	<0.10	<0.10	0.10	8497446
Surrogate Recovery (%)	•			•	
D10-2-Methylnaphthalene	%	88	72		8497446
D10-Fluoranthene	%	102	92		8497446
D10-Fluorene (FS)	%	92	78		8497446
D10-Phenanthrene	%	100	88		8497446
D12-Benzo(a)anthracene	%	108	92		8497446
D12-Benzo(a)pyrene	%	92	78		8497446
D12-Benzo(b)fluoranthene	%	106	92		8497446
D12-Benzo(ghi)perylene	%	100	88		8497446
D12-Benzo(k)fluoranthene	%	102	90		8497446
D12-Chrysene	%	106	90		8497446
D12-Indeno(1,2,3-cd)pyrene	%	102	88		8497446
D12-Perylene	%	98	84		8497446
D14-Dibenzo(a,h)anthracene	%	100	88		8497446
D14-Terphenyl (FS)	%	98	88		8497446
D8-Acenaphthylene	%	92	78		8497446
D8-Naphthalene	%	88	70		8497446
RDL = Reportable Detection Li	nit				

QC Batch = Quality Control Batch



Report Date: 2023/02/23

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		UZV970		UZV971		UZV972		
Sampling Date		2023/02/05		2023/02/05		2023/02/05		
	UNITS	EAST PAH 05-FEB PUF # 1 UPL913-01	RDL	NORTH PAH 05-FEB PUF # 2 UPL914-01	RDL	OLD WEST PAH 05-FEB PUF # 3 UPL915-01	RDL	QC Batch
Benzo(a)pyrene	ng/m3	1.13	0.30	0.58	0.32	<0.30	0.30	8494249

RDL = Reportable Detection Limit

QC Batch = Quality Control Batch

Bureau Veritas ID		UZV973		UZV974	UZV975		
Sampling Date		2023/02/05		2023/02/05	2023/02/05		
	UNITS	SOUTH PAH 05-FEB PUF # 4 UPL916-01	RDL	NEW WEST 05-FEB PUF # 5 UPL917-01	STN29164 05-FEB PUF # 6 UPL924-01	RDL	QC Batch
Benzo(a)pyrene	ng/m3	<0.31	0.31	<0.30	<0.30	0.30	8494249

RDL = Reportable Detection Limit

QC Batch = Quality Control Batch



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

GENERAL COMMENTS

Results relate only to the items tested.



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
8497446	CTC	Spiked Blank	D10-2-Methylnaphthalene	2023/02/14		82	%	50 - 150
			D10-Fluoranthene	2023/02/14		104	%	50 - 150
			D10-Phenanthrene	2023/02/14		90	%	50 - 150
			D12-Benzo(a)anthracene	2023/02/14		104	%	50 - 150
			D12-Benzo(a)pyrene	2023/02/14		98	%	50 - 150
			D12-Benzo(b)fluoranthene	2023/02/14		106	%	50 - 150
			D12-Benzo(ghi)perylene	2023/02/14		106	%	50 - 150
			D12-Benzo(k)fluoranthene	2023/02/14		106	%	50 - 150
			D12-Chrysene	2023/02/14		104	%	50 - 150
			D12-Indeno(1,2,3-cd)pyrene	2023/02/14		106	%	50 - 150
			D12-Perylene	2023/02/14		104	%	50 - 150
			D14-Dibenzo(a,h)anthracene	2023/02/14		104	%	50 - 150
			D8-Acenaphthylene	2023/02/14		84	%	50 - 150
			D8-Naphthalene	2023/02/14		84	%	50 - 150
			Benzo(a)pyrene	2023/02/14		90	%	50 - 150
8497446	CTC	RPD	Benzo(a)pyrene	2023/02/14	0		%	50
8497446	CTC	Method Blank	D10-2-Methylnaphthalene	2023/02/14		86	%	50 - 150
			D10-Fluoranthene	2023/02/14		96	%	50 - 150
			D10-Phenanthrene	2023/02/14		86	%	50 - 150
			D12-Benzo(a)anthracene	2023/02/14		96	%	50 - 150
			D12-Benzo(a)pyrene	2023/02/14		92	%	50 - 150
			D12-Benzo(b)fluoranthene	2023/02/14		100	%	50 - 150
			D12-Benzo(ghi)perylene	2023/02/14		100	%	50 - 150
			D12-Benzo(k)fluoranthene	2023/02/14		100	%	50 - 150
			D12-Chrysene	2023/02/14		100	%	50 - 150
			D12-Indeno(1,2,3-cd)pyrene	2023/02/14		100	%	50 - 150
			D12-Perylene	2023/02/14		98	%	50 - 150
			D14-Dibenzo(a,h)anthracene	2023/02/14		96	%	50 - 150
			D8-Acenaphthylene	2023/02/14		88	%	50 - 150
			D8-Naphthalene	2023/02/14		88	%	50 - 150
			Benzo(a)pyrene	2023/02/14	<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.



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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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: 2023/03/09

Report #: R7539406 Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C352665 Received: 2023/02/23, 12:09

Sample Matrix: Puf And Filter # Samples Received: 5

		Date	Date		
Analyses	Quantity	Extracted	Analyzed	Laboratory Method	Analytical Method
Calculated Polyaromatic Hydrocarbons	5	2023/02/23	2023/03/08	BRL SOP-00201	
PAH's in MM5 SamplingTrains (CARB429mod) (1)	5	2023/02/24	2023/03/07	' BRL SOP-00201	CARB429(ARBM1,M2)mod
Air Volume from HiVol Sampling	5	N/A	2023/02/23		

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 09 Mar 2023 09:13:04

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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> Total Cover Pages: 1 Page 1 of 8



Report Date: 2023/03/09

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		VDB207	VDB208	VDB209	VDB210	
Sampling Date		2023/02/17	2023/02/17	2023/02/17	2023/02/17	
COC Number		n/a	n/a	n/a	n/a	
	UNITS	EAST PAH 17-FEB	NORTH PAH 17-FEB	OLD WEST PAH	SOUTH PAH 17-FEB	QC Batch
		PUF#1	PUF#2	17-FEB PUF#3	PUF#4	
Volume	m3	PUF#1 324.6	301.0	331.6	309.7	ONSITE

Bureau Veritas ID		VDB212				
Sampling Date		2023/02/17				
COC Number		n/a				
	UNITS	STN29164 17-FEB PUF#6	QC Batch			
Volume	m3	324.5	ONSITE			
QC Batch = Quality Control Batch						



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		VDB207	VDB208	VDB209		
Sampling Date		2023/02/17	2023/02/17	2023/02/17		
COC Number		n/a	n/a	n/a		
	UNITS	EAST PAH 17-FEB PUF#1	NORTH PAH 17-FEB PUF#2	OLD WEST PAH 17-FEB PUF#3	RDL	QC Batch
Benzo(a)pyrene	ug	0.40	0.10	<0.10	0.10	8520431
Surrogate Recovery (%)					•	
D10-2-Methylnaphthalene	%	82	70	80		8520431
D10-Anthracene	%	98	100	102		8520431
D10-Fluoranthene	%	94	96	96		8520431
D10-Fluorene (FS)	%	80	78	84		8520431
D10-Phenanthrene	%	86	88	88		8520431
D12-Benzo(a)anthracene	%	100	96	98		8520431
D12-Benzo(a)pyrene	%	86	86	84		8520431
D12-Benzo(b)fluoranthene	%	104	102	102		8520431
D12-Benzo(ghi)perylene	%	96	94	92		8520431
D12-Benzo(k)fluoranthene	%	92	88	90		8520431
D12-Chrysene	%	94	92	92		8520431
D12-Indeno(1,2,3-cd)pyrene	%	94	90	90		8520431
D12-Perylene	%	96	94	94		8520431
D14-Dibenzo(a,h)anthracen	%	92	84	84		8520431
D14-Terphenyl (FS)	%	84	86	86		8520431
D8-Acenaphthylene	%	100	88	96		8520431
D8-Naphthalene	%	76	68	78		8520431

RDL = Reportable Detection Limit

QC Batch = Quality Control Batch



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		VDB210	VDB212		
Sampling Date		2023/02/17	2023/02/17		
COC Number		n/a	n/a		
	UNITS	SOUTH PAH 17-FEB PUF#4	STN29164 17-FEB PUF#6	RDL	QC Batch
Benzo(a)pyrene	ug	0.36	<0.10	0.10	8520431
Surrogate Recovery (%)					•
D10-2-Methylnaphthalene	%	82	74		8520431
D10-Anthracene	%	102	94		8520431
D10-Fluoranthene	%	94	92		8520431
D10-Fluorene (FS)	%	86	74		8520431
D10-Phenanthrene	%	90	82		8520431
D12-Benzo(a)anthracene	%	108	90		8520431
D12-Benzo(a)pyrene	%	96	84		8520431
D12-Benzo(b)fluoranthene	%	110	96		8520431
D12-Benzo(ghi)perylene	%	100	88		8520431
D12-Benzo(k)fluoranthene	%	98	84		8520431
D12-Chrysene	%	100	86		8520431
D12-Indeno(1,2,3-cd)pyrene	%	100	84		8520431
D12-Perylene	%	104	90		8520431
D14-Dibenzo(a,h)anthracen	%	94	78		8520431
D14-Terphenyl (FS)	%	86	80		8520431
D8-Acenaphthylene	%	94	88		8520431
D8-Naphthalene	%	78	70		8520431
RDL = Reportable Detection I	imit				

QC Batch = Quality Control Batch



Client Project #: RAIN CARBON CANADA INC

Your P.O. #: 32669 Sampler Initials: RH

CALCULATED SEMIVOLATILE ORGANICS (PUF AND FILTER)

Bureau Veritas ID		VDB207		VDB208		VDB209		
Sampling Date		2023/02/17		2023/02/17		2023/02/17		
COC Number		n/a		n/a	n/a			
	UNITS	EAST PAH 17-FEB PUF#1	RDL	NORTH PAH 17-FEB PUF#2	RDL	OLD WEST PAH 17-FEB PUF#3	RDL	QC Batch
Benzo(a)pyrene	ng/m3	1.23	0.31	0.33	0.33	<0.30	0.30	8518892

RDL = Reportable Detection Limit QC Batch = Quality Control Batch

Bureau Veritas ID		VDB210		VDB212		
Sampling Date		2023/02/17		2023/02/17		
COC Number		n/a		n/a		
	UNITS	SOUTH PAH 17-FEB PUF#4	RDL	STN29164 17-FEB PUF#6	RDL	QC Batch
Benzo(a)pyrene	ng/m3	1.16	0.32	<0.31	0.31	8518892

RDL = Reportable Detection Limit QC Batch = Quality Control Batch



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

GENERAL COMMENTS

Results relate only to the items tested.



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
8520431	CTC	Spiked Blank	D10-2-Methylnaphthalene	2023/03/06		78	%	50 - 150
			D10-Fluoranthene	2023/03/06		98	%	50 - 150
			D10-Phenanthrene	2023/03/06		88	%	50 - 150
			D12-Benzo(a)anthracene	2023/03/06		100	%	50 - 150
			D12-Benzo(a)pyrene	2023/03/06		98	%	50 - 150
			D12-Benzo(b)fluoranthene	2023/03/06		106	%	50 - 150
			D12-Benzo(ghi)perylene	2023/03/06		102	%	50 - 150
			D12-Benzo(k)fluoranthene	2023/03/06		94	%	50 - 150
			D12-Chrysene	2023/03/06		94	%	50 - 150
			D12-Indeno(1,2,3-cd)pyrene	2023/03/06		100	%	50 - 150
			D12-Perylene	2023/03/06		102	%	50 - 150
			D14-Dibenzo(a,h)anthracene	2023/03/06		94	%	50 - 150
			D8-Acenaphthylene	2023/03/06		94	%	50 - 150
			D8-Naphthalene	2023/03/06		76	%	50 - 150
			Benzo(a)pyrene	2023/03/06		85	%	50 - 150
8520431	CTC	RPD	Benzo(a)pyrene	2023/03/06	0		%	50
8520431	CTC	Method Blank	D10-2-Methylnaphthalene	2023/03/06		78	%	50 - 150
			D10-Fluoranthene	2023/03/06		98	%	50 - 150
			D10-Phenanthrene	2023/03/06		86	%	50 - 150
			D12-Benzo(a)anthracene	2023/03/06		104	%	50 - 150
			D12-Benzo(a)pyrene	2023/03/06		96	%	50 - 150
			D12-Benzo(b)fluoranthene	2023/03/06		112	%	50 - 150
			D12-Benzo(ghi)perylene	2023/03/06		98	%	50 - 150
			D12-Benzo(k)fluoranthene	2023/03/06		98	%	50 - 150
			D12-Chrysene	2023/03/06		100	%	50 - 150
			D12-Indeno(1,2,3-cd)pyrene	2023/03/06		92	%	50 - 150
			D12-Perylene	2023/03/06		104	%	50 - 150
			D14-Dibenzo(a,h)anthracene	2023/03/06		86	%	50 - 150
			D8-Acenaphthylene	2023/03/06		92	%	50 - 150
			D8-Naphthalene	2023/03/06		76	%	50 - 150
			Benzo(a)pyrene	2023/03/06	<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.



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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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: 2023/02/21

Report #: R7517302 Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C338216 Received: 2023/02/08, 12:49

Sample Matrix: Air # Samples Received: 6

		Date	Date		
Analyses	Quantity	Extracted	Analyzed	Laboratory Method	Analytical Method
Canister Pressure (TO-15)	6	N/A	2023/02/14	BRL SOP-00304	EPA TO-15 m
Volatile Organics in Air (TO-15) (1)	6	N/A	2023/02/14	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



Bureau Veritas

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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> Total Cover Pages: 1 Page 1 of 7



Client Project #: RAIN CARBON CANADA INC

Your P.O. #: 32669 Sampler Initials: RH

RESULTS OF ANALYSES OF AIR

Bureau Veritas ID		VAA970	VAA971	VAA972	VAA974					
Sampling Date		2023/02/05	2023/02/05	2023/02/05	2023/02/05					
COC Number		na	na	na	na					
	UNITS	EAST VOC 05-FEB 14244	NORTH VOC 05-FEB 32589	OLD WEST VOC 05-FEB 2818	SOUTH VOC-DUPLICATE 05-FEB 35570	QC Batch				
Pressure on Receipt	psig	(-2.2)	(-4.5)	(-2.7)	(-9.2)	8506147				
QC Batch = Quality Contro	QC Batch = Quality Control Batch									

Bureau Veritas ID		VAA975	VAA976	
Sampling Date		2023/02/05	2023/02/05	
COC Number		na	na	
	UNITS	NEW WEST VOC 05-FEB 1259	STN29164 24-JAN 2768	QC Batch
D		(2 0)	(-1.4)	8506147
Pressure on Receipt	psig	(-3.0)	(-1.4)	8300147



Report Date: 2023/02/21

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		VAA970			VAA971				
Sampling Date		2023/02/05			2023/02/05				
COC Number		na			na				
	UNITS	EAST VOC 05-FEB 14244	ug/m3	DL (ug/m3)	NORTH VOC 05-FEB 32589	RDL	ug/m3	DL (ug/m3)	QC Batch
Benzene	ppbv	14.6	46.6	0.319	2.28	0.10	7.29	0.319	8503098
Surrogate Recovery (%)			-				•		
Bromochloromethane	%	100	N/A	N/A	93		N/A	N/A	8503098
D5-Chlorobenzene	%	83	N/A	N/A	83		N/A	N/A	8503098
Difluorobenzene	%	93	N/A	N/A	93		N/A	N/A	8503098

RDL = Reportable Detection Limit

QC Batch = Quality Control Batch

N/A = Not Applicable

Bureau Veritas ID		VAA972				VAA974				
Sampling Date		2023/02/05				2023/02/05				
COC Number		na				na				
	UNITS	OLD WEST VOC 05-FEB 2818	RDL	ug/m3	DL (ug/m3)	SOUTH VOC-DUPLICATE 05-FEB 35570	RDL	ug/m3	DL (ug/m3)	QC Batch
Benzene	ppbv	0.31	0.10	0.986	0.319	<0.29	0.29	<0.926	0.926	8503098
Surrogate Recovery (%)	•		•	•				•		
Bromochloromethane	%	100		N/A	N/A	99		N/A	N/A	8503098
D5-Chlorobenzene	%	88		N/A	N/A	87		N/A	N/A	8503098
Difluorobenzene	%	100		N/A	N/A	100		N/A	N/A	8503098

RDL = Reportable Detection Limit

QC Batch = Quality Control Batch

N/A = Not Applicable



Client Project #: RAIN CARBON CANADA INC

Your P.O. #: 32669 Sampler Initials: RH

VOLATILE ORGANICS BY GC/MS (AIR)

Bureau Veritas ID		VAA975			VAA976				
Sampling Date		2023/02/05			2023/02/05				
COC Number		na			na				
	UNITS	NEW WEST VOC 05-FEB 1259	ug/m3	DL (ug/m3)	STN29164 24-JAN 2768	RDL	ug/m3	DL (ug/m3)	QC Batch
Benzene	ppbv	0.28	0.895	0.319	0.38	0.10	1.23	0.319	8503098
Surrogate Recovery (%)	•								
Bromochloromethane	%	99	N/A	N/A	94		N/A	N/A	8503098
Bromochloromethane D5-Chlorobenzene	% %	99 86	N/A N/A	N/A N/A	94 87		N/A N/A	N/A N/A	8503098 8503098

RDL = Reportable Detection Limit

QC Batch = Quality Control Batch

N/A = Not Applicable



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

GENERAL COMMENTS

Sample VAA974 [SOUTH VOC-DUPLICATE 05-FEB 35570] : Sample was pressurized due to high vacuum in can. The DL's were adjusted accordingly.

Results relate only to the items tested.



Report Date: 2023/02/21

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
8503098	NS2	Spiked Blank	Bromochloromethane	2023/02/14		108	%	60 - 140
			D5-Chlorobenzene	2023/02/14		98	%	60 - 140
			Difluorobenzene	2023/02/14		103	%	60 - 140
			Benzene	2023/02/14		106	%	70 - 130
8503098	NS2	Method Blank	Bromochloromethane	2023/02/14		98	%	60 - 140
			D5-Chlorobenzene	2023/02/14		86	%	60 - 140
			Difluorobenzene	2023/02/14		98	%	60 - 140
			Benzene	2023/02/14	<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.



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:

Hulanie Mabri	
Melanie Mabini, Team Leader	

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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: 2023/03/08

Report #: R7537866 Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C352802 Received: 2023/02/23, 12:09

Sample Matrix: Air # Samples Received: 7

		Date	Date		
Analyses	Quantity	/ Extracted	Analyzed	Laboratory Method	Analytical Method
Canister Pressure (TO-15)	7	N/A	2023/02/28	3 BRL SOP-00304	EPA TO-15 m
Volatile Organics in Air (TO-15) (1)	7	N/A	2023/02/28	3 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 08 Mar 2023 08:20:00

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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for Ontario Environmental laboratory operations.



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

Sampler Initials: RH

RESULTS OF ANALYSES OF AIR

Bureau Veritas ID		VDB833	VDB834	VDB835	VDB836	
Sampling Date		2023/02/17	2023/02/17	2023/02/17	2023/02/17	
COC Number		NA	NA	NA	NA	
	UNITS	EAST VOC 17-FEB 14545	NORTH VOC 17-FEB 14118	OLD WEST VOC 17-FEB 27647	SOUTH VOC 17-FEB 143	QC Batch
Pressure on Receipt	psig	(-3.0)	(-4.9)	(-2.6)	(-3.7)	8528359
QC Batch = Quality Cont	rol Batch					

Bureau Veritas ID		VDB837	VDB838	VDB840						
Sampling Date		2023/02/17	2023/02/17	2023/02/17						
COC Number		NA	NA	NA						
	UNITS	SOUTH VOC-DUPLICATE 17-FEB 18244	NEW WEST VOC 17-FEB 1240	STN29164 17-FEB 2774	QC Batch					
Pressure on Receipt	psig	(-4.5)	(-3.4)	(-2.9)	8528359					
QC Batch = Quality Contr	QC Batch = Quality Control Batch									



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

Your P.O. #: 32669 Sampler Initials: RH

VOLATILE ORGANICS BY GC/MS (AIR)

Bureau Veritas ID		VDB833			VDB833				
Sampling Date		2023/02/17			2023/02/17				
COC Number		NA			NA				
	UNITS	EAST VOC 17-FEB 14545	ug/m3	DL (ug/m3)	EAST VOC 17-FEB 14545 Lab-Dup	RDL	ug/m3	DL (ug/m3)	QC Batch
Benzene	ppbv	3.06	9.79	0.319	3.06	0.10	9.76	0.319	8525779
Surrogate Recovery (%)									
Bromochloromethane	%	85	N/A	N/A	84		N/A	N/A	8525779
D5-Chlorobenzene	%	90	N/A	N/A	91		N/A	N/A	8525779
Difluorobenzene	%	83	N/A	N/A	82		N/A	N/A	8525779

RDL = Reportable Detection Limit

QC Batch = Quality Control Batch

Lab-Dup = Laboratory Initiated Duplicate

N/A = Not Applicable

Bureau Veritas ID		VDB834			VDB835				
Sampling Date		2023/02/17			2023/02/17				
COC Number		NA			NA				
	UNITS	NORTH VOC 17-FEB 14118	ug/m3	DL (ug/m3)	OLD WEST VOC 17-FEB 27647	RDL	ug/m3	DL (ug/m3)	QC Batch
Benzene	ppbv	0.68	2.17	0.319	0.40	0.10	1.28	0.319	8525779
Surrogate Recovery (%)	•		•						
Bromochloromethane	%	85	N/A	N/A	82		N/A	N/A	8525779
D5-Chlorobenzene	%	89	N/A	N/A	90		N/A	N/A	8525779
Difluorobenzene	%	83	N/A	N/A	81		N/A	N/A	8525779

RDL = Reportable Detection Limit

QC Batch = Quality Control Batch

N/A = Not Applicable



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		VDB836			VDB837				
Sampling Date		2023/02/17			2023/02/17				
COC Number		NA			NA				
	UNITS	SOUTH VOC 17-FEB 143	ug/m3	DL (ug/m3)	SOUTH VOC-DUPLICATE 17-FEB 18244	RDL	ug/m3	DL (ug/m3)	QC Batch
Benzene	ppbv	7.92	25.3	0.319	7.53	0.10	24.0	0.319	8525779
Surrogate Recovery (%)			*	-		•	•	•	
Bromochloromethane	%	81	N/A	N/A	82		N/A	N/A	8525779
D5-Chlorobenzene	%	88	N/A	N/A	79		N/A	N/A	8525779
Difluorobenzene	%	79	N/A	N/A	81		N/A	N/A	8525779
RDL = Reportable Detection QC Batch = Quality Control N/A = Not Applicable			•			•			•

Bureau Veritas ID		VDB838			VDB840				
Sampling Date		2023/02/17			2023/02/17				
COC Number		NA			NA				
	UNITS	NEW WEST VOC 17-FEB 1240	ug/m3	DL (ug/m3)	STN29164 17-FEB 2774	RDL	ug/m3	DL (ug/m3)	QC Batch
Benzene	ppbv	0.32	1.02	0.319	0.25	0.10	0.803	0.319	8525779
Surrogate Recovery (%)									
Bromochloromethane	%	85	N/A	N/A	82		N/A	N/A	8525779
D5-Chlorobenzene	%	93	N/A	N/A	85		N/A	N/A	8525779
Difluorobenzene	%	83	N/A	N/A	80		N/A	N/A	8525779

RDL = Reportable Detection Limit

QC Batch = Quality Control Batch

N/A = Not Applicable



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

GENERAL COMMENTS

Results relate only to the items tested.



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
8525779	DVP	Spiked Blank	Bromochloromethane	2023/02/28		115	%	60 - 140
			D5-Chlorobenzene	2023/02/28		122	%	60 - 140
			Difluorobenzene	2023/02/28		115	%	60 - 140
			Benzene	2023/02/28		96	%	70 - 130
8525779	DVP	Method Blank	Bromochloromethane	2023/02/28		109	%	60 - 140
			D5-Chlorobenzene	2023/02/28		116	%	60 - 140
			Difluorobenzene	2023/02/28		109	%	60 - 140
			Benzene	2023/02/28	<0.10		ppbv	
8525779	DVP	RPD [VDB833-01]	Benzene	2023/02/28	0.24		%	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.



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:

Anke Macfarlane, Laboratory Manager, VOC

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APPENDIX E

Field Notes



Station : East

Location : 725 Strathearne Avenue N, Hamilton

Period : 01 January, to 31 March 2023

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 m³)	Sample Duration (21.6 - 26.4 Hrs)	Technician Initial	Comments
12-Jan-23	PUF #1	UPL435-01	11-Jan-23	38	3534.87	38	3559.10	13-Jan-23	346.5	24.23	RH	
12-3411-23	UPL436-01	UFL433-01	15:00	36	3334.67	36	3339.10	15:14	340.3	24.23	KII	
24-Jan-23	PUF #1	UPL682-01	23-Jan-23	38	3559.10	38	3582.40	25-Jan-23	334.7	23.30	RH	
24-3411-23	UPL683-01	01 2002-01	15:35	30	3339.10	30	3302.40	10:30	304.7	25.50	IXII	
05-Feb-23	PUF #1	UPLE912-01	02-Feb-23	38	3582.41	40	3605.77	07-Feb-23	336.4	23.36	RH	
03-Feb-23	UPL913-01	OI LL312-01	16:00	30	3302.41	40	3003.77	12:24	330.4	25.50	IXII	
17-Feb-23	PUF #1	UUS032-01	15-Feb-23	38	3605.84	42	3629.12	22-Feb-23	324.6	23.28	RG/RH	
17-1 60-23	UUS033-01	003032-01	12:00	30	3003.04	42	3029.12	09:30	324.0	25.20	NO/NT	
01-Mar-23	PUF #1	UUS165-01								0.00		
01-Wai-25	UUS166-01	000100-01								0.00		
13-Mar-23	PUF #1									0.00		
13-Wai-23										0.00		
25-Mar-23	PUF #1									0.00		
25-IVIAI -23										0.00		



Station : North

Location : 725 Strathearne Avenue N, Hamilton

Period : 01 January, to 31 March 2023

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 m³)	Sample Duration (21.6 - 26.4 Hrs)	Technician Initial	Comments
12-Jan-23	PUF #2	UPL435-01	11-Jan-23	38	1715.63	38	1739.23	13-Jan-23	312.1	23.60	RH	
12-3411-23	UPL437-01	UFL433-01	15:30	36	17 15.05	36	1739.23	15:25	312.1	23.00	KII	
24-Jan-23	PUF #2	UPL682-01	23-Jan-23	38	1739.24	38	1762.56	25-Jan-23	310.1	23.32	RH	
24-3411-23	UPL684-01	01 2002-01	15:50	30	1739.24	30	1702.50	10:35	310.1	25.52	IXII	
05-Feb-23	PUF #2	UPLE912-01	02-Feb-23	38	1762.59	38	1785.97	07-Feb-23	308.9	23.38	RH	
03-Feb-23	UPL914-01	OI LL312-01	16:15	30	1702.09	30	1705.97	12:45	300.9	25.50	IXII	
17-Feb-23	PUF #2	UUS032-01	15-Feb-23	38	1786.04	38	1809.30	22-Feb-23	301.0	23.26	RG/RH	
17-1 60-23	UUS034-01	003032-01	13:15	30	1700.04		1009.00	10:00	301.0	25.20	NO/NT	
01-Mar-23	PUF #2	UUS165-01								0.00		
01-Wai-25	UUS167-01	000100-01								0.00		
13-Mar-23	PUF #2									0.00		
13-Wai-23										0.00		
25-Mar-23	PUF #2									0.00		
29-IVIdI -23										0.00		



Station : Old West

Location : 725 Strathearne Avenue N, Hamilton

Period : 01 January, to 31 March 2023

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 m³)	Sample Duration (21.6 - 26.4 Hrs)	Technician Initial	Comments
12-Jan-23	PUF #3	UPL435-01	11-Jan-23	38	3428.99	40	3452.51	13-Jan-23	328.1	23.52	RH	
12-3411-23	UPL438-01	0FL433-01	17:00	36	3420.99	40	3432.31	16:30	320.1	23.32	KII	
24-Jan-23	PUF #3	UPL682-01	23-Jan-23	38	3452.51	40	3476.26	25-Jan-23	344.6	23.75	RH	
24-Jan-23	UPL685-01	01 2002-01	16:30	30	3432.31	40	3470.20	11:40	344.0	25.75	IXII	
05-Feb-23	PUF #3	UPLE912-01	02-Feb-23	38	3476.26	40	3500.04	07-Feb-23	337.1	23.78	RH	
05-Feb-23	UPL915-01	OF LES 12-01	17:15	36	3470.20	40	3300.04	14:47	337.1	23.70	KII	
17-Feb-23	PUF #3	UUS032-01	15-Feb-23	38	3500.08	40	3523.78	22-Feb-23	331.6	23.70	RG/RH	
17-1 60-23	UUS035-01	003032-01	11:45	30	3300.00	40	3323.70	11:10	331.0	25.70	NO/NT	
01-Mar-23	PUF #3	UUS165-01								0.00		
01-Wai-23	UUS168-01	000100-01								0.00		
13-Mar-23	PUF #3									0.00		
13-Wai-23										0.00		
25-Mar-23	PUF #3									0.00		
23-IVIAI -23										0.00		



Station : South

Location : 725 Strathearne Avenue N, Hamilton

Period : 01 January, to 31 March 2023

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 m³)	Sample Duration (21.6 - 26.4 Hrs)	Technician Initial	Comments
12-Jan-23	PUF #4	UPL435-01	11-Jan-23	38	3358.60	38	3381.52	13-Jan-23	321.1	22.92	RH	
12-0411-25	UPL439-01	01 L430-01	16:00	30	3330.00	30	3301.32	15:45	321.1	22.92	IXII	
24-Jan-23	PUF #4	UPL682-01	22-Jan-23	38	3381.52	40	3404.44	25-Jan-23	323.3	22.92	RH	
24-Jaii-23	UPL686-01	OF L002-01	16:00	36	3301.32	40	3404.44	11:00	323.3	22.92	KII	
05-Feb-23	PUF #4	UPLE912-01	02-Feb-23	38	3404.44	40	3427.37	07-Feb-23	324.4	22.93	RH	
U5-FED-23	UPL916-01	UPLE912-01	16:30	36	3404.44	40	3427.37	12:50	324.4	22.93	КП	
17-Feb-23	PUF #4	UUS032-01	15-Feb-23	38	3427.45	40	3450	22-Feb-23	309.7	22.92	RG/RH	
17-Feb-23	UUS036-01	005032-01	12:45	36	3427.45	40	3450	10:20	309.7	22.92	RG/RH	
01-Mar-23	PUF #4	UUS165-01								0.00		
U1-War-23	UUS169-01	005165-01								0.00		
42 May 22	PUF #4									0.00		
13-Mar-23										0.00		
05.1400	PUF #4									0.00		
25-Mar-23									1	0.00		
									1			



Station : New West

Location : 725 Strathearne Avenue N, Hamilton

Period : 01 January, to 31 March 2023

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 m³)	Sample Duration (21.6 - 26.4 Hrs)	Technician Initial	Comments
12-Jan-23	PUF #5	UPL435-01	11-Jan-23	38	3051.29	38	3074.25	13-Jan-23	314.8	22.96	RH	
12-3411-23	UPL440-01	0FL433-01	16:40	36	3031.29	36	3074.23	16:10	314.0	22.90	KII	
24-Jan-23	PUF #5	UPL682-01	23-Jan-23	38	3074.25	38	3098.05	25-Jan-23	328.6	23.80	RH	
24-3411-23	UPL687-01	01 2002-01	16:15	30	3074.23	30	3090.03	11:15	320.0	25.00	101	
05-Feb-23	PUF #5	UPLE912-01	02-Feb-23	38	3098.06	40	3122.15	07-Feb-23	333.7	24.09	RH	
05-Feb-23	UPL917-01	OF LES 12-01	17:00	36	3098.00	40	3122.13	14:30	333.7	24.09	KII	
17-Feb-23	PUF #5	UUS032-01	15-Feb-23	38	3122.20	40	3122.20	22-Feb-23	0.0	0.00	RG/RH	DO NOT ANALYZE
17-1 60-23	UUS037-01	003032-01	11:15	30	3122.20	40	3122.20	10:45	0.0	0.00	NO/NIT	DO NOT ANALTZE
01-Mar-23	PUF #5	UUS165-01								0.00		
01-Wai-25	UUS170-01	000100-01								0.00		
13-Mar-23	PUF #5									0.00		
13-Wai-23										0.00		
25-Mar-23	PUF #5									0.00		
29-IVIdI -23										0.00		



Station : 29164

Location : Eastport Drive, Hamilton

Period : 01 January, to 31 March 2023

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 m³)	Sample Duration (21.6 - 26.4 Hrs)	Technician Initial	Comments
12-Jan-23	PUF #6	UPL435-01	11-Jan-23	40	1102.00	39	1126.09	13-Jan-23	330.7	24.09	SS	
12-3411-23	UPL447-01	UFL433-01	10:00	40	1102.00	39	1120.09	10:30	330.7	24.09	33	
24-Jan-23	PUF #6	UPL682-01	24-Jan-23	40	1126.09	39	1149.89	25-Jan-23	329.3	23.80	SS	
24-3411-23	UPL694-01	01 2002-01	10:30	40	1120.09	39	1149.09	11:30	329.3	25.00	00	
05-Feb-23	PUF #6	UPLE912-01	04-Feb-23	39	1149.99	40	1171.84	06-Feb-23	299.5	21.85	SS	
03-Feb-23	UPL924-01	OI LL312-01	11:30	33	1149.99	40	1171.04	10:30	299.5	21.03	00	
17-Feb-23	PUF #6	UUS032-01	16-Feb-23	40	1171.84	40	1195.78	21-Feb-23	324.5	23.94	SS	
17-1 60-23	UUS044-01	003032-01	14:45	40	1171.04	40	1195.70	12:00	324.3	20.94	00	
01-Mar-23	PUF #6	UUS165-01								0.00		
01-Wai-25	UUS177-01	000100-01								0.00		
13-Mar-23	PUF #6									0.00		
13-Wai-23										0.00		
25-Mar-23	PUF #6									0.00		
29-IVIdI -23										0.00		



Station : East

Location: 725 Strathearne Avenue N, Hamilton

Period : 01 January, to 31 March 2023

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
12-Jan-23	14242	11-Jan-23		-30.0		-8.0	13-Jan-23			RH		
12-3011-23	14242	15:05		-30.0		-0.0	15:15			IXII		
12-Jan-23	119	11-Jan-23		-30.0		-16.0	13-Jan-23			RH		Duplicate
12-5411-25	113	15:15		-50.0		-10.0	15:20			TATI		Buplicate
24-Jan-23	118	23-Jan-23		-30.0		-7.0	25-Jan-23			RH		
24-0uii-20	110	15:40		-50.0		-7.0	10:30			TATI		
05-Feb-23	14294	02-Feb-23		-30.0		-7.0	07-Feb-23			RH		
00-1 05-20	14254	16:20		-50.0		-7.0	12:30			IXII		
17-Feb-23	14545	15-Feb-23		-29.5		-8.0	22-Feb-23			RG/RH		
17-1 05-20	14040	12:00		-23.5		-0.0	09:35			110/1111		
01-Mar-23												
13-Mar-23												
25-Mar-23												



Station : North

Location: 725 Strathearne Avenue N, Hamilton

Period : 01 January, to 31 March 2023

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
12-Jan-23	18252	11-Jan-23		-30.0		-13.0	13-Jan-23			RH		
12-3411-23	10232	15:30		-30.0		-13.0	15:30			IXII		
24-Jan-23	7802	23-Jan-23		-30.0		-13.0	25-Jan-23			RH		
24-3411-23	7002	15:50		-30.0		-13.0	10:40			IXII		
05-Feb-23	32589	02-Feb-23		-30.0		-11.5	07-Feb-23			RH		
00-1 00-20	32303	17:30					12:45					
17-Feb-23	14118	15-Feb-23		-29.5		-12.0	22-Feb-23			RG/RH		
1110020	11110	13:15		20.0		12.0	10:05					
01-Mar-23												
13-Mar-23												
25-Mar-23												



Station : Old West

Location: 725 Strathearne Avenue N, Hamilton

Period : 01 January, to 31 March 2023

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
12-Jan-23	7866	11-Jan-23		-29.5		-9.5	13-Jan-23			RH		
12-3411-23	7000	17:10		-29.5		-9.5	16:30			KH		
24-Jan-23	24174	23-Jan-23		-28.5		-8.5	25-Jan-23			RH		
24-Jan-23	24174	16:40		-20.5		-0.5	11:45			NII		
05-Feb-23	2818	02-Feb-23		-28.0		-8.5	07-Feb-23			RH		
03-1 65-23	2010	17:30					14:50					
17-Feb-23	27647	15-Feb-23		-29.0		-8.5	22-Feb-23			RG/RH		
17-1 05-20	21041	11:45					11:15			TO/TO		
01-Mar-23												
13-Mar-23												
25-Mar-23												



Station : South

Location: 725 Strathearne Avenue N, Hamilton

Period : 01 January, to 31 March 2023

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
12-Jan-23	1260	11-Jan-23		-28.5		-6.0	13-Jan-23			RH		
12-0411-25	1200	16:15		-20.5		-0.0	15:30			IXII		
12-Jan-23	318	11-Jan-23		-29.5		-6.0	13-Jan-23			RH		Duplicate
12-5411-25	310	16:20		-29.5		-0.0	15:35			KΠ		Duplicate
24-Jan-23	7914	23-Jan-23		-28.5		-6.5	25-Jan-23			RH		
24-Jan-23	7914	16:05		-20.5		-0.5	11:10			INII		
05-Feb-23	2599	02-Feb-23		-28.0		0.0	07-Feb-23			RH		Canister pressure had increased to - 12 " Hg from initial - 30 " Hg at 12 pm February 3, 2023 due to unsuccessful tightening of
05-Feb-25	2399	17:10					13:05			INII		fittings on February 2, 2023. Duplicate sampler installed.
05-Feb-23	35570	03-Feb-22		-30.0		-20.0	07-Feb-23			RH		Duplicate
03-1 65-23	33370	11:10					13:00			IXII		Duplicate
17-Feb-23	143	15-Feb-23		-29.0		-9.5	22-Feb-23			RG/RH		
17-Feb-23	143	12:30		-29.0		-9.5	10:23		KG/KH	KG/KIT		
17-Feb-23	18244	15-Feb-23		-29.0		-11.0	22-Feb-23			RG/RH		Duplicate
11-1 60-23	10244	12:30		-23.0		-11.0	10:25			NO/NIT		Duplicate
01-Mar-23												



Station : New West

Location: 725 Strathearne Avenue N, HamiltonPeriod: 01 January, to 31 March 2023

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
12-Jan-23	18236	11-Jan-23		-28.0		-9.0	13-Jan-23			RH		
12-3411-23	10230	16:50		-20.0		-9.0	16:10			IXII		
24-Jan-23	14514	23-Jan-23		-28.0		-9.0	25-Jan-23			RH		
24-3411-23	14014	16:20		-20.0		-9.0	11:30			KII		
05-Feb-23	1259	02-Feb-23		-28.0		-8.5	07-Feb-23			RH		
00-1 05-20	1200	17:10		20.0			14:30			TAT		
17-Feb-23	1240	15-Feb-23		-27.5		-9.0	22-Feb-23			RG/RH		
17 1 00 20		11:13					10:55			110,7111		
01-Mar-23												
13-Mar-23												
25-Mar-23												



Station : 29164

Location : South Service Road

Period : 01 January, to 31 March 2023

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
12-Jan-23	14268	11-Jan-23		-28.0		-10.0	13-Jan-23		24.0	SS		
12-3411-23	14200	10:00		-20.0		-10.0	10:30		24.0	33		
24-Jan-23	2791	23-Jan-23		-28.0		-8.0	25-Jan-23		24.0	SS		
24-0uii-20	2731	10:30		-20.0		-0.0	11:30		24.0	35		
05-Feb-23	2768	05-Feb-23		-28.0		-6.5	06-Jan-23		24.0	ss		
00-1 00-20	2700	11:30					10:45		2	-		
17-Feb-23	2774	16-Feb-23		-29.0		-8.0	21-Feb-23		24.0	SS		
17-1 05-20	2114	12:00		-20.0		-0.0	11:00					
01-Mar-23									24.0			
13-Mar-23									24.0			
25-Mar-23									24.0			