



REPORT

B(a)P Monitoring Quarterly Written Summary Report
Ruetgers Canada Inc.

Submitted to:

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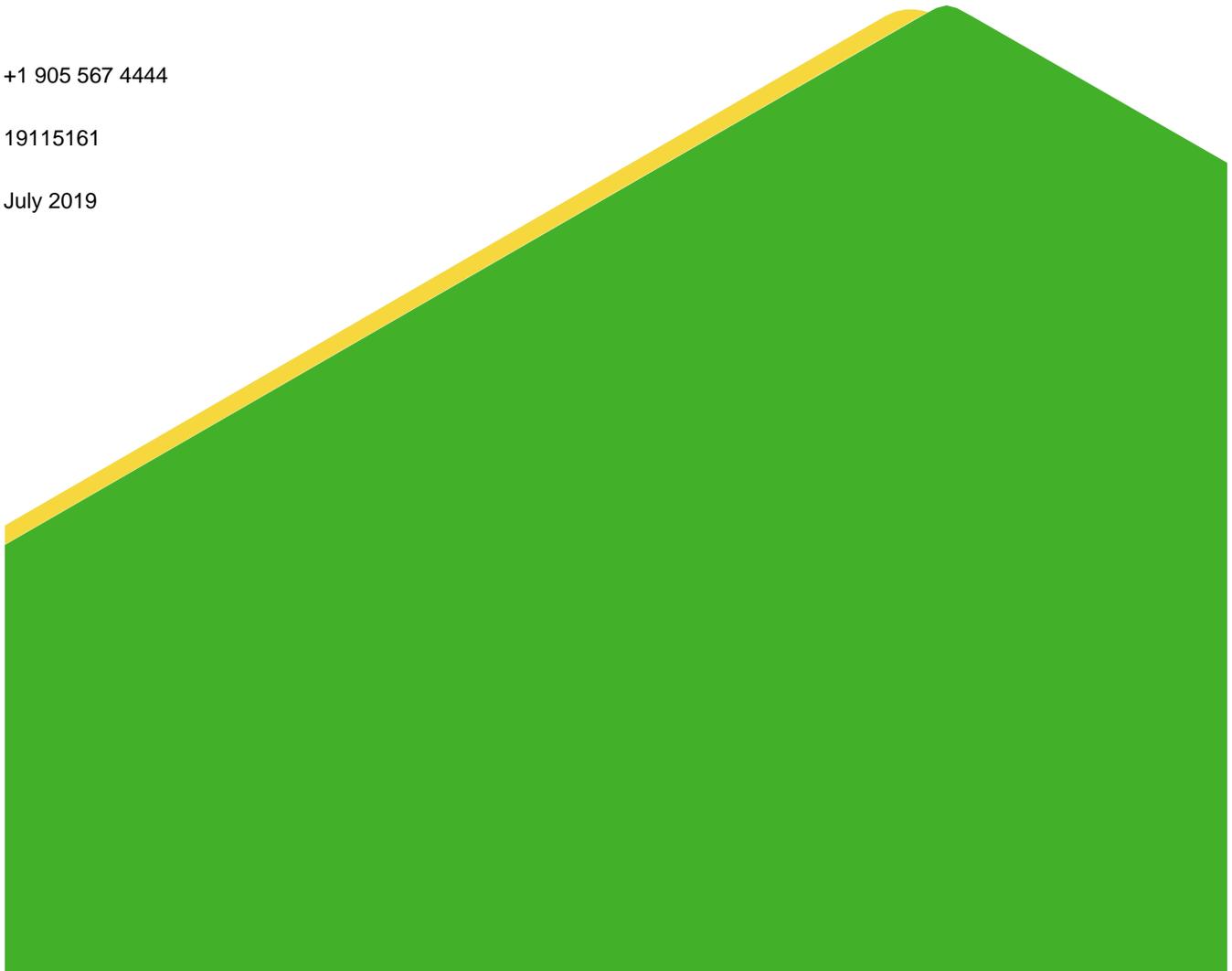
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1.0 INTRODUCTION

Golder Associates Ltd. (Golder) was retained by Ruetgers Canada Inc. (Ruetgers) to prepare quarterly written summary reports of benzo(a)pyrene [B(a)P] ambient monitoring measurements for the coal tar and petroleum material processing plant located at 725 Strathearne Avenue N., Hamilton, Ontario (the Facility). This report summarizes the measurements taken at the Facility during the second quarter of 2019 (April to June) as part of the Ruetgers ambient monitoring program.

The ambient monitoring measurements have been taken in accordance with the April 2018 Monitoring Plan for B(a)P and Benzene (the Plan) approved by the Ontario Ministry of the Environment, Conservation and Parks (MECP) on May 15, 2018. The Plan and monitoring program have been developed as per the conditions of the Site-Specific Standard (SSS) approvals for B(a)P (no. 201-17-rv0) and benzene (no. 202-17-order-rv0) issued to the Facility on November 21, 2017.

2.0 B(A)P MONITORING

The monitoring program for B(a)P consists of setting up a polyurethane foam (PUF) polyaromatic hydrocarbon (PAH) sampling system at four locations at the Facility. Samples are collected over a 24-hour period. Air quality data acquisition and instrument performance were evaluated by Rotek Environmental Inc. personnel. The laboratory analysis was conducted by Maxxam Analytics, which is ISO17025 compliant and accredited. Additional details on the locations of the monitoring stations are provided in the monthly Ambient Air Quality Monitoring Reports (AAMRs) prepared for monitoring events during April to June 2019.

B(a)P measurements from April, May, and June 2019 are summarized in Table 1. Copies of the laboratory analysis reports may be found in the AAMRs for April, May, and June.

Table 1: Summary of April, May, and June B(a)P Measurements

Date	Measured Concentration [$\mu\text{g}/\text{m}^3$]			
	East - Top of Tank-36	North - MCC	West - Tank-77 Platform	South - Berm
April 3-4, 2019	0.01390	0.01110	0.00193	0.00310
April 15-16, 2019	0.00666	0.00286	*Below detection limit	0.00044
April 27-28, 2019	0.00064	0.00225	0.00048	0.00049
May 9-10, 2019	0.00142	0.00460	0.01360	0.00207
May 12-22, 2019	0.00460	0.00497	0.00140	0.00056
June 2-3, 2019	0.02540	0.00278	0.00037	0.00050
June 14-15, 2019	0.00471	0.00209	0.00043	*Below detection limit
June 26-27, 2019	0.00599	0.00379	0.00087	*Below detection limit

*The detection limit ranges from $<0.0030 \mu\text{g}/\text{m}^3$ to $<0.0032 \mu\text{g}/\text{m}^3$

2.1 B(a)P Measurements Comparison to MECP Thresholds

The MECP included a Measured Level threshold in the B(a)P SSS as a trigger to evaluate progress on the B(a)P Action Plan. This level, set by the MECP, is not directly related to the ESDM Report results. There were ten measurements above the $0.0043 \mu\text{g}/\text{m}^3$ Measured Level threshold. This triggers the preparation of a report, as required by the B(a)P SSS. As per Condition 2 of the SSS, Ruetgers prepared three separate reports that include information on the causes of measurements being above the Measured Level threshold and prevention of future occurrences. Ruetgers has committed to undergo an engineering study to assess the effectiveness of all actions completed to date.

The results of the B(a)P monitoring events showed measured concentrations above the Upper Risk Threshold (URT) of $0.005 \mu\text{g}/\text{m}^3$, which were anticipated based on the predicted modelling values previously submitted to the MECP. Ontario Regulation 419/05 stipulates that the MECP must be notified when measured concentrations are above the URT at a point of impingement. Although all four monitors are located within the Facility's property boundary and, therefore, not at an offsite point of impingement, Ruetgers chose to notify the MECP of the first measurement above the URT and submitted the MECP "Notification of Exceedance – Local Air Quality Regulation" form on October 30, 2018. The MECP has been notified of any other monitoring events that measure concentrations above the URT by way of the Monthly Monitoring Reports submitted by the 20th of the month following monitoring (i.e., individual notifications related to measured concentrations will not be submitted).

Please note that Ruetgers submitted an Emission Summary and Dispersion Modelling (ESDM) Report to the MECP Hamilton District Office in May 2019 to reflect the Facility's updated loading data. This ESDM Report (V6.0) also includes the new non-operational storage tank (Tank 93) and the venting system in the Tanker Truck Loading area. ESDM Report V6.0 will be revised to incorporate the improvements from the benzene and B(a)P Action Plans.

Please note that the frequency assessment of B(a)P completed as part of ESDM Report V6.0 showed that the predicted concentrations are below the URT of $0.005 \mu\text{g}/\text{m}^3$ at sensitive receptors (i.e., residential land uses). As the measured concentrations are below the predicted concentration, it is anticipated that measured concentrations at sensitive receptors would also be below the URT.

3.0 CONCLUSIONS

This report summarizes the measurements taken at the Facility during the second quarter of 2019 (April – June) as per the Plan and the conditions of the Site-Specific Standard (SSS) approvals for B(a)P (no. 201-17-rv0) and benzene (no. 202-17-order-rv0) issued to the Facility on November 21, 2017.

During the second quarter of 2019, there were ten measurements that were above the 0.0043 $\mu\text{g}/\text{m}^3$ Measured Level threshold. This triggered the preparation of a report, as set out in the B(a)P SSS. As per Condition 2 of the SSS, Ruetgers prepared three separate reports during the second quarter that included information on the causes and prevention of future measurements being above the Measured Level threshold.

The measured B(a)P concentrations were below the maximum 24-hour predicted concentration of B(a)P of 0.378 $\mu\text{g}/\text{m}^3$ at the POI which shows that the ESDM Report V6.0 does not underpredict B(a)P emissions from the Facility. Ruetgers has committed to undergo an engineering study to assess the effectiveness of all actions completed to date. Please note that the frequency assessment of B(a)P completed as part of ESDM Report V6.0 showed that the predicted concentrations are below the URT of 0.005 $\mu\text{g}/\text{m}^3$ at sensitive receptors (i.e., residential land uses). As the measured concentrations are below the predicted concentration, it is anticipated that measured concentrations at sensitive receptors would also be below the URT.

Signature Page

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