

**REPORT**

# December 2025 Ambient Air Monitoring Report

*Rain Carbon Canada Inc.*

Submitted by:

**Rain Carbon Canada Inc.**

725 Strathearn Avenue North  
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January 2026

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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 eighty sixth monthly report submitted as part of the Rain Carbon ambient monitoring program and summarizes the measurements taken in December 2025.

The ambient air monitoring measurements for December 2025 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 also conducts monitoring for benzene and B(a)P monitoring off site at the HAMN station 29164.

This report includes the following information for measurements taken in December 2025:

- 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.
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## 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 two 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 conducted by Rain Carbon Canada Inc. personnel, and the laboratory analysis was conducted by Bureau Veritas Laboratories, which is ISO1702 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.



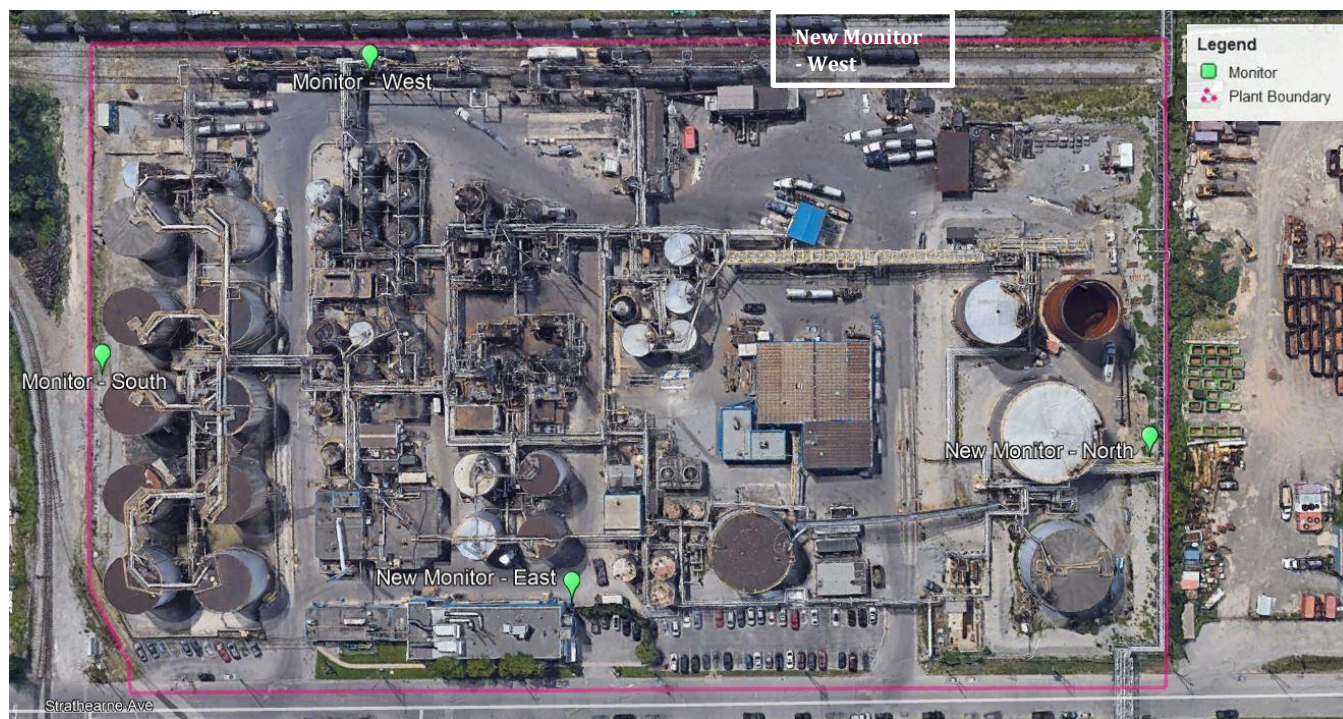


Figure 1: Monitor and Source Locations



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



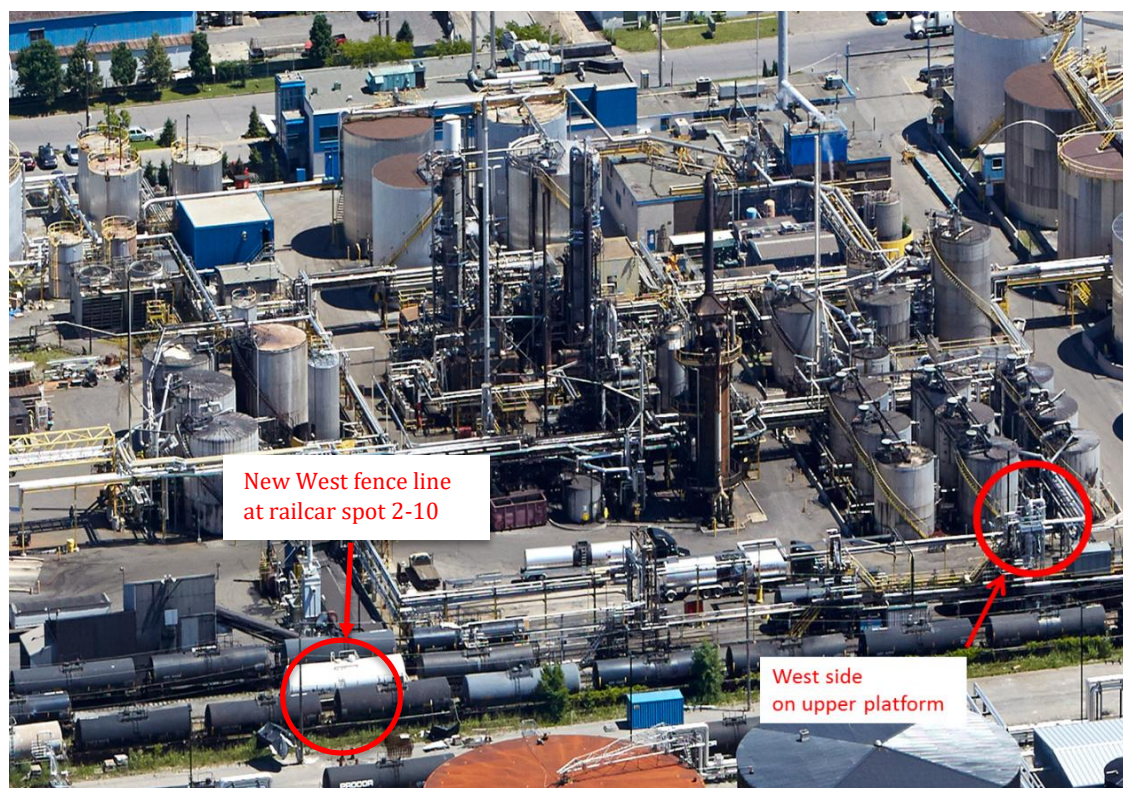


Figure 3: Monitor Locations on the West Side of the Facility



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<sup>3</sup> and 358.8 m<sup>3</sup> over 24 hours. The summa canister pressures on receipt and PUF filter total volumes are presented below in Tables 2 and 3.

For the December 2025 B(a)P monitoring results, all the recorded PUF volumes were inside the MECP specified range of between 293.6 m<sup>3</sup> and 358.8 m<sup>3</sup> over 24 hours.

All the summa canister pressures on receipt were within the MECP acceptable pressure of receipt of between -1.6 to -13.4 inches Hg except at the old west VOC monitor on the **Monday December 15 , 2025, MECP monitoring event** where we recorded a summa canister pressure on receipt of -28.0 inches Hg likely due to a VOC sampler timer internal valve failure.

The **old west VOC monitor sampler timer** was then operated again on the successful **Wednesday December 17, 2025, Old West Monitor Additional monitoring event**.

**Table 2: Summa Canister Pressures on Receipt (inches Hg)**

Monitoring Event Date	Benzene SUMMA Canister Pressure on Receipt (inches Hg)				New West	HAMN STN 29164
	East	North	Old West	South		
December 3	- 4.48*	- 4.07*	- 9.16	- 6.32	- 6.72	-7.13
December 15	-3.87*	-4.07*	<b>-28.00**</b>	-6.52	-6.32	-7.53
December 17 Old West Monitor Additional Monitoring Event	-	-	-5.70	-	-	-
December 27	-4.68*	-4.07*	-5.50	-6.52	-6.72	-6.92

\*Sample is acceptable as within the MECP acceptable pressure of receipt of between -1.6 to -13.4 inches Hg but outside the MECP recommended pressure on receipt range of - 5 to -10 inches Hg.

\*\* Sample is invalid as the Summa canister pressure on receipt was outside the MECP acceptable range of - 1.6 to -13.4 inches Hg.

**Table 3: PUF Filter Total Volumes**

<b>Monitoring Event Date</b>	<b>+B(a)P PUF Total Volume [m<sup>3</sup>]</b>					<b>HAMN STN 29164</b>
	<b>East</b>	<b>North</b>	<b>Old West</b>	<b>South</b>	<b>New West</b>	
December 3	334.0	335.0	334.0	312.0	329.0	342.4
December 15	346.2	331.0	341.6	327.6	330.4	343.8
December 27	343.3	343.6	344.7	333.5	323.2	341.8

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#### 4.0 SUMMARY OF BENZENE MEASUREMENTS

**Table 4: Summary of December 2025 Benzene Measurements**

Monitoring Event Date	Measured Concentration [ $\mu\text{g}/\text{m}^3$ ]					HAMN STN 29164
	East	North	Old West	South	New West	
December 3	14.8*	3.08*	1.39	0.593	0.767	1.99
December 15	7.09*	1.46*	Invalid sample**	0.727	0.453	0.697
December 17 Old West Monitor Additional Monitoring Event	-	-	1.55	--	--	-
December 27	3.12*	1.68*	4.48	25.2	2.55	0.462

\*Sample is acceptable as within the MECP acceptable pressure of receipt of between -1.6 to -13.4 inches Hg but outside the MECP recommended pressure on receipt range of - 5 to -10 inches Hg.

\*\* Sample is invalid as the Summa canister pressure on receipt was outside the MECP acceptable range of -1.6 to -13.4 inches Hg.

Three sets of valid benzene measurements at each monitor were taken in December 2025. The measurements range from 0.453  $\mu\text{g}/\text{m}^3$  to **25.2  $\mu\text{g}/\text{m}^3$  benzene**, with the highest value being detected at the **south monitor** during the **Saturday December 27, 2025, MECP Monitor monitoring event**.

All the benzene concentrations measured during the December 2025 MECP monitoring events were below the 24-hour Upper Risk Threshold (URT) of 100  $\mu\text{g}/\text{m}^3$  benzene.

## 5.0 SUMMARY OF B(a)P MEASUREMENTS.

**Table 5: Summary of December 2025 B(a)P Measurements.**

Monitoring Event Date	Measured Concentration [ $\mu\text{g}/\text{m}^3$ ]					HAMN STN 29164
	East	North	Old West	South	New West	
December 3	0.00058	0.00130	<b>0.00674*</b>	< 0.00032	0.00085	<0.00029
December 15	<b>0.0182*</b>	0.00072	<0.00029	<0.00031	<0.00030	<0.00029
December 27	<0.00029	<0.00030	<0.00029	<0.00031	<0.00030	0.00125

\*Above the 0.00430  $\mu\text{g}/\text{m}^3$  B(a)P Measured Level Threshold (MLT) and the 0.0050  $\mu\text{g}/\text{m}^3$  B(a)P 24-hr Upper Risk Threshold (URT).

Three sets of B(a)P measurements were taken in December 2025. The B(a)P measurements ranged from < 0.00029  $\mu\text{g}/\text{m}^3$  to **0.0182  $\mu\text{g}/\text{m}^3$  B(a)P**, with the highest value being detected at the **east monitor** during the **Monday December 15, 2025, monitoring event**. All the B(a)P measurements are summarized in Table 5 above, and copies of the laboratory analysis reports are provided in Appendix B.

The B(a)P concentrations of **0.00674  $\mu\text{g}/\text{m}^3$  B(a)P** measured at the old west monitor on the **Wednesday December 3, 2025, MECP monitoring event** and **0.0182  $\mu\text{g}/\text{m}^3$  B(a)P** measured at the east monitor on the **Monday December 15, 2025, MECP monitoring event** were both above the **0.00430  $\mu\text{g}/\text{m}^3$  B(a)P Measured Level Threshold (MLT)** which triggered the preparation of the December 2025 AML report.

These measurements were also above the **24-hr Upper Risk Threshold (URT) of 0.0050  $\mu\text{g}/\text{m}^3$  B(a)P** which required **Section 30 Notifications to the MECP**.

All the remaining B(a)P concentrations measured during the three December 2025 monitoring events were below the **0.0043  $\mu\text{g}/\text{m}^3$  Measured Level Threshold (MLT)** and below the **24-hr Upper Risk Threshold (URT) of 0.0050  $\mu\text{g}/\text{m}^3$  B(a)P**



## 6.0 CONCLUSIONS

The B(a)P concentrations of **0.00674  $\mu\text{g}/\text{m}^3$  B(a)P** measured at the old west monitor on the **Wednesday December 3, 2025, MECP monitoring event** and **0.0182  $\mu\text{g}/\text{m}^3$  B(a)P** measured at the east monitor on the **Monday December 15, 2025, MECP monitoring event** were both above the **0.00430  $\mu\text{g}/\text{m}^3$  B(a)P Measured Level Threshold (MLT)** which triggered the preparation of the December 2025 AML report. These measurements were also above the **24-hr Upper Risk Threshold (URT) of 0.0050  $\mu\text{g}/\text{m}^3$  B(a)P** which required Section 30 Notifications to the MECP.

All the remaining B(a)P concentrations measured during the three December 2025 monitoring events were below the **0.0043  $\mu\text{g}/\text{m}^3$  Measured Level Threshold (MLT)** and below the **24-hr Upper Risk Threshold (URT) of 0.0050  $\mu\text{g}/\text{m}^3$  B(a)P**

All the benzene concentrations measured during the three December 2025 MECP monitoring events were below the 24-hour Upper Risk Threshold (URT) of 100  $\mu\text{g}/\text{m}^3$  benzene.

All the summa canister pressures on receipt were within the MECP acceptable pressures of receipt of between -1.6 to -13.4 inches Hg except for at the old west VOC monitor on the **Monday December 15, 2025, MECP monitoring event** where we recorded a summa canister pressure on receipt of -28.0 inches Hg likely due to a VOC sampler timer internal valve failure.

The **old west VOC monitor** was operated again on the successful **Wednesday December 17, 2025, Old West Monitor Additional monitoring event**.

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## Signature Page

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**APPENDIX A**

# Monitoring Plan

APPENDIX B

Laboratory Analysis



**APPENDIX C**

# Chain of Custody Forms

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# Certificates of Analysis

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Field Notes