

REPORT

Environmental Management System and Community Engagement Report 2024.

Rain Carbon Canada Inc.

Submitted by Gord Gilmet

Rain Carbon Canada Inc.

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1.0 Introduction

Rain Carbon Canada Inc. (Rain Carbon) operates a coal tar and petroleum-based material processing facility located at 725 Strathearne Avenue N. in Hamilton, Ontario (the Facility). Coal tar from various sources are blended, distilled and fractionated into six fractions, which include light oil, tar acid oil, naphthalene oil, wash oil, heavy aromatic oil and coal tar pitch. These products, which are shipped from the Facility by tanker truck and rail car, are essential basic materials for the following downstream industries: aluminum, graphite products, refractory, chemicals, construction, wood preservation and automotive. These basic materials are processed further by other industries to make industrial products such as carbon electrodes, concrete superplasticizers, carbon black pigment and pavement sealer.

The primary processes utilized at the Facility include coal tar receiving, storage, distillation, product storage and shipping, fume gathering and incineration, fume scrubbing, natural gas combustion and wastewater collection and treatment. The Rain Carbon site spans 5 hectares.

1.1 Site-Specific Standards

Rain Carbon submitted Site-Specific Standard (SSS) Applications to the Ontario Ministry of the Environment, Conservation and Parks (MECP) for benzene and benzo(a)pyrene [B(a)P] to demonstrate compliance with Ontario Regulation (O. Reg.) 419/05 while continuing to reduce emissions as much as possible with technology-based solutions and best practices. The SSS for benzene and B(a)P were approved on November 21, 2017 (Reference Number 7856-9VDPSR) as summarized in Table 1 and expired on November 21, 2022.

Table 1: Summary of Benzene and B(a)P Site-Specific Standards

Contaminant, CAS Number	Applicable Dates	Annual Site-Specific Standard [$\mu\text{g}/\text{m}^3$]
B(a)P, 50-32-8	November 21, 2017 – December 31, 2017	0.062
	January 1, 2018 – June 30, 2018	0.0613
	July 1, 2018 – Nov 21, 2022	0.0008
Benzene, 71-43-2	November 21, 2017 – June 30, 2018	27.7
	July 1, 2018 – Nov 21, 2022	12.7

Rain Carbon was issued Site-Specific Standard (SSS) approvals in 2017 for benzene and benzo(a)pyrene [B(a)P] (Reference Number 7856-9VDPSR; Approval Numbers 201-17-rv0 and 202-17-rv0). The SSS expired on November 21, 2022, after which the Facility was operating under a bridging order (the Order) 1-134982315 issued December 14, 2022. The Order required the use of a new dispersion model CALPUFF, refinement of the ESDM Report and submission of a SSS Renewal Application and ECA Application to reflect the modifications documented in the Action Plan. The first submission of the Technological Benchmarking Report (TBR) and Action Plans were provided to the Ontario Ministry of the Environment, Conservation and Parks (MECP) in March 2023 as part of the SSS Renewal Application in May 2023. Also the site submitted an Abatement Plan to the MECP on May 18, 2023 covering TRS, naphthalene and SO₂.

1.2 Environmental Compliance Approval Number 7313-8KEN49 Notice No.1 November 17, 2022

This report is required to be prepared by the Facility's ECA 7313-8KEN49 Notice No 1 Nov 17 2022 Section 7 – Environmental Monitoring Team Subsection 6.

This Report is intended to include the following information with respect to the preceding calendar year (2024):

- i) Documentation of all complaints received by the Company relating to air emissions and the resolution of those complaints.
- ii) A written summary of the actions taken each calendar year to implement the Action Plan for benzene and B(a)P, including a description of each action taken, the date of implementation of each action taken and dates for the implementation of actions yet to be taken; and
- iii) The minutes of the Environmental Monitoring Team (EMT) meetings held during the calendar year and any related follow-up actions.

This Report will be made available for public inspection at the Facility during office hours and on the Rain Carbon website and will also be presented at the next EMT meeting after March 2025.

2.0 ENVIRONMENTAL MANAGEMENT SYSTEM

Rain Carbon is committed to the responsible management of its operations and products to ensure there is no unacceptable risk to employees, the public and the environment. They are committed to comply with all applicable environmental, legal and other requirements, including voluntary measures and air emission and wastewater limits. Rain Carbon is dedicated to pollution prevention by minimizing the environmental impact of their operations and products through spill prevention measures and waste minimisation. They strive to continually improve environmental performance through maintaining an effective Environmental Management System (EMS). Rain Carbon is certified to ISO 14001:2015 Environmental Management System.

2.1 Complaint Response Procedure

As part of their EMS, Rain Carbon has implemented a complaints response procedure to record and resolve complaints received from the public. There was one External Complaint on May 31, 2024 related to the FGI system venting during a vessel being loaded with Carbon Black Oil.

2.2 Abatement Plans for B(a)P, Benzene; Total Reduced Sulphur, Naphthalene and Sulphur Dioxide

An Abatement Plan for B(a)P and benzene was submitted to the MECP on May 20, 2022 and an Abatement Plan covering TRS, naphthalene and SO₂ was submitted to the MECP on May 18, 2023. These Abatement Plans contain actions Rain Carbon will take to reduce emissions of these substances. Regular updates are provided to the MECP and presented at subsequent EMT meetings.

3.0 Community Engagement

Open and transparent communication with our community is very important to Rain Carbon. Rain Carbon is committed to an open exchange of information with stakeholders. As required by ECA 7313-8KEN49 Notice No 1 Nov 17 2022 , Rain Carbon held various meetings to inform the public and key stakeholders about the steps being taken to reduce emissions and to demonstrate compliance with O. Reg. 419/05. Table 2 summarizes the meetings that have been held in 2024. A copy of the meeting minutes and follow-up actions from the EMT meetings is provided in Appendix B – Environmental Monitoring Team Minutes and Follow-up Actions.

Table 2: Summary of Community Engagement Meetings

Date	Meeting Description	Purpose
February 28, 2024	First EMT Meeting	<ul style="list-style-type: none"> ■ Virtual meeting instructions ■ Approval of meeting minutes ■ Action items from previous EMT meeting ■ Air Quality Monitoring Program ■ LDAR Program ■ Regulatory Updates ■ Next EMT meeting (schedule and location)
May 29, 2024	Second EMT Meeting	<ul style="list-style-type: none"> ■ Virtual meeting instructions ■ Approval of meeting minutes ■ Action items from previous EMT meeting ■ Air Quality Monitoring Program ■ LDAR Program ■ Regulatory Updates ■ Next EMT meeting (schedule and location)
September 11, 2024	Third EMT Meeting	<ul style="list-style-type: none"> ■ Virtual meeting instructions ■ Approval of meeting minutes ■ Action items from previous EMT meeting ■ Air Quality Monitoring Program ■ LDAR Program ■ Regulatory Updates ■ Next EMT meeting (schedule and location)
December 4, 2024	Fourth EMT Meeting	<ul style="list-style-type: none"> ■ Virtual meeting instructions ■ Approval of meeting minutes ■ Action items from previous EMT meeting (no actions) ■ Air Quality Monitoring Program ■ LDAR Program ■ Regulatory Updates ■ Next EMT meeting (schedule and location)

4.0 Conclusion

This Report is intended to fulfill MECP reporting requirements for an EMS and Community Engagement Report as outlined in ECA 7313-8KEN49 Notice No 1 Nov 17 2022.

This Written Summary was prepared for the exclusive use of Rain Carbon and is intended to fulfil MECP reporting requirements for a Written Summary as outlined in the B(a)P SSS Approval and benzene Order. The contents of the Written Summary are based on Facility changes throughout 2024. Any changes in Facility conditions and operational practices completed subsequent to this period are not accounted for. Persons other than Rain Carbon and the previously mentioned Ontario regulatory authorities using this document or the observations, conclusions or recommendations stated within, will do so at their own risk.

Appendix A

2024 Summary of Implemented Process Improvement Actions for Benzo(a)Pyrene and Benzene As Required by Site Specific Standard Approvals for Rain Carbon Canada

In 2024, Rain Carbon continued to implement Process Improvement Actions that were approved in the benzene and B(a)P Action Plans and included in the SSS Approvals

Rain Carbon Activity	Source Type/Pollution Control	Rationale, if available
Storage Tank – Internal inspection	N/A	No emission reduction directly but improves robustness of system
Continuation and extensions of LDAR Program	Fugitive Sources	Reduced emission factors due to improved replacement and repair program
Flange Management program	Fugitive Sources	Reduction of fugitive emissions due to higher quality of flange seal
Substitution of Feedstock with lower Benzene and PAH content.	Petroleum based material like FCC decant oil and PFO	The reduction is based on the improved vapour composition (lower partial pressure of benzene and B(a)P) in the headspace of storage tanks and material handling areas (loading and unloading) as well as the fugitive emission from LDAR and non- LDAR sources.
Substitution of liquid coal tar pitch by granulated (solid) petroleum pitch in big bags	Fugitive Sources	By producing lower PAH solid Petro pitches the loading into railcars and trucks will be substituted by enclosed (emission free) big bag filling, 100% control of emissions.

Emission Reduction Actions 2024

The Abatement Plan covers many of the emission reduction actions.

- LDAR Program: Finalized the current Site Specific LDAR Program.
- Continue with daily tank PVRV VOC measurements by Operators.
- Replaced tar/tar distillate tank PVRVs with the new European style units.
- In the FGI system created several groups of tanks to provide separate emissions control.

- Continued with taking storage tanks out of service for cleaning, inspection and repairs as needed. TK 8 was done. Tk 3 , Tk 5 done in 2025. Tk 69 underway.
- Constructed two new pitch storage tanks (Tks 22 and 23).
- Installation of piping connections for the new TOx, Enclosed Flare and Desulfurization equipment.
- Installed new low emission valves in Pumphouse 1. This continues in 2025.
- One External Complaint on May 31, 2024 related to the FGI system venting during a vessel being loaded with Carbon Black Oil.
- Continued to hold regular meetings with the MECP throughout 2024.
- Worked to finalize the new ECA (received in July 2025)
 - Includes a new air emissions monitoring program.
 - Gives Rain the authority to install and commission new emissions reduction equipment (TOx, Enclosed Flare and Desulfurization).
- Site Specific Standard application ongoing.
- In Feb the MECP set up a Pyxis benzene monitor on Strathearne Ave, east of the plant.
- Installed secondary containment in the South Tank farm.
- Implemented an Environmental Emergency Plan.
- Commissioned a Reverse Osmosis Unit.


Rain Carbon completed three LDAR Leak Surveys in 2024. The results from these surveys are summarized below.

Summary of 2024 LDAR Leak Surveys

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LDAR Program 2024 – Summary

BENZENE



	Total Number of Components	Measured Components	Inaccessible/ Unsafe Components	Leaked Points	Repaired Points	Delay of Repair	Comments
April 2024	3,094	2,136	1,299	Total of 34	Total of 34 as of December 4, 2024	Total of 0	<ul style="list-style-type: none"> LDAR Survey April 22 to 26, 2024. 34 LDAR components measured leaking. 34 LDAR component repairs completed successfully with fugitive emissions under 250 ppm VOC.
August 2024	3,094	2,136	1,299	Total of 37	Total of 37 as of December 4, 2024	Total of 0	<ul style="list-style-type: none"> August 12 to 16, 2024 37 LDAR components measured leaking 37 LDAR component repairs completed successfully with fugitive emissions under 250 ppm VOC.
November 2024	3,654	3,022	1,299	Total of 31	Total of 15 verified with TVA-2020 as of December 4, 2024	Total of 0.	<ul style="list-style-type: none"> November 18 to 22, 2024 31 LDAR components measured leaking 15 LDAR component repairs completed successfully with fugitive emissions under 250 ppm VOC as of December 4, 2024. 16 LDAR component repairs remaining under Delay of under December 22, 2024 , or January 22, 2025, repair deadlines

Appendix B

TITLE	Rain Carbon EMT Meeting (February 28, 2024) – Meeting Notes
DATE/TIME	February 28, 2024, at 6:00 pm to 8:00 pm
VENUE	Virtual - Teams

1.0 WELCOME, VIRTUAL MEETING GROUND RULES AND APPROVAL OF PREVIOUS EMT MEETING MINUTES

- Kate Liubansky welcomed everyone to the meeting.
- Kate provided the virtual meeting ground rules.
- Denis Corr asked if there were any comments on the EMT meeting notes from the December 2023 meeting that were circulated to the Rain Carbon EMT members on January 8, 2024, via email.
- No further comments were provided, and meeting minutes were considered final.
- There were no other specific action items from last meeting.

2.0 AIR QUALITY MONITORING PROGRAM

Rain Carbon Benzo(a)pyrene [B(a)P] Monitoring Results for November 2023 – January 2024

- □ Gord presented the Rain Carbon B(a)P results for November 2023. On November 8, 2023, the New West PAH Monitor failed to record a measurement. MECP monitoring event was due to a PAH monitor Elapsed Time Indicator (ETI) mechanical issue which was then successfully repaired, and the unit was returned to service.
- On November 20, 2023, the 0.01090 µg/m³ B(a)P measurement at the Old West Monitor monitoring event was above the 0.00430 µg/m³ Measured Level threshold and above the 24-hour upper risk threshold (URT) of 0.005 µg/m³. The likely source of the above exceedance was fugitive coal tar pitch dust and particulate emissions being carried a short distance of about 75 metres by the predominantly north easterly wind from an uncovered pile of excavation soil. The soil pile was not covered with a tarpaulin on November 20, 2023, as it was an active excavated soil staging area with soil being added daily. The soil pile has now been completely covered with a tarpaulin.
- Also on November 20, 2023, the South PAH Monitor failed to record a measurement during a MECP monitoring event due to a South Berm Monitor electrical power failure which was successfully repaired, and the unit was returned to service.
- □ Gord presented the Rain Carbon B(a)P results for December 2023. On December 2, 2023, no B(a)P sample was obtained at the HAMN STN 29164 Monitor as the PAH sampler was not set up to operate on December 2, 2023.
- All other results were below the Measured Level Threshold of 0.0043 µg/m³ and below the URT of 0.005 µg/m³.
- □ Gord presented the Rain Carbon B(a)P results for January 2024. On January 19, 2024, the 0.00919 µg/m³ measurement at the South Monitor was above the 0.00430 µg/m³ Measured Level threshold and above the 24-hour URT of 0.005 µg/m³ B(a)P. The likely source of the above exceedance was fugitive coal tar pitch dust and particulate emissions being carried a short distance of about 75 metres by the predominantly north easterly wind from an uncovered pile of excavation soil.
- Gord added that there are excavation activities occurring around the monitor as they are building a new secondary containment for the coal tar storage tanks. This containment involves building a concrete wall around the entire south edge of the plant including the tanks, and a concrete flooring will also be added to cover the base of all the tanks inside.

On January 31, 2024, results were not available for the issuing of the AAMR on February 20, 2024. These will be presented at the next EMT meeting.

Gord presented the 24-hour B(a)P results for August 2018 to January 2024. As you move towards the right-hand side of the graph, the trend is showing lower concentrations.

- Gord presented the new graph demonstrating the B(a)P rolling annual average results graph for the six monitors from August 2019 to January 2024.

- Values were relatively high in 2018 but have decreased over time, with some variability in each of the stations. The arrow on the graph points to expired annual site-specific standard of 0.0008 ug/m³ which falls in the middle of other annual averaging trends shown on the graph.

- Pascale asked why the East Monitor rolling average increases and remains higher after 2022. □ Andreas explained that these high values are due to the inspection and cleaning of Tank 6, located near the East Monitor, back in 2022. This resulted in two very high readings, which have impacted the annual rolling average and will take time to see any reductions on the graph. Since then, Rain Carbon has worked on changing the procedure of how tanks are cleaned for inspections.

- Kate explained the methodology of how rolling annual averages are calculated. Approximately 30 samples are used to calculate an average. For any new additional data, the values are shifted down one at a time.

Clarification: A lower denominator in the average calculation may result in a higher average concentration, especially if there are high concentrations used to calculate the average.

- Rain Carbon Benzene Results for November 2023 – January 2024

- Gord presented the benzene results for November 2023. On November 20, 2023, there were two invalid samples at the East and North monitors as the Summa canister pressure on receipt was outside the acceptable MECP range.

- □ Gord presented the benzene results for December 2023. On December 2, 14 and 26, 2023, the East Monitor VOC samples were all invalid as the Summa canister pressures on receipt were outside the MECP acceptable range. The East Monitor VOC sampler timer was then serviced and calibrated on Monday January 15, 2024, prior to the Friday January 19, 2024, MECP monitoring event. The East Monitor VOC sampler timer MFC (mechanical airflow controller) setting has been reduced to increase the likelihood that the canister pressures on receipt would fall inside the MECP acceptable range for testing moving forward.

- On December 14, 2023, no sample was obtained at the South Berm VOC Monitor due to a VOC sampler timer internal clock setting error. The South Berm Monitor was rerun on the Saturday December 16, 2023 as an additional monitoring event.

- On December 2, 2023, no benzene sample was obtained at the HAMN STN 29164 Monitor VOC sampler was not set up to operate on December 2, 2023.

- Andreas explained the December invalid sample canister issue. The lab will now test the containers right away to let Rain know of any issues with the samples, instead of providing the results in the report for the measurement day approximately 3 weeks later. This will give Rain the opportunity to repeat measurements a few days later if needed.

- □ Gord presented the benzene results for January 2024. On January 7, 2024, the North Monitor sample was invalid as the Summa canister pressures on receipt were outside the MECP acceptable range.

- On January 31, 2024, results were not available for the issuing of the AAMR on February 20, 2024. These will be presented at the next EMT meeting.

- □ Gord presented the benzene 24-hour results graph for March 2020 to January 2024, which demonstrates much variability for each monitor over time. The peaks observed in the graph can be traced back to their likely causes in most cases. Andreas added that the large peak observed at the East Monitor in 2022 correlates to the high rolling annual average increase seen in the previous B(a)P graph.

- □ Gord presented the benzene 24-hour results graph for STN 29164 from April 2022 to January 2024. It was presented on a second graph since the values were too small to observe clearly alongside the other monitoring stations.

- Gord presented the benzene rolling annual average graph for March 2021 to January 2024, demonstrating much variability for some of the monitors. Any time there is a high value, it has a lasting impact on the rolling annual average. The arrow on the graph points to expired annual site-specific standard of 12.7 ug/m³.

3.0 LDAR SURVEYS 2024

- Gord presented an update on the leak detection and repair (LDAR) surveys that took place in 2024.
- Rain developed a detailed LDAR program specific to the Hamilton facility based on experience over the past, using the consultant who has been performing surveys.
- The new LDAR program was submitted to the MECP on Feb 15, 2024, and Rain is awaiting comments. Rain should be able to discuss more about the program at the next meeting.
 - □ LDAR Surveys in 2024 are scheduled as follows. April 22 to April 26, 2024
 - August 12 to August 16, 2024
 - November 11 to November 15, 2024

4.0 REGULATORY UPDATES

- Kate presented the regulatory updates since the last meeting.
- Rain Carbon continues to meet monthly with the MECP since Spring 2023.
- Rain submitted the SSS application for benzene and B(a)P and ECA application on May 1, 2023.
- The applications were supported by the Site's ESDM Report, TBR and Action Plans.
 - □ Based on MECP comments as well as other required updates, Rain will submit the next version of the Site's ESDM Report by the end of February 2024. Update: The updated ESDM Report was submitted to the MECP on April 9, 2024.
 - □ Updates include improvement to emissions post action plan implementation.
 - □ Kate noted that the HAMN monitoring results from the last quarter of 2023 were not ready from HAMN, so the analysis typically presented could not be included. By next meeting, there should hopefully be two sets of monitoring data to present from the two quarters.

5.0 ABATEMENT PLAN UPDATE

- Gord presented the abatement plan progress as of February 28, 2024.
 - □ Upgrade of existing coal tar pitch pumps to reduce B(a)P fugitive emissions. P4 N installed with mechanical seal and operating.
 - P4 S and P13 E installed with mechanical seals and to be commissioned in March.
 - P-42 N, P-202 N/S; P-201 N/S planned.
 - □ Pilot project to install hermetic pump (seal-less pump) for P-105 E/W in coal tar oil service. Test is underway.
 - □ New coal tar pitch cooler which uses hot oil cooling instead of steam for better control of coal tar pitch temperature to reduce fugitive emissions during vehicle loading. Equipment has been installed and commissioning is ongoing.

6.0 TK-6 INCIDENT

- Gord discussed the incident which occurred at Tank 6 on October 23, 2023 (discussed previously).
 - During September 14-19, 2023, Tank 6 was found to have three small holes in the top section of the tank (vapour section) due to corrosion under insulation.
 - On September 19, 2023, repairs were made and measurements using the TVA 2020 confirmed successful repairs.
 - On October 17, 2023, an inspection company completed tank wall thickness measurements of the entire top tank shell. The contractor prepared a repair plan for the top shell plates.
 - On October 23, 2023, the MECP mobile emissions testing unit was on Strathearne Avenue downwind of Tank 6. The plant was in the Fall shutdown with all units down and only tar receiving active. Tank 6 was checked, and it was discovered that the patch repair had separated from the shell. This was repaired immediately, and subsequent testing showed low emissions.
 - Since October 24, 2023, Rain Carbon has tested Tank 6 daily for emissions at a number of points and reported results to the MECP. Final repair of the top tank shell was confirmed on February 20, 2024, to be complete as per external Contractor's requirements.
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• Jochen asked Gord if they have looked at other tanks similar to TK-6, and what state all the other tanks are in, or if there are any measures to remove insulation to check what is underneath? Andreas noted TK-6 is not the first tank to be inspected, tanks are frequently inspected to make necessary repairs.

• An internal and external inspection of TK-8 was last completed by removing insulation and tar residue. Areas requiring patches were found.

• TK-1 was also inspected, as well as some pitch tanks (TK-43 last year, TK-42 year before). The next tank to be inspected might be TK-3.

• Pascale asked if there are any other expected activities on the site that could require soil excavation and if there are any mitigation strategies planned to prevent the wind from affecting the monitor readings again. Andreas responded that there have been at least 3 occasions in the last 1.5 years where high readings were related to excavation works. Rain is always working on continuously improving their mitigation methods to reduce dust, using wind shields, to contain the dust as much as possible. If any piles need to be stored temporarily, they try to cover them with a tarp. However, the high readings recorded were during active excavation, meaning that at least for a few hours there was no tarp on top of the soil pile.

• For the South Tank Farm, everything will be made with concrete (floors, etc.) which will be easier to clean and will reduce dust.

• Jochen asked if it is fair to say that the maintenance of the tanks occurs late (after a leak is found). The frequency of inspections seems low. Is the ministry worried that the tanks have leaks that cannot be identified easily? Andreas corrected that they detected a problem with the tank before the leak occurred, due to the reduced thickness of the metal plate and corrosion found on the outside of the tank. An inspection company shares the recommended repair plan and determines the useful life of the tanks before the next inspection. Leaks in the liquid or gas phase can be recognized immediately. Once detected, the preventative repairs are made right away.

• There is a preventative maintenance program that inspects a certain number of tanks per year based on API recommendations. Spot checks are also performed on tank walls on a frequent basis by removing pieces of insulation for measuring. Not all the tanks can be taken out of operation in a year.

• Denis asked to confirm that it was not until the ministry's mobile unit was sampling along Strathearne Avenue that the hole in TK-6 was found. Andreas responded that the hole was found approximately 3-4 weeks earlier and was patched, as a temporary repair while waiting for the repair plan by the inspection company. When the MECP was monitoring in the area, it was realized that the patch was detaching from the tank, possibly due to the tank pressure or weather conditions.

• Denis brought up that the mobile unit was very useful in detecting higher than anticipated levels. Denis asked if it could be worthwhile to reserve the mobile unit on a regular basis (approximately once a year) to scan the area and detect any missed leaks or patches become detached as a safety precaution.

• Stephen responded that they did follow up monitoring with the mobile unit to ensure that the repairs were successful. There are also regular assessments done of the Hamilton area with the TAGA unit. They are looking to set up a Pyxis to continue to monitor and ensure that the right steps are being taken.

• Stephen also mentioned that the ministry was concerned by the high readings, so a qualified professional report of the maintenance and repairs on TK-6 and other tanks was required to confirm that the repairs were effective.

• Stephen mentioned that they are coordinating with the Hamilton Port Authority to ensure they have access to spots to get the most effective readings. Denis added that monitoring locations are critical to pick up the correct measurements due to wind direction.

• Stephen responded that they are able to move the TAGA unit to the most desirable spots where the wind may be blowing.

• Natalie stated that the ministry has established a Pyxis continuous real-time benzene monitoring station on Strathearne Avenue (in close proximity to East Monitor). It is the first of its kind in Ontario and was installed just under 2 weeks ago. They are still working on the data communication and reporting process, but they can currently access the instrument directly to download data. Rain has expressed interest in seeing the data, and the

MECP will be following up on that request. The Pyxis is measuring BTEX compounds, but MECP is primarily targeting benzene. It is a standalone monitor that is mobile and can be relocated easily.

- Andreas mentioned that the use of this continuous monitor can provide direct feedback to help detect any issues and address them quickly. They tried to buy one of these stations in the past, but the company denied their order for an unknown reason.

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7.0 FINDING MECP MONITORING EVENTS ON RAIN CARBON WEBSITE

- Pascale asked how the information about MECP monitoring events exceedances are shared with the public. After searching extensively on the Rain Carbon website, she was not able to find the information.

- Gord directed Pascale to go to the Rain Carbon website → Sustainability tab → Social Commitment → Scroll to “Information for residents”, click “Read More” → brings you to the forms and letters for each MECP monitoring event (link: Information for residents (raincarbon.com))

- Denis agreed that the information is very buried and hard to find on the website. Denis asked if they could put a request from the environmental monitoring team that a push email system could notify members of EMT or anyone of interest about the publishing of a new report, with a link to bring them to the website.

Pascale suggested changing the wording from “Information for residents” to something more obvious to make it easier to locate on the website.

- Andreas and Gord will look into this matter internally.

8.0 2024 EMT MEETINGS

- Date of the next meeting – May 2024 (tentatively May 29, 2024).

- The format of the next meeting was suggested to be virtual. Jochen asked for the next meeting to be in person or hybrid

- A long discussion was held regarding EMT members’ preferences and suggestions – topics included accessibility, number of potential attendees, issues related to hybrid meeting (i.e., in person and virtual)

- Rain Carbon committed to confirming options for venues and reaching out to the EMT members in April to confirm the number of members who will come in person. □ Please note, if only one or two EMT members are able to attend in person (excluding Rain Carbon/WSP/MECP), the format may be reassessed as the value of an in-person meeting would be lost with a few EMT members.

- •□ Potential topics for next meeting: Air quality monitoring, Abatement Plan updates, and Regulatory updates.

TITLE	Rain Carbon EMT Meeting (May 29, 2024) – Meeting Notes
DATE/TIME	May 29, 2024, at 6:00 pm to 8:00 pm
VENUE	Virtual – Teams
ATTENDEES	
MEMBERS OF PUBLIC	Denis Corr, Hans-Peter Boergers
MECP	Stephen Burt, Neil Hannington, Darryl Hagman, Natalie Stacey
RAIN CARBON	Andreas Grunewald, Gord Gilmet, Robin Hart
WSP CANADA INC.	Kate Liubansky

1.0 WELCOME, VIRTUAL MEETING GROUND RULES AND APPROVAL OF PREVIOUS EMT MEETING MINUTES

- Kate Liubansky welcomed everyone to the meeting.
- Kate provided the virtual meeting ground rules.
- Denis Corr asked if there were any comments on the EMT meeting notes from the February 2024 meeting that were circulated to the Rain Carbon EMT members on May 9, 2024, via email.
- No further comments were provided, and meeting minutes were considered final.
- There were no other specific action items from last meeting.

2.0 AIR QUALITY MONITORING PROGRAM

Rain Carbon Benzo(a)pyrene [B(a)P] Monitoring Results for January – April 2024

□ Robin presented the Rain Carbon B(a)P results for January 2024. On January 31, 2024, the 0.0496 $\mu\text{g}/\text{m}^3$ B(a)P measurement at the North Monitor was above the Measured Level Threshold of 0.00430 $\mu\text{g}/\text{m}^3$ and below the URT of 0.005 $\mu\text{g}/\text{m}^3$. The likely sources of the exceedance include fugitive coal tar pitch dust and particulate emissions carried by the generally south, southwest wind from a pile of excavated soil that was awaiting removal and for which sections of the tarp covering had come off.

Excavation will be happening for another 3-4 months. Rain Carbon takes precautions to prevent contaminant exceedances by using tarps to cover excavation piles and minimize the effect of wind. Monitors are very sensitive to coal tar pitch particles, and only the equivalent of a few grains of sand are enough to exceed limits.

Stephen Burt from the MECP suggested that Rain Carbon should assess the contaminated soil before excavation begins and be prepared to excavate the soil directly into trucks that can be transported offsite, eliminating the need to store the contaminated soil onsite. Rain Carbon is working on improving this process and minimizing the time that the soil is exposed to the wind and atmosphere.

Rain Carbon has also started using a new company to transport contaminated soils offsite, helping to reduce the amount of time that the soil remains on the site and can be affected by surrounding winds.

Around February 21, 2024, it was observed that one of the clamps on the north monitor PUF cartridge was not closing properly resulting in a small leak on the PUF cartridge due a small gap between the PUF cartridge body and the PUF cartridge top filter (repair was made after Rotek's visit). Rain Carbon believes that this could have also contributed to the exceedance measured at the North Monitor on January 31, 2024.

All other results were below the Measured Level Threshold of 0.0043 $\mu\text{g}/\text{m}^3$ and below the URT of 0.005 $\mu\text{g}/\text{m}^3$.

• Robin presented the Rain Carbon B(a)P results for February 2024. On February 12, 2024, the 0.02950 $\mu\text{g}/\text{m}^3$ B(a)P measurement at the North Monitor was above the Measured Level Threshold of 0.00430 $\mu\text{g}/\text{m}^3$ and above the URT of 0.005 $\mu\text{g}/\text{m}^3$. Rain Carbon also believes that this exceedance is due to the small leak on the PUF cartridge occurring at the North Monitor, which was discovered and repaired on February 21, 2024.

Measurements on February 24, 2024, were back within compliance levels and indicated that the repair was effective.

• All other results were below the Measured Level Threshold of 0.0043 $\mu\text{g}/\text{m}^3$ and below the URT of 0.005 $\mu\text{g}/\text{m}^3$.

• □ Robin presented the Rain Carbon B(a)P results for March 2024. All measurements during the month of March were below the 24-hour MECP Measured Level Threshold of 0.0043 $\mu\text{g}/\text{m}^3$ and below the URT of 0.005 $\mu\text{g}/\text{m}^3$.

• □ Robin presented the Rain Carbon B(a)P results for April 2024. All measurements during the month of April were below the 24-hour MECP Measured Level Threshold of 0.0043 $\mu\text{g}/\text{m}^3$ and below the URT of 0.005 $\mu\text{g}/\text{m}^3$.

• □ Robin presented the 24-hour B(a)P results for August 2018 to April 2024. As you move towards the right-hand side of the graph, the trend is showing lower concentrations. A peak can be observed for the February 12, 2024, measurement. The line has come back down again following the February 24, 2024, measurement found to be within compliance levels.

• □ Robin presented the new graph demonstrating the B(a)P rolling annual average results graph for the six monitors from August 2019 to April 2024. Values have decreased over time, with some variability in each of the stations.

Rain Carbon Benzene Results for January – April 2024

- □ Robin presented the benzene results for January 2024. All measurements for January were below the 100 $\mu\text{g}/\text{m}^3$ URT.
- On January 7, 2024, the North Monitor had an invalid sample as the Summa canister pressure on receipt was outside the MECP acceptable range. Rain Carbon now has a much quicker turn around time, as is able to implement a full service and repair on the VOC sampler as quickly as possible once they receive a notice of an issue from BVL.
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- □ Denis suggested keeping an eye on the pressure of the monitor by end of day to prevent invalid samples from occurring.
- □ Natalie Stacey from the MECP stated that the MECP operations manual has a minimum requirement of 80% valid data but encourages to strive for 90% or more. Since summa canisters are only measured every 12 days, every invalid sample contributes greatly to the overall data capture percentage, compared to more frequent samples.
- □ Robin presented the benzene results for February 2024. On February 12, 2024, the South Monitor had an invalid sample as the Summa canister pressure on receipt was outside the MECP acceptable range.
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- □ Robin presented the benzene results for March 2024. On March 19, 2024, a measurement of 107.0 $\mu\text{g}/\text{m}^3$ was obtained at the East Monitor. On this day, the Tank 7 PVRV Pressure Port tested at 236 ppm VOC fugitive emissions and the Tank 7 PVRV Vacuum Port tested at 172 ppm VOC fugitive emissions measurements were conducted by Operations using a Mini Rae 3000. These Tank 7 PVRV fugitive emissions may have possibly contributed in part to the 107.0 $\mu\text{g}/\text{m}^3$ benzene measurement.
- On March 31, 2024, the New West Monitor had an invalid sample as the Summa canister pressure on receipt was outside the MECP acceptable range.
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- □ Robin presented the benzene results for April 2024. All measurements during the month of April were in compliance and below 100 $\mu\text{g}/\text{m}^3$.
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- □ Robin presented the benzene 24-hour results graph for March 2020 to April 2024, which demonstrates much variability for each monitor over time. The peaks observed in the graph can be traced back to their likely causes in most cases. Improvements can be observed due to lower peaks in the months since October/November 2023.
- Denis suggested increasing the font size of the graphs to make it easier to read for future presentations.
-
- □ Robin presented the benzene 24-hour results graph for STN 29164 from April 2022 to April 2024. It was presented on a second graph since the values were too small to observe clearly alongside the other monitoring stations. Most values can be observed to be below the AAQC.
- □ Robin presented the benzene rolling annual average graph for March 2021 to April 2024, demonstrating much variability for some of the monitors. Any time there is a high value, it has a lasting impact on the rolling annual average. An overall downward trend can be observed for the South Monitor, while the East Monitor has a slight upwards trend.
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3.0 AIR QUALITY MONITORING – HAMN AND RAIN CARBON RESULTS AND WINDROSES

- Kate presented the potential effects of wind directions and speeds on various monitoring stations around the Rain Carbon site.
 - Kate presented several aerial images that showed B(a)P and benzene results recorded at four nearby HAMN Monitoring Stations as well as results recorded at Rain Carbon monitoring stations. In addition, wind roses for the HAMN Stations from the monitoring days were presented and the wind conditions were described. The wind roses demonstrate the direction from which the wind is coming from and the frequency of the winds.
 - Kate discussed the complexity of the area surrounding Rain Carbon in terms of variable winds and potential for additional contributors to the monitoring stations. Denis added that there will be impacts from the coke ovens in the area.
- Stephen Burt from the MECP added that the coke-producing facilities in the Hamilton area generate B(a)P, and therefore may also affect nearby monitor measurements. It is recognized that the surrounding area is complex and affected by multiple nearby sources and processes. There has been work done with these facilities in terms of new leak limits since 2015/2016 and there have been continuous improvements since then. The MECP notes that Rain Carbon has challenges ahead of itself but recognizes the Action Plan that will be implemented and the
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current monitoring program that will be enhanced and looking forward to seeing the Site-Specific Standard process progress.

- Appendix A presents the aerial images of the HAMN and Rain Carbon monitoring results.

4.0 LDAR SURVEYS 2024

- Robin presented an update on the leak detection and repair (LDAR) surveys that took place in 2024.
- Rain developed a detailed leak detection and repair (LDAR) program specific to the Hamilton facility and submitted this to the MECP on Feb 15, 2024.
- Rain received comments from the MECP and is working on responding to the MECP and updating it.
 - □ LDAR Surveys in 2024 are scheduled as follows. April 22 to April 26, 2024
 - August 12 to August 16, 2024
 - November 11 to November 15, 2024
 - □ Robin presented the summary of results from the first LDAR survey in 2024 which took place in April. The total number of components is currently 3,094, where 2,136 have been measured. Out of all the components, 1,299 have been identified as being inaccessible/unsafe.
 - 34 LDAR components measured leaking, including 13 LDAR components from the November 2023 LDAR Survey Delay of Repair List.
 - 10 LDAR component repairs have been completed to date.
 - 24 LDAR component repairs are remaining, either under Delay of Repair List (14) or under the June 22, 2024, repair deadline (10).

5.0 REGULATORY UPDATES

- Kate presented the regulatory updates since the last meeting.
- Rain Carbon continues to meet monthly with the MECP since Spring 2023.
- Rain submitted the SSS application for benzene and B(a)P and ECA application on May 1, 2023.
- The applications were supported by the Site's ESDM Report, TBR and Action Plans.
- Based on MECP comments as well as other required updates, Rain submitted revised ESDM Report (March 2024), TBR and Action Plans (May 2024).
- Rain has received initials comments on the reports and is working on providing responses to the MECP as soon as possible.

6.0 ENVIRONMENTAL MANAGEMENT SYSTEM & COMMUNITY ENGAGEMENT REPORT 2023

- Gord provided an update on the annual report named the Environmental Management System & Community Engagement Report for the year 2023.
- There was one External Complaint related to the TK6 incident of Sept 2023, discussed at previous EMT meetings.
- Continued to hold regular meetings with the MECP throughout 2023.
- Met all requirements of the bridging order (Order #1 – 134982315) issued Dec. 14, 2022. Adopted a new dispersion model – CALPUFF, refinement of the ESDM, submission of a TBR, Action Plan, holding public meetings, SSS renewal application and ECA application to reflect the Action Plan.
- The Abatement Plan covers the majority of emissions reduction actions.
 - LDAR Program: Coal tar and coal tar oil storage tank PVRVs added to LDAR component list.

Conducted an audit of the original LDAR Program and have implemented most of the recommendations such as a lower leak threshold (from 500 ppm to 250 ppm) and including components in service at greater than 0.5% benzene.

- Continue with daily tank PVRV VOC measurements by Operators.
 - By mid-2023 replaced all tar/tar distillate tank PVRVs that were determined to be leakers.
 - In the FGI system, created several groups of tanks such as the Light Oil and Tar Acid Oil tank group to provide separate emissions control.
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- Continued with taking storage tanks out of service for cleaning, inspection and repairs as needed. TK 8 was done. Tk 21, Tk 3, Tk 69, and Tk 67 are planned in 2024.
- Constructed two new pitch storage tanks (Tks 22 and 23) and a new Tar Acid Oil tank (Tk 14).
- Installed new pitch pumps P-4N & S - centrifugal pumps with double mechanical seals for improved emissions control. To continue pitch pump replacements in 2024, as outlined in abatement plan.
- Pilot project ongoing to trial a hermetic pump (sealess pump) in coal tar oil service. Trial was conducted in 2023.
- Installed a new coal tar pitch cooler - Hot oil cooling instead of steam for better control of coal tar pitch temperature to reduce fugitive emissions during vehicle loading.

7.0 ABATEMENT PLAN UPDATE

- Gord presented the abatement plan progress as of May 24, 2024.
- In the FGI system created several tank groups with separate emissions control to isolate benzene emission sources from the coal tar/tar oil tank farm.
 - Commissioned three Groups of tanks each with its own emissions control: Tks 13, 14, 25 – Light Oil and Tar Acid Oil
 - Tks 15, 21, 26, 39, 40 - Naphthalene Oil, Heavy Aromatic Oil and Refined Tar
 - Tks 1 to 5; 7 to 11; 51, 52, 70 – Coal tar, Heavy Aromatic Oil
- Tk 8 repairs to be completed end of May 2024. Recommissioning expected in beginning of June 2024.
- Added TK 3 to the Plan and it will be next after Tk 8.
- To replace Tk 21. Material ordered. Foundation and Engineering ongoing. Plan to commission in 2024.
- Pitch pumps P-4N & S successfully commissioned in February 2024.
- Pitch pump P-13E commissioning ongoing.
- Pilot project to trial a hermetic pump (sealess pump) in coal tar oil service did not work. An alternate pump is on order.
- Commissioned a new coal tar pitch cooler in February 2024.

8.0 2024 EMT MEETINGS

- Date of the next meeting – September 2024
- Rain will attempt to book a venue as soon as possible to hold the meeting in-person and let the EMT Members know of date options
- Potential topics for next meeting: Air quality monitoring, Abatement Plan updates, and Regulatory updates.

Title	Rain Carbon EMT Meeting (Sept 11, 2024) – Meeting Notes
Date/Time	Sept 11, 2024, at 6:00 pm to 8:00 pm
Venue	Hybrid – Teams; Bernie Morelli Recreation Centre
Attendees In Person	Kat Bezner...Citizen Jochen Bezner...Citizen Heather Arrell...MECP Hans-Peter Boergers....Citizen Darryl Hagman.....MECP Pascale Marchand,,,,,Ward 4 Geoffrey Knapper....HIEA Liz Tobin.....Citizen Stephen Burt....MECP Denis Corr....Chairperson Robin Hart...Rain Carbon Andreas Grunewald...Rain Carbon Gord Gilmet...Rain Carbon
Attendees Virtually	NATALIE STACEY....MECP NEIL HANNINGTON...MECP TIM HUNG...MECP

	MANAL CHAUDRY...MECP KERRY LECLAIR...WARD 3
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1.0 WELCOME, VIRTUAL MEETING GROUND RULES AND APPROVAL OF PREVIOUS EMT MEETING MINUTES

- Denis Corr welcomed everyone to the meeting.
- Robin Hart provided the meeting ground rules and reviewed the agenda.
- Denis asked if there were any comments on the EMT meeting notes from the May 29, 2024 meeting that were circulated to the Rain Carbon EMT members via email. No further comments were provided, and meeting minutes were considered final.
- There were no other specific action items from last meeting.

2.0 AIR QUALITY MONITORING PROGRAM

Rain Carbon Benzo(a)pyrene [B(a)P] Monitoring Results for May – July 2024

- Robin presented the Rain Carbon B(a)P results for May 2024.
 - Robin reviewed monitoring locations of the Rain site.

TITLE	Rain Carbon EMT Meeting (December 2024) – Meeting Notes
DATE/TIME	December 4, 2024, at 6:00 pm to 8:00 pm
VENUE	Virtual on Teams and In-Person at Bernie Morelli Recreation Centre
ATTENDEES	
MEMBERS OF PUBLIC	Denis Corr, Hans-Peter Boergers, Kerry Le Clair, Jochen Bezner, Kat Bezner, Pascale Marchand, Manal Chaudhry
MECP	Stephen Burt, Heather Arrell, Darryl Hagman, Natalie Stacey
RAIN CARBON	Andreas Grunewald, Gord Gilmet, Robin Hart
WSP CANADA INC.	Kate Liubansky

1.0 WELCOME, VIRTUAL MEETING GROUND RULES AND APPROVAL OF PREVIOUS EMT MEETING MINUTES

- Kate Liubansky welcomed everyone to the meeting.
- Kate provided the virtual meeting ground rules.
- Gord noted that the September 2024 meeting notes are in progress and will be circulated by the end of the week.
- There were no other specific action items from last meeting.

2.0 AIR QUALITY MONITORING PROGRAM

Robin presented locations of on-site monitors

Rain Carbon Benzo(a)pyrene [B(a)P] Monitoring Results for August – October 2024

- □ Robin presented the Rain Carbon B(a)P results for August 2024. All results were below the Measured Level Threshold of 0.0043 µg/m³ and below the URT of 0.005 µg/m³.

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- □ Robin presented the Rain Carbon B(a)P results for September 2024. All results were below the Measured Level Threshold of 0.0043 µg/m³ and below the URT of 0.005 µg/m³.
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- □ Robin presented the Rain Carbon B(a)P results for October 2024. All results were below the Measured Level Threshold of 0.0043 µg/m³ and below the URT of 0.005 µg/m³.
-
- □ Robin noted that Rain Carbon has been making improvements when it comes to dust control during excavations and contaminated soil removal.
- □ Robin presented the 24-hour B(a)P results for August 2018 to October 2024. As you move towards the right-hand side of the graph, the trend is showing lower concentrations. Issue showing readings on the graph from recent months; will share those at the next time
-
- □ Robin presented the new graph demonstrating the B(a)P rolling annual average results graph for the six monitors from August 2019 to October 2024. Values have decreased over time, with some variability in each of the stations.
-

Rain Carbon Benzene Results for August – October 2024

- □ Robin presented the benzene results for August 2024. Some measurement above the 100 µg/m³ URT
 - On both occasions Rain Carbon found that using the mini-RAE for fugitive VOC monitoring of TK-4, 5 and 7 there were no leaks on the monitoring days and there were no notable VOC fugitive emissions; no cause was identified.
 - Other tanks were not monitored with the mini-RAE on those days as operations monitor three tanks per day.
 - Stephen Burt noted that fugitive emissions likely come from tanks on-site
 - Andreas noted that we monitor every day, three tanks per day and fence line monitoring occurs every 12 days, so may need to adjust the schedule for daily tank monitoring.
 - Denis asked about looking at wind directions and what tanks are in the prevailing wind direction □ Andreas noted that online (continuous) monitoring is better for this
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 - Jochen asked about daily routine, asked if the routine will change □ Andreas said that this will change, will try to show what happens several days before the monitoring day
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 - Heather noted this is why the MECP is recommending continuous monitoring □ Andreas noted that we are now doing that
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 - Jochen asked what kind of investment the online (continuous) monitoring is □ Andreas noted the MECP's is around \$140,000 or \$150,000; the three monitors currently on-site are approximate \$20,000 each.
 - □ Heather noted monitoring for benzene continuously has improved significantly; Andreas noted that Europe had them but not available online easily
 - □ Denis added that there are added costs beyond the above like maintenance, auditing, reporting, etc.
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 - Jochen asked if MECP monitors are available for the public to view □ Heather noted that they are being piloted and still working on some bugs
 - □ Jochen asked if MECP alerts Rain if they see high levels
 - □ Heather noted that the MECP shares with Rain when monitored values go above certain thresholds
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 - All other measurements were below the 100 µg/m³ URT.
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 - □ Robin presented the benzene results for September 2024. Had issues getting the samplers working at the Old West monitor and there are added dates which represent the makeup days for monitoring that failed; Rotek was involved in trying to resolve issues and finally, there were no issues on September 27
 - TK-4 was the likely source of emissions of high results at South and East monitors; this has since been corrected
 - Stephen Burt confirmed that the Old West is at the top of the rail car loading area while New West is on the ground, adding that placing the monitor on top of rail car loading was to assess contribution of loading activities associated with the B(a)P Site-Specific Standard process; the planned action plan item is to enclose the rail car loading activities
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- Pascale asked if the unit at the Old West monitor was completely replaced □ Robin noted that a component of the unit was replaced (after a few attempts by Rotek at repairing it)
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- All other measurements were below the 100 µg/m³ URT.
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- □ Robin presented the benzene results for October 2024. Monitoring units were all operating, with two exceedances in October at East monitor
- Oct 9: TK-1 to 3 were monitored with mini-RAE on the same day; no notable emissions from these tanks
- Oct 21: TK-1 to 4 were monitored with mini-RAE on the same day; no notable emissions from these tanks
- Darryl noted this was a Shutdown day
- □ Andreas added that the continuous monitoring had high values which was a big learning – identified cleaning methods that need to be improved such as cleanout processes
- □ Stephen Burt noted it might be good to add vacu-trucks
- □ Andreas noted they use carbon filter for tank cleanouts which have high control efficiencies
- □ Stephen added that the presented values directly near the facility and are not the values monitored in monitors located near communities like Beach Blvd.
- □ Andreas added that maybe there should be a continuous monitor in community
- □ Pascale noted there are people who work in the area
- □ Stephen Burt noted the values are below the occupational health limits and Rain has an industrial hygiene program in place
- □ Andreas noted we also use the mini-RAE around the site once in a while to check levels
- □ Jochen asked about measurements inside the office and Andreas noted they never saw any high levels
- □ Gord added that personal monitors are sometimes used
- □ Andreas added that some workers use respirators depending on where they work
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Robin presented the benzene 24-hour results graph for March 2020 to October 2024, which demonstrates much variability for each monitor over time but there have been high values since July.

- Robin presented the benzene 24-hour results graph for STN 29164 from April 2022 to October 2024. It was presented on a second graph since the values were too small to observe clearly alongside the other monitoring stations.
 - □ Robin presented the benzene rolling annual average graph for March 2021 to October 2024, demonstrating variability for some of the monitors. Any time there is a high value, it has a lasting impact on the rolling annual average. LDAR Programs in August did not find the main leakers that could have led to the high results
 - Stephen added that this is why continuous monitoring is very important (so there is no reliance on a 12-day monitoring schedule), adding that there has been damage, tank activities; Andreas added that some insulation has been added to tanks
 - Heather noted there are still PVRVs to be replaced
 - Andreas noted that two are on the way, others are being shipped
 - Heather explained the naphthalene crystallization causes for PVRV issues and European PVRVs should prevent this from happening
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 - Denis noted that we are identifying specific items and impactful things that could be done, and there has been many improvements over the years, but there are still ways to improve emissions through monitoring.

3.0 AIR QUALITY MONITORING – HAMN AND RAIN CARBON RESULTS AND WINDROSES

Kate presented the locations of the HAMN stations and Rain Carbon stations, and reminded everyone about what the windroses mean in terms of direction, wind speed, and frequency for the upcoming discussion of the potential effects of wind directions and speeds on various monitoring stations around the Rain Carbon site.

- Kate presented several aerial images that showed B(a)P and benzene results recorded at four nearby HAMN Monitoring Stations as well as results recorded at Rain Carbon monitoring stations. In addition, wind roses for the HAMN Stations from the monitoring days were presented and the wind conditions were described. The wind roses demonstrate the direction from which the wind is coming from and the frequency of the winds.
 - Kate discussed the complexity of the area surrounding Rain Carbon in terms of variable winds and potential for additional contributors to the monitoring stations.
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- Natalie noted that it is imperative that the direction and individual meteorological stations are taken into account; for example, STN29102 (located on Beach Blvd.) is not suitable for use for winds from the north or northeast as the station is obstructed by trees and this station is specifically intended to measure contributions from the west or southwest (ideally predominantly from the steel mills).
- Natalie added that Rain Carbon is in a very unique location – not quite inland and not quite on the lakeshore so it's important to take into account the most reliable and most suitable data; not all meteorological stations are comparable or suitable for use in all situations.
- Heather noted that one of the MECP recommendations is for Rain Carbon to get their own meteorological station, approved by the MECP, as the winds are highly variable
- Andreas noted they have a station but it is not certified by MECP
 - Jochen asked where they get the wind information when completing analysis of potential causes Robin noted that they use the same four stations, but have to make the best interpretation because sometimes they do not agree but most of the time they agree
 - Andreas added that the on-site station is used to help interpret the wind direction to confirm it's in line with the HAMN stations
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 - Denis noted that there may also be regional influence on wind direction
 - Kat asked if MECP looks at wind direction analysis when assessing impact from Hamilton sources Stephen noted the wind patterns are complex but review all available information
 - Denis added that transportation is another contributing source of emissions
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 - Natalie noted that results are 24-hr and reported concentrations could have been the result of a very brief period of time when the wind directions aligned from any source; even though the predominant wind direction or the majority of the time during that 24-hr period may have been from one direction, the maximum contribution could have been from any direction over that 24-hr period; we really don't know when those maximums occurred or when the peak plume concentration occur during that 24-hr period; with a wide range of wind conditions, it is difficult to pinpoint sources because we do not know when that exact plume impacted the monitor
 - Natalie added that this is the other reason why we are focused on continuous monitoring as it is much more helpful in pinpointing when the exact event occurred
 - Pascale asked if there are monitors with internal wind monitoring
 - Heather responded that there are no combined monitors but there could be at the same location

Andreas added that it makes sense for meteorological stations to be at continuous monitoring stations

- Denis summarized the complexity of siting proper meteorological stations
- Appendix A presents the aerial images of the HAMN and Rain Carbon monitoring results.

4.0 LDAR SURVEYS 2024

- Robin presented an update on the LDAR surveys that took place in 2024.
 - LDAR Surveys in 2024 were completed in the following time periods. April 22 to April 26, 2024
 - August 12 to August 16, 2024
 - November 18 to November 22, 2024
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 - For the first two surveys none of the leakers that we detected in April or August showed up in November which means the repairs improved the components; everything from April and August was repaired
 - Robin presented the summary of results from the last LDAR survey of 2024 which took place in November. The total number of components increased significantly and is now 3,654, where 3,022 were measured
 - 31 LDAR components were identified as leakers (roughly 1% of all components)
 - As of today, 15 of these were repaired, none of these are in the Delay of Repair list
 - Still have 16 to repair (deadline for these are December 22 and January 22), which are not considered simple to repair
 - Significant focus to repair
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 - Jochen asks about inaccessible/unsafe Robin explained that inaccessible or unsafe components are insulated and there is no port to take the measurement with the TVA or the components are too high
 - Andreas added that they use Optical Gas Imaging measurements on them (already used in each of the 2024 surveys)
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- Heather added that if a plume is visible Rain needs to figure out a way to measure with TVA
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- □ Robin noted that a significant number of components were added to the LDAR Program, in addition to the lower threshold leak definition (500 ppm to 250 ppm)
- □ Robin added that the OGI system has its limitations and, for example, it wouldn't detect a leak of 300 ppm as it typically detects higher than 1000 ppm. Andreas added that some OGI detect as low as 50 ppm.
- □ Heather added that one of the importance of the LDAR Program is not just knowing how many components are leaking but how much they are leaking because repair timing will depend on that Andreas noted high leaks get repaired sooner than small leaks
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- □ Robin noted they are focused on repairing as soon as possible

5.0 REGULATORY UPDATES

- □ LDAR Program Rain developed a detailed leak detection and repair (LDAR) program specific to the Hamilton facility and submitted this to the MECP on Feb 15, 2024.
- Latest comments from Rain were sent to MECP on Dec 3, 2024
- Andreas added that the updated LDAR Program is already being implemented
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- □ Air Monitoring Program MECP proposed a revised Air Monitoring Program for Rain
- Rain provided comments, latest discussion was held on Dec 2, 2024
- Gord noted that they will update the EMT at the next meeting if it is finalized
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- □ Abatement Plan Update Rain submitted an updated Abatement Plan mid-November to focus on the action items included in the SSS application to reduce benzene and B(a)P
- There was a particulate focus on actions related to valves in Pumphouse #1 as this was identified as a major contributing source to benzene emissions
- To date, seven valves were replaced; these valves did not have leaks during the November survey but had leaks in August
-
- Stephen and Heather noted that the MECP hopes to issue the ECA by end of January 2025. Comment period on ERO has closed. **MINUTES**

Heather noted the ECA is to allow Rain to install thermal oxidizer and associated equipment; ECA will also include the approved LDAR Program and other items that are in discussion.

Stephen added that there will be another ECA as part of the Site-Specific Standard approval for remaining additional controls.

Stephen noted there is interest in the continuous monitoring data, will look into how information could be shared with public – will try to present at next EMT meeting.

6.0 2025 EMT MEETINGS

- Date of the next meeting – February 26, 2025
- Rain will attempt to book a venue as soon as possible to hold the meeting in-person and let the EMT Members know of date options
- Potential topics for next meeting: Air quality monitoring, Abatement Plan updates, and Regulatory updates.



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