REPORT

Environmental Management System and Community Engagement Report

Ruetgers Canada Inc.

Submitted to:

Ruetgers Canada Inc.

Submitted by:

Golder Associates Ltd.

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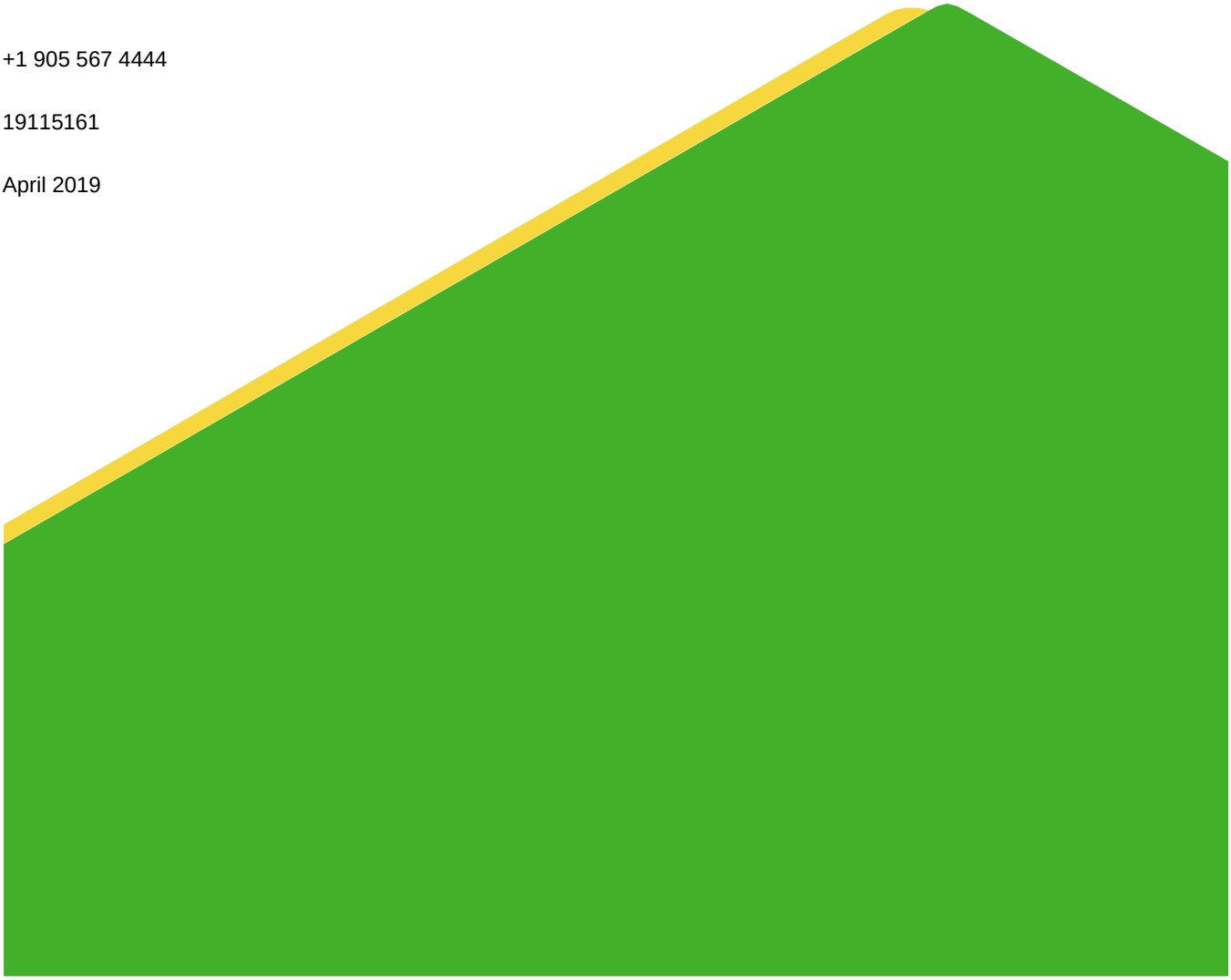
April 2019



Distribution List

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1.0 INTRODUCTION

Ruetgers Canada Inc. (Ruetgers) 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 Ruetgers site spans 5 hectares and distills approximately 250,000 tonnes of tar annually.

1.1 Site-Specific Standards

Ruetgers 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.

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

Contaminant, CAS Number	Applicable Dates	Annual Site-Specific Standard [µg/m³]
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 – Expiry Date	0.0008
Benzene, 71-43-2	November 21, 2017 – June 30, 2018	27.7
	July 1, 2018 – Expiry Date	12.7

The following sections associated with the Facility's SSS Orders require Ruetgers to prepare an Environmental Management System and Community Engagement Report (the Report) for each calendar year:

- B(a)P: Item 3.2 in Order Number 202-17-order-rv0 issued November 21, 2017; and
- Benzene: Item 4.2 in Order Number 202-17-order-rv0 issued November 21, 2017.

This Report is intended to meet the requirements listed on the SSS Orders, including the following information with respect to the preceding calendar year:

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 has been prepared to summarize the above items for the 2018 calendar year. The Report will be made available for public inspection at the Facility during office hours and on the Ruetgers website and will also be presented at the next Environmental Monitoring Team meeting after that date.

2.0 ENVIRONMENTAL MANAGEMENT SYSTEM

Ruetgers 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. Ruetgers 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).

2.1 Complaint Response Procedure

As part of their EMS, Ruetgers has implemented a complaints response procedure to record and resolve complaints received from the public. No complaints were received in 2018.

2.2 Action Plans for B(a)P and Benzene

The Action Plans for B(a)P and benzene were submitted to the MECP as part of the SSS Application in February 2016. Following review and discussions with the MECP, the Action Plans for B(a)P and benzene were updated and resubmitted in September and November 2016, respectively. The SSS Approvals define the Action Plans as those “submitted by the Company as part of its Request, including but not limited to the items summarized in Appendix 1 of this Approval.” Appendix 1 of each SSS Approval includes further actions that were not included in the originally submitted Action Plans. The Action Plans detail the steps Ruetgers will take to reduce emissions of B(a)P and benzene. Steps taken in 2018 are documented in Appendix A – 2018 Written Summary of Implemented Process Improvement Actions for B(a)P and Benzene.

3.0 COMMUNITY ENGAGEMENT

Open and transparent communication with our community is very important to Ruetgers. Ruetgers is committed to an open exchange of information with stakeholders. As part of the SSS approval process, Ruetgers 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 2018. As required by the SSS Orders, 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
January 17, 2018	First EMT Meeting	Discuss overview of Ruetgers operations, December 5, 2017 incident, purpose of EMT and proposed ambient monitoring plan.
April 11, 2018	Second EMT Meeting	Discussion of the Terms of Reference, followed up with questions from previous meeting, and an overview of regulatory permitting. Discussion of the Environmental Management System and Community Engagement report, ESDM Report Version 5.3, and the status of the Monitoring Plan.
July 11, 2018	Third EMT Meeting	Updates on the Leak Detection and Repair (LDAR) Program, updates on Action Plan progress, updates to the Monitoring Plan, and discussion of current ESDM Report Version 5.4.
October 30, 2018	Fourth EMT Meeting	Updates on implementation of the Action Plan, discussion of Naphthalene, updates on the Air Quality Monitoring Plan, and brief update on the ECA Application.

4.0 CONCLUSION

This Report was prepared for the exclusive use of Ruetgers and is intended to fulfil MECP reporting requirements for an EMS and Community Engagement Report as outlined in the SSS Orders. The contents of the Report are based on discussions with Ruetgers regarding Facility operations in 2018 and review of documentation provided by Ruetgers. Any changes in Facility conditions and operational practices completed subsequent to this period are not accounted for. Persons other than Ruetgers 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.

When evaluating the Facility and developing this Report, Golder has relied on information provided by Ruetgers and the regulatory authorities. Golder has acted in good faith and accepts no responsibility for any deficiencies, misstatements, or inaccuracies contained in this Written Summary resulting from omissions, misinterpretations or falsifications by those who provided Golder with information.

Golder prepared this Report using its commercially reasonable best efforts consistent with the level and skill ordinarily exercised by members of the profession currently practicing under similar conditions.

A site inspection and physical sampling of atmospheric emission sources were not completed as part of the scope of work.

Signature Page

Golder Associates Ltd.

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APPENDIX A

2018 Written Summary of Implemented Process Improvement Actions for B(a)P and Benzene

RAIN CARBON INC.

Written Summary of Implemented Process Improvement Actions for Benzo(a)Pyrene and Benzene

As Required by Site Specific Standard Approvals for Ruetgers Canada Inc.

April 2019

Submitted by

Gord Gilmet
Technical Manager
Ruetgers Canada Inc.

Distribution List

1 e-copy: District Manager

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1 INTRODUCTION

Ruetgers Canada Inc. (Ruetgers) operates a coal tar and petroleum-based material processing facility located at 725 Strathearne Avenue N. in Hamilton, Ontario (the Facility). The Facility takes by-products from the steel manufacturing sector and produces high value products used in the aluminum, chemical, construction, pavement sealer and wood preservation industries.
The Ruetgers air emissions control program controls all benzene and B(a)P sources at the Facility. This program was completed in 2013 and resulted in the reduction of benzene and B(a)P emissions by over 99% from historical levels. However, the introduction of the MECP annual standards for both benzene and B(a)P in 2016 required the Facility to submit Site-Specific Standard applications to demonstrate compliance with O. Reg. 419/05. The SSS Applications were submitted in February 2016. Updated documentation requested by the MECP was submitted subsequently as needed (e.g., updated Action Plans). The SSS for benzene and B(a)P were approved on November 21, 2017 (Reference Number 7856-9VDPSR; Approval Numbers 201-17-rv0 and 202-17-rv0).

The following sections associated with the Facility's SSS Approvals or Orders require Ruetgers to prepare a Written Summary of the actions taken each calendar year to implement the Action Plans for B(a)P and benzene:

- B(a)P: Condition 5 in Site-Specific Standard Approval Number 201-17-rv0 issued November 21, 2017
- Benzene: Item 4.19 in Order Number 202-17-order-rv0 issued November 21, 2017

This Written Summary of the B(a)P and benzene Action Plans implementation summarizes the calendar years of 2018. This Written Summary presents descriptions of each action taken, date of implementation of each action taken, and dates for the implementation of actions yet to be taken. This Written Summary was submitted electronically to the MECP District Manager as well as the MECP Standards Development Branch (SDB) Director.

2 B(A)P AND BENZENE ACTION PLANS AND IMPLEMENTATION

The Action Plans for B(a)P and benzene were submitted to the MECP as part of the SSS Application in February 2016. Following review and discussions with the MECP, the Action Plans for B(a)P and benzene were updated and resubmitted in September and November 2016, respectively. The SSS Approvals define the Action Plans as those "submitted by the Company as part of its Request, including but not limited to the items summarized in Appendix 1 of this Approval." Appendix 1 of each SSS Approval includes further actions that were not included in the originally submitted Action Plans.

Section 2.1 – 2018 Calendar Year Implemented Actions summarizes the actions taken in 2018 based on both the originally submitted Action Plans (February 2016) and the actions listed in Appendix 1 of each SSS Approval (November 2017).

2.1 2018 Calendar Year Implemented Actions

In 2018, Ruetgers continued to implement Process Improvement Actions that were approved in the B(a)P and benzene Action Plans and included in the SSS Approvals. As of December 2018, Ruetgers completed all the Process Improvement Actions proposed in the original Action plans (February 2016) and actions listed in Appendix 1 of each SSS Approval (November 2017), with the exception of installation of equipment related to continuous monitoring in the Fume Gathering and Incineration (FGI) System as well as the Engineering Reports for the Fume Scrubbing System (FSS), FGI System and Wastewater Treatment Plant.

Details of the implemented actions, dates they were implemented in 2018, actions that have not yet been implemented and their planned implementation dates are summarized in Table 1.

Table 1: Summary of Implemented Action Plan in 2018 for B(a)P and Benzene as per Site-Specific Standard Approvals

Action	Expected Date of Completion	Action Included in Action Plans	Action Implemented in 2018?	Notes
B(a)P				
Implement door closure practices on pitch flaking operation	Dec. 21, 2017	No	No - Unit was closed as of Aug. 10, 2017	—
Solid(flakes) Coal tar pitch production line closing	Oct. 1, 2017	Yes	Yes – Closed as of Aug. 10, 2017	—
Engineering Report of the FSS, including: - Engineering Calculations (mass, heat/energy balance) to clarify the system capacity and actual operating parameters, to determine whether or not the existing system has sufficient capacity to handle the volatile organic compounds (VOC) loading at the projected efficiency. - Engineering Calculations (mass, heat/energy balance) to clarify the system capacity to determine whether or not the existing system has sufficient capacity for additional VOCs loading. - To assess situations when the system is overwhelmed and excess vapours are not captured. - To determine additional methods that would be used to direct volatile organic compounds if the system capacity is not sufficient. - To assess further methods to address system efficiency and optimize operations.	Dec. 31, 2018	No	In progress	Ruetgers is working with an external engineering firm to undertake this engineering study and prepare the FSS Engineering Report. A Work Plan is underway to assess how current FSS operating conditions compare to the original design to assess adequacy and excess capacity and analyse how changes to operating parameters impact the discharge of each contaminant. A draft report is expected by the end May 2019.
Benzene				
Fume Gathering and Incineration System (FGI): Install equipment, implement and maintain a program to continuously monitor and record the temperature, flow rate and residence time of the gaseous stream into the incineration system, as detailed in the steps below:	—	—	—	—
- Plan and arrange for necessary equipment	Dec. 21, 2017	No	In progress	- July 2018: measured flow rate and sampled boiler stack exit gases and found inadequate space for new equipment installation. - Ruetgers worked with a third-party instrumentation company to develop an alternative which involved the installation of a flow meter on the after-combustion stack to estimate flow rate and temperature. - Although the above actions were completed by the end of 2018, it was determined that a flow meter is also required for the second boiler to provide proper measuring of the required parameters. The vendor is scheduled to install the other flow meter during the Fall 2019 planned shutdown.
- Install the equipment	Jan. 21, 2018	No	In progress	
- Start to operate the installed equipment to continuously monitor and record the temperature, flow rate and residence time of the gaseous stream into the incineration system	Feb. 21, 2018	No	In progress	

Engineering Report of the FGI System, including: - Engineering Calculations (mass, heat/energy balance) to clarify the system capacity and actual operating parameters, to determine whether or not the existing system has sufficient capacity to handle the VOCs loading at the projected efficiency. - Engineering Calculations (mass, heat/energy balance) to clarify the system capacity to determine whether the existing system has sufficient capacity for additional VOCs loading. - To assess situations when the system is overwhelmed and excess vapours are not captured. - To determine additional methods that would be used to direct volatile organic compounds if the system capacity is not sufficient. - To assess further methods to address system efficiency and optimize operations.	Dec. 31, 2018	No	In progress	Ruetgers is working with an external engineering firm to undertake this study and prepare the FGI System Engineering Report. A Work Plan is underway to assess how current FGI System operating conditions compare to the original design to assess adequacy and excess capacity and analyse how changes to operating parameters impact VOC destruction. A draft report is expected by the end May 2019.
Engineering Report of the Wastewater Treatment Plant (WWTP): Assess Wastewater Plant operations and options to increase benzene removal efficiency and decrease benzene emissions to the atmosphere.	Dec. 31, 2018	No	In progress	Ruetgers is working with an external consultant to undertake this engineering study and prepare the WWTP Engineering Report. Ruetgers is currently evaluating and implementing improvements to the WWTP as it relates to benzene, which contribute to fulfilling the engineering assessment of the WWTP required by the Site-Specific Standard. - Ruetgers is currently installing a vacuum pump on New Unit Distillation (started the commissioning of the New Unit vacuum pump during the week of March 25, 2019) which Ruetgers estimates will eliminate up to 30% of the contaminated water that currently goes to the WWTP, and in turn, the benzene loadings typically directed to the WWTP. - A vacuum pump will be installed on Old Unit Distillation based on successful performance of the vacuum pump on the New Unit Distillation. - Ruetgers is in the process of assessing different methods of reducing phenol loadings being sent to the WWTP and has recently completed a technology benchmark analysis that resulted in a reduction in both phenol and benzene. Ruetgers will be submitting a Pilot Project Environmental Compliance Approval to the MECP to obtain approval to conduct a plant trial of this technology towards confirming its ability to remove both phenol and benzene.
B(a)P and Benzene				
Update and implement Standard Operating Procedures (SOP) for the Coal tar pitch production line	Dec. 21, 2017	No	No – Unit was closed as of Aug. 10, 2017	—
Improve cleaning practices at the Facility to minimize emissions	Dec. 21, 2017	No	No – Unit was closed as of Aug. 10, 2017	—
Fume Scrubbing System (FSS): - Increase frequency of adding new scrubber oil - Increase temperature control - Use appropriate quality scrubbing oil	Dec. 21, 2017	Yes	Yes – Complete as of Q1-Q2 2016	—

Liquid (product) Coal tar pitch handling improvements:	—	—	—	—
- Improving seal on unloading stations	Dec. 21, 2017	Yes	Yes – Complete as of Dec 20, 2017 for tar unloading; Mar 28, 2018 for pitch unloading	—
- Automate and improve draw of fumes	Dec. 21, 2017	Yes	Yes – Complete as of Jan 20, 2018	—
- Add new control system to control pressure on tank TK-77	Dec. 21, 2017	Yes	Yes – Complete as of Jan 20, 2018	—
- Improving seal on rinsing stations	Dec. 21, 2017	Yes	Yes – Complete as of Jan 28, 2018	—
- Improve seal on loading equipment for tanker trucks	Jan. 1, 2018	Yes	Yes – Complete as of Mar. 16, 2018	—
- Replacing loading arms for rail cars	Mar. 31, 2018	Yes	Yes – Complete as of July 9, 2018	—
- Update SOPs for ventilation, pumps	Mar. 31, 2018	Yes	Yes – Complete as of Q3 2018	—

2.2 LDAR Program

As part of the Action Plan for benzene submitted in November 2016, Ruetgers proposed to submit a LDAR plan to the MECP for approval during the second quarter of 2017 and begin its implementation following its approval. As per the benzene Order, the LDAR plan (referred to as the Component Leak Survey Plan) does not require MECP approval and its compliance date is April 1, 2018 (second quarter of 2018).

Ruetgers completed the Component Identification component on January 21, 2018 and revised on March 16, 2018. Although not a requirement of the benzene Order, Ruetgers submitted the Component Identification to the MECP, so that any recommendations could be incorporated into the document. Ruetgers completed three LDAR Leak Surveys in 2018. The results from these surveys are summarize in Table 2.

Table 2: Summary of 2018 LDAR Leak Surveys

Date Completed	Detected Components	Leaked Points	Repaired Points	Delayed Repair
April 2018	434	12	8 tightened packing or close valve tighter	4 require shutdown
August 2018	619	7	3 tightened packing	4 require shutdown
November 2018	580	11	4 tightened packing, 1 tightened screw, 1 plugged, 2 replaced valve, 1 closed valve completely	2 require shutdown

Sincerely

Gord Gilmet
Technical Manager

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APPENDIX B

Environmental Monitoring Team Minutes and Follow-up Actions

MEETING MINUTES

DATE March 20, 2018 **Reference No.** 001-MM-RevA

TO Ruetgers Environmental Monitoring Team (EMT)

CC Gord Gilmet, Ruetgers Canada Inc.

FROM Sean Capstick **EMAIL** RuetgersEMT@golder.com

SUBJECT: FIRST RUETGERS EMT MEETING (JANUARY 17, 2018)

Date, Time and Location:	January 17, 2018 6:00 p.m. to 8:15 p.m. Hamilton Waterfront Trust Centre (Multipurpose Room) 57 Discovery Drive, Hamilton, Ontario, L8L 8K4		
Attendees:	Gord Gilmet, Ruetgers	Denis Corr, Chair	Sean Capstick, Golder
	Kyla Suchovs, Golder	Paul Widmeyer, MOECC	Lubna Hussain, MOECC
	Cathy Grant, MOECC	Andy Sebestyen, Stelco	Jochen Bezner, Resident
	Bob Weingartner, Resident	Lynda Lukasik, Environment Hamilton	Kathleen Livingston, Resident
	Candy Vennier, Resident	Liz Tobin, Resident	Kat Bezner, Resident
	Joanna Kadlubowska, Resident	Cathy McPherson, Resident	Susan Noakees, Resident
	Ghosh Bobba, Resident		

Meeting Notes

Welcome and Introductions

- Gord Gilmet welcomed everyone to the meeting, introduced himself, and provided an overview of the meeting agenda.
- Introductions were made around the room, with attendees noting their name and why they are interested in being part of the EMT.

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RUETGERS - Who We Are and Why We Are Here

Gord Gilmet gave a presentation to provide an overview of Ruetgers Canada Inc. (Ruetgers), including the following topics:

1) Ruetgers Canada
2) Company evolution
3) Rain Carbon (global facilities, stats, value chain)
4) Product end use
5) Plant/facility overview
6) Community involvement

The presentation generated the following comments and questions:

- Kathleen Livingston inquired if Rain Carbon is a publically owned company. Gord Gilmet responded that Rain Carbon is not publicly owned, the company is privately owned.
- Lynda Lukasik requested Gord Gilmet provide an overview of what happens in each part of the plant, using the aerial imagery in the presentation to illustrate what happens and where. Gord Gilmet provided an overview, noting where the distillation units and pitch/product storage tanks are located. Gord Gilmet noted that as the product becomes more refined, the smaller the storage tank(s) for the material becomes. Gord Gilmet noted that once the products are tested and meet customer specifications, the product is loaded into railcars or trucks. The Ruetgers plant has eight railcar loading spots and three truck loading spots. Gord Gilmet noted that the majority of product is loaded into and transported off-site via railcar and tanker trucks.
- Jochen Bezner inquired if material comes into the Ruetgers plant via truck. Gord Gilmet responded that a lot of local material comes in via truck, and railcar is typically used for bringing in materials from non-local facilities (e.g. coal tar).
- Lynda Lukasik inquired where the coal tar comes from. Gord Gilmet noted that coal tar is brought in from local plants and also from just outside Pittsburgh, and operations in Alabama (Birmingham), Pennsylvania, and West Virginia. Gord Gilmet noted that coal tar can be brought to the Ruetgers plant via the waterway (i.e., slip 23/24), but this transportation method is less used as Essar Steel coal tar is not currently received.
- Lynda Lukasik asked what percentage of the coal tar comes from local plants and what percentage comes from elsewhere. Gord Gilmet noted he did not have the answer on hand, but noted he would look into it and provide the information at the next EMT meeting.
- Kat Bezner asked where the off-loading areas (i.e. for materials coming from other plants) are located within the plant, and once the material is in the plant, is the Ruetgers plant a closed system. Using the aerial imagery in the presentation, Gord Gilmet illustrated where the material off-loading areas are located and noted that once the material is at the Ruetgers plant the material is then transferred within the plant via pipes. To move the finished product from the plant's storage tanks into a tanker truck or railcar in the loading area, the awaiting truck/railcar will open a hatch located at the top of tanker/railcar and a loading line and vapour recovery line unit will be brought over and put directly onto the hatch and connect onto it. Once the connection has been securely made, the operator will signal that the product is ready to be pumped into the truck/railcar. Gord Gilmet noted that this transfer of product to the truck/railcar is one the most significant sources of benzo(a)pyrene that can be further controlled.

- Jochen Bezner inquired where the air that is in the truck/railcar goes once the air has been displaced with the product put in the truck/railcar. Gord Gilmet provided an overview of this process, specifically noting that loading line and vapour recovery line unit is attached to the top of the truck/railcar to take in the displaced air. Gord Gilmet noted that the seal of this loading line and vapour recovery line unit on the railcars (compared to the trucks) can be improved and therefore this is a key step in the Action Plan for benzo(a)pyrene.
- Kathleen Livingston asked for clarification regarding where the release of benzo(a)pyrene is coming from during the transfer of product from the storage tanks to the truck/railcar. Gord Gilmet noted that the leakage of benzo(a)pyrene is a result of the seal of the loading line and vapour recovery line unit not being perfect. Gord Gilmet noted that the loading line and vapour recovery line unit seal(s) is an area of improvement for the plant.
- Liz Tobin asked how Ruetgers' operations in Germany and Russia compare to the facility in Hamilton, specifically if these facilities have the same loading/unloading operations. Gord Gilmet noted that the operations in Germany and Russia differ from the Hamilton plant; however, the loading/unloading follows the same general principle/method. Liz Tobin noted she has seen a photo of a Ruetgers facility located in the middle of a residential area. Gord Gilmet noted that the facility in question is most likely Ruetgers' Germany site. Gord Gilmet noted that the Ruetgers Germany facility is larger than the Hamilton plant, and thus the plant processes in Germany are located right in the middle of the site and not as close to the fence line. Gord Gilmet noted that at Ruetgers Canada, the railcar loading facilities are very close to the site fenceline.
- Kathleen Livingston asked if the Ruetgers Germany facility has the same leakage issue with the hose's seal on trucks/railcars as the Ruetgers Hamilton plant. Gord Gilmet noted he is not aware of the specific emission numbers from the Germany facility, nor whether that facility has the same leakage from loading line and vapour recovery line unit during product loading.
- Bob Weingartner noted that Gord Gilmet may be misrepresenting the information slightly when it was noted that the Ruetgers Germany facility has a different fence line and location of plant processes compared to the Hamilton plant. Bob Weingartner noted that just because the dispersion/dilution of emissions may differ between the Germany facility and the Hamilton plant because of the location of the fence line, the main issue remains that a chemical is still being released into the air. Bob Weingartner noted understanding of dilution principles by providing an example that dumping a chemical in a small pond would result in different dispersion and dilution compared to dumping that same amount of a chemical in a large lake; however, the main concern is that a chemical is still being "dumped". Gord Gilmet noted understanding, and reiterated that it was not his intent to compare the Germany and Hamilton facility's fence lines and use Hamilton's smaller plant size as a way to justify any emissions from the Hamilton plant.
- Ghosh Bobba inquired how Ruetgers is providing mitigation and protection from spills during the loading of product. In particular, Ghosh Bobba noted concern with potential spills onto the ground that could then result in surface water contamination. Gord noted there are numerous mechanisms in place for spill control, such as automatic shut-offs, alert systems etc. so that spills don't occur. If a spill were to occur, Gord Gilmet noted that the loading area is covered in asphalt, which would prevent any spills from immediately contaminating surface water. Any spills would be dealt with in an appropriate manner.

December 5th Incident

Gord Gilmet provided an overview on an incident that took place at the Ruetgers Hamilton plant on December 5, 2017, noting that the incident was significant. The incident involved a spill of coal tar pitch, resulting in a large yellowish vapour cloud emission. Gord Gilmet apologized on behalf of Ruetgers Canada for the incident, noting

that it was an accident. It was noted that some personnel working at the plant experienced some minor health effects from their brief exposure to the vapour cloud, and were transported to hospital as a precautionary measure, but were fine by the next day. It was noted that the leak of coal tar pitch was stopped within 10 minutes of the leak starting. Gord Gilmet noted that in addition to stopping the leak, Ruetgers priority was ensuring the health and safety of employees, contractors, and the plant's neighbours. Ruetgers has started down the path to make sure that such an incident does not happen again. Gord Gilmet noted that further details regarding the incident cannot be given at this time because the incident is being investigated by the Ministry of the Environment and Climate Change (MOECC).

The following comments and questions were discussed regarding this topic:

- Jochen Bezner inquired what the vapour cloud emission was comprised of. Gord Gilmet noted that the vapour cloud contained benzo(a)pyrene. Jochen Bezner inquired about the concentration of benzo(a)pyrene in the vapour cloud. Gord Gilmet did not provide the exact concentration, but noted that the concentration was significant.
- Kathleen Livingston shared a story regarding her father working in a facility and how that facility's operations at the time resulted in her father's passing, thus noting concern regarding employees' short and long term health, particularly as a result of this incident. Gord Gilmet noted that since the employees' exposure to the coal tar pitch was brief, the health effects to employees are minor and short term; therefore, long term health effects are not anticipated.
- Lynda Lukasik inquired whether spills are a recurring issue at the Ruetgers plant. Gord Gilmet noted that the spill that occurred on December 5, 2017 was the largest spill to take place at the plant in many years. It was noted that smaller spills do occasionally occur. Lynda Lukasik inquired whether smaller spills are reported to the MOECC. Gord Gilmet noted that if a small spill happens, and has the potential for off-site impacts, then the spill is reported to the MOECC.
- Jochen Bezner asked how many reported spills Ruetgers has had over the previous years. Gord Gilmet noted that over the past years approximately 12-15 spills have occurred in total.
- Jochen Bezner asked how spills are detected and captured, whether there were monitoring stations for spills, and whether Ruetgers has cameras installed. Gord Gilmet noted that all off-site spills are reported, no matter how small they are. In regards to cameras, Gord Gilmet noted that Ruetgers does have cameras, however, they are used primarily for security at this time, but are currently being upgraded so they can be used in a greater capacity.
- Jochen Bezner noted to the MOECC that sometimes the judgement of the company itself may not always be the most trustworthy in self-determination whether a spill has an off-site impact, thus determining whether or not the spill requires reporting to the MOECC.
- Paul Widmeyer from the MOECC commented that spill reporting is subjective, but reiterated that companies have a legal responsibility to report spills. Paul Widmeyer noted that in Ruetgers' case, any spills or incidents from the plant would usually have a visible emission.
- Denis Corr asked the MOECC how many spill reporting's have happened. Paul Widmeyer noted that there has been four spill reporting's since June 2017, but did not have the number of spill reporting's prior to that on hand; Paul Widmeyer noted he would provide this information at the next EMT meeting.

- Cathy McPherson asked the MOECC when the report regarding the Ruetgers December 5, 2017 incident would be available to the public. Paul Widmeyer offered to provide a list of all spill reports/records from Ruetgers for the next EMT meeting. Paul Widmeyer reiterated that details regarding the December 5, 2017 Ruetgers incident cannot be discussed in detail due to an ongoing investigation. If any details regarding the incident were shared, it could compromise the investigation.
- Cathy McPherson asked the MOECC when the investigation into the December 5, 2017 incident would be complete, and when a report of the incident would be available to the public. Paul Widmeyer noted that at this time an Order is publicly available, this Order was issued to Ruetgers, and the Order outlines what the company must do as a result of the incident. Paul Widmeyer noted that the Order includes that Ruetgers must hire an engineer to assess the plant (including plant procedures) and prepare a report outlining recommended changes. The engineer's report would be provided to Ruetgers and the MOECC, and if the MOECC approves of the report, then Ruetgers will have to implement any changes noted in the report. Ruetgers will have to implement the changes under supervision of an independent engineer.
- Joanna Kadlubowska asked about the timelines associated with the aforementioned Order and resulting engineer's report and implementation of changes. Paul Widmeyer noted July 10, 2018 is the deadline on the Order.
- Joanna Kadlubowska noted reading in a news report that some people were sent to the hospital as a result of the Ruetgers incident. Gord Gilmet confirmed that six people went to the hospital; five people were contractors, one was an employee. Gord Gilmet noted that these people were taken to hospital as a precautionary measure, and five of the people were released from hospital that same day, the remaining person was released from hospital the following day.
- Joanna Kadlubowska asked if the Ministry of Labor was involved, and whether all personnel were wearing appropriate Personal Protective Equipment (PPE). Gord Gilmet noted that the Ministry of Labor was involved. Gord Gilmet noted he could not comment on whether personnel were wearing appropriate PPE due to the ongoing investigation.
- Kathleen Livingston asked if details regarding the other three events (i.e. not including the December 5, 2017 incident) could be provided for the next EMT meeting. Paul Widmeyer committed to providing the materials via email following the meeting.
- Kathleen Livingston requested reports for all incidents for the past 24-month period. Jochen Bezner added a request for the Order(s) to be provided via email as well. Paul Widmeyer noted that both reports for the past 24-month period, and the Order(s) would be provided.
- Kat Bezner asked for clarification regarding the difference between exceedances, incident reporting and event reporting. Paul Widmeyer clarified that an exceedance is from an Environmental Compliance Approval (ECA), under section 15 of the *Environmental Protection Act*. Paul Widmeyer noted that an incident is synonymous with an event, and these differ from an exceedance. Provincial legislation requires all people (i.e., companies and general members of the public) to report spills, which can be either liquid spills or releases to the environment.
- Kathleen Livingston noted that there are seven months between the December 5, 2017 incident and the filing of the report to the MOECC (i.e., July, 2018), and asked the MOECC why this is the case. Paul Widmeyer noted that July 2018 is the final compliance date of the Order; however, there are interim compliance deadlines that must be met in the time up to July. Kathleen Livingston asked for confirmation in the understanding that Ruetgers will have to be in full compliance by July 2018. Paul Widmeyer noted this

understanding is accurate, and further added the Ruetgers is required to report monthly to the MOECC on progress being made. Gord Gilmet added that information regarding the Order and efforts and progress made towards compliance will be provided to the EMT.

- Lynda Lukasik asked the MOECC to confirm the definition of a spill (i.e., that requires reporting under the *Environmental Protection Act*). Paul Widmeyer noted that as per the *Environmental Protection Act*, "spill", when used with reference to a pollutant, means discharge: (a) into the natural environment; (b) from or out of a structure, vehicle or other container; and, (c) that is abnormal in quality or quantity in light of all circumstances of the discharge.

Environmental Monitoring Team (EMT)

Sean Capstick (Golder) provided an overview of the EMT, referring to a hardcopy of the draft EMT Terms of Reference that was provided at the meeting. Sean noted that the EMT will serve as a forum for open discussion between Ruetgers, members of the community, and the MOECC, regarding environmental issues pertaining to the operation of the Ruetgers plant. In addition, it was noted that the establishment of the EMT would satisfy conditions outlined in two Orders issues by the MOECC (i.e. Order Number 201-17-order-rv0 and 202-17-order-rv0). Sean Capstick discussed the draft Terms of Reference, including contact, purpose, objectives, membership, meetings, reporting, and review of the terms of reference.

The following questions and comments were discussed regarding the EMT and the Terms of Reference:

- Jochen Bezner inquired where the "EMT" name came from, noting that he is aware of Community Liaison Committees (CLC) that appear to serve a similar purpose as the EMT. Lubna Hussain and Cathy Grant from the MOECC noted that the "EMT" name came from other similar groups in Northern Ontario and other industries. The MOECC noted that "EMT" and "CLC" are interchangeable/synonymous. However, the MOECC noted the intent that the EMT will review more data, whereas CLC meetings are typically more information sessions. The MOECC noted that while data may be reviewed by the EMT, a scientific background is not required to be a member of the Ruetgers EMT.
- Denis Corr noted that the EMT is required to meet quarterly. Denis Corr proposed to all meeting attendees that subsequent EMT meetings be held on a Wednesday, between 6 p.m. to 8 p.m. Attendees were unanimous in agreeing that Wednesday's between 6 p.m. to 8 p.m. was suitable.
- Denis Corr asked all meeting attendees whether the location (i.e., Hamilton Waterfront Trust Centre) was a suitable location for subsequently held EMT meetings. Attendees unanimously agreed that EMT meetings could be held at the Hamilton Waterfront Trust Centre, contingent on venue availability.
- Sean Capstick noted that as per the draft Terms of Reference, EMT meeting invites would be sent out at least one-month prior to the meeting, and a proposed meeting agenda would be provided to EMT members at least one-week prior to the meeting. Denis Corr proposed that an "other business" item be added to the agenda for subsequent EMT meetings. Sean Capstick and Gord Gilmet noted agreement; "other business" will be added as an item on future meeting agendas.
- Denis Corr asked all meeting attendees whether anyone had any objections to him (i.e. Denis Corr) continuing to Chair the EMT meetings. As outlined in the draft Terms of Reference, Denis Corr noted that as Chair, he would facilitate the meetings so that the meetings are conducted in an efficient, professional and collaborative manner. Though retained by Ruetgers, Denis Corr reiterated that as Chair he would be independent and provide impartial support. Meeting attendees noted no objection(s) and it was agreed that Denis Corr would remain as Chair for subsequent EMT meetings.

- Kathleen Livingston noted that when she has attended other Ministry meetings, often the “other business” item is utilized by the Ministry to provide other communications, that in her experience, tended to be off-topic not relevant to the meeting. As such, Kathleen Livingston inquired whether the proposed “other business” on the agenda would be utilized in this manner, and if so, noted that she would not want to participate in said meeting. Denis Corr noted agreement that any topics discussed during the “other business” agenda item would be kept relevant to the topic/EMT. Denis Corr referred to the draft Terms of Reference and noted that he has been retained by Ruetgers as an independent facilitator for the EMT meetings and he would make sure that EMT meetings would remain relevant/on topic.
- In response to Kathleen Livingston’s comment, Paul Widmeyer noted that the EMT meetings are not the Ministry’s meetings, but are Ruetgers’ meetings, and as such, the MOECC will not be presenting at EMT meetings unless invited by the EMT.
- Lynda Lukasik noted that Ruetgers may wish to review other company’s EMT/CLC Terms of Reference documents to see how the draft Ruetgers EMT Terms of Reference compares. Lynda Lukasik referenced a couple of company’s Terms of References and offered to provide copies to Ruetgers. Sean Capstick thanked Lynda Lukasik for the offer, and requested she email him (i.e., Sean Capstick) the Terms of Reference. Sean Capstick provided Lynda Lukasik with his contact information following the meeting.
- Kathleen Livingston inquired whether food would be provided for EMT meetings, specifically noting that the meeting timeframe from 6 p.m. to 8 p.m. can make it difficult to have a meal beforehand. Denis Corr noted that food will be provided for all EMT meetings, and asked that any dietary restrictions be noted by attendees when they RSVP to meetings so that food can be provided accordingly.

Proposed Monitoring Plan

Sean Capstick (Golder) gave a presentation to provide an overview of the proposed monitoring plan for the Ruetgers plant, which included the following topics:

1) Hamilton air monitoring network
2) Annual wind trends (2015-2016)
3) Hamilton industry B(a)P emissions to air (2000-2013)
4) Hamilton industry Benzene emissions to air (1994-2013)
5) Modelled concentrations at the fence line
6) Comparison of modelling and monitoring results at closest sensitive receptor
7) Average concentrations (2009-2017)
8) 2009-2017 monitoring data - B(a)P and Benzene
9) Sampling equipment – high volume samplers and summa canister

The presentation generated the following comments and questions:

- In regards to the Hamilton air monitoring network, Denis Corr added that the monitoring information is available to the public at real time online. (http://newreporting.hamnair.ca/)
- In regards to the modelled concentrations at the fence line, Cathy McPherson inquired whether it would be useful to have concentrations/modelling information for along the waterfront. Sean Capstick noted that for all the sensitive receptors in the community, the concentration decreases with distance, and this is predicted by dispersion models. Therefore, dispersion models have information regarding concentrations along the waterfront.

- Lynda Lukasik inquired whether impacts to wildlife and the environment are considered in the Standards, in addition to human health. Sean Capstick noted that the Standard is set for human health or the environment. Denis Corr added that the Standards are important, but so are the limiting times (i.e. 24 hours, 1-year, etc.). Denis Corr noted that decades ago the Standards were typically determined based primarily on what was practical for industries to adhere to, with human health effects being secondary. Denis Corr noted that presently the MOECC disregards what is practical/feasible. Standards are for industries and the Standards are set based solely on what is best for human health or the environment, whichever is lower.
- Joanna Kadlubowska asked whether the beachfront community would have a higher concentration of benzene compared to other communities, specifically noting that the beachfront community is where most of the wind from around the Ruetgers plant would be pushing to. Sean Capstick noted that the concentration of benzene is not higher in the beachfront community. Joanna Kadlubowska inquired whether the Queen Elizabeth Way (QEW) was a source of benzene. Sean Capstick noted that the modelling results are only for the Ruetgers plant and do not include any potential emissions from the QEW.
- Ghosh Bobba inquired whether monitoring is undertaken seasonally. Sean Capstick noted that the presentation includes annual monitoring data, however, monitoring takes place at other timelines, such as 24-hour every 12 days.
- Denis Corr added that the monitoring methods are traceable back to the National Institute of Standards and Technology in the U.S. Denis Corr noted that the MOECC audits these monitoring networks and the MOECC Auditors have no problem failing any network that fails to meet monitoring requirements.
- Ghosh Bobba noted understanding that air samples are collected, but asked Sean Capstick whether snow was also being collected. Ghosh Bobba noted the strong relationship between air quality and snow, and noting that when the snow starts melting it will become run-off (i.e., surface water) and thus any potential impacts to the snow would ultimately result in an impact to the watershed. Sean Capstick noted that snow collection is not currently being undertaken, nor is it required as part of the monitoring.
- Lynda Lukasik noted that the Order outlines timelines, and that some of the dates have since passed. Lynda Lukasik inquired whether Ruetgers achieved the deadline outlined in Appendix I of the Order. Gord Gilmet stated that the actions with dates that have past have been completed. The timing for the monitoring is set out in the Order and in the Standard are all contingent on the approval of the monitoring plan. Gord Gilmet noted that the monitoring plan would be submitted to the MOECC for approval the following week (i.e., the week of January 22, 2018). Gord Gilmet further added that once the monitoring is approved, equipment will be procured, and then the monitoring will be in place. The overall timeline will commence when the monitoring plan is submitted/approved.
- Jochen Bezner noted disappointment with Ruetgers not having the Site Specific Standard in place for July 1, 2016, while other industries in Hamilton met the Standard deadline. Jochen Bezner further added that the delay in obtaining a Site Specific Standard may be a result of poor quality submissions, noting though that he cannot be certain that is the cause. Jochen Bezner noted that 16-months have passed since the phase in date for the Schedule 3 Standards, Jochen Bezner noted that even though Ruetgers did not have a Site Specific Standard during this period, there have been no repercussions for this, and thus noted his belief that Ruetgers has been taking advantage of this. Jochen Bezner noted his disappointment in the Site Specific Standard process and in Ruetgers, reiterating that other industries met the deadline and didn't receive the 16-month "extension" that Ruetgers has had, and there has been no negative consequences or repercussions to Ruetgers for taking this "extension". Gord Gilmet noted that improvements have been made during this 16-month timeframe, in advance of the formal Site Specific Standard approval.

Closing Remarks

Denis Corr inquired whether there were any additional items to be discussed prior to closing the meeting. The following additional items were discussed:

- Cathy Grant provided meeting attendees with a hand-out regarding an MOECC proposal pertaining to cumulative effects, noting that the Ministry is considering a cumulative effects assessment, and is seeking comments on the Environmental Bill of Rights (EBR) Registry online. The deadline for comments was February 7, 2018.
- In light of the amount of documents that require distribution to EMT members (e.g., presentations given at the meeting, supplementary Ruetgers and MOECC documents, the Terms of Reference, etc.), Sean Capstick proposed that Golder set up an external SharePoint site to be used as a library/repository for all documentation. Kyla Suchovs noted that the use of a SharePoint site may be advantageous in that not only would all documents be located and organized in one location, but also that given the file size of many documents/presentations, sending them by email may not be feasible. Kyla Suchovs added that the SharePoint site would be accessible only be EMT members, and proposed that EMT members would be notified via email when new documents were uploaded to the SharePoint site. Denis Corr asked meeting attendees whether they were in favour of the proposed SharePoint site. Meeting attendees unanimously agreed that the SharePoint site would be beneficial and supported its development/use. Kyla Suchovs noted that the Ruetgers EMT SharePoint site would be set-up following the meeting, and invitations to the site would be sent to meeting attendees via email. In addition, Kyla Suchovs reiterated that the Terms of Reference is in draft form, and thus input on the draft document would be required before finalization. A deadline for comments on the draft Terms of Reference would be provided in the email sent with the SharePoint information. Denis Corr added it is the hope that a Terms of Reference document can be agreed upon and finalized by the next EMT meeting, and reminded meeting attendees that those who would like to be officially be members of the Ruetgers EMT would be asked to sign the final Terms of Reference.

Denis Corr thanked everyone for attending the EMT meeting and encouraged everyone to attend the next EMT meeting to be scheduled in approximately April/May, 2018.

MEETING MINUTES

TO Ruetgers Environmental Monitoring Team (EMT)

CC Gord Gilmet, Ruetgers Canada Inc.

FROM Sean Capstick **EMAIL** RuetgersEMT@golder.com

SUBJECT: RUETGERS EMT MEETING (APRIL 11, 2018)

Date, Time and Location:	April 11, 2018 6:00 p.m. to 8:10 p.m. Hamilton Waterfront Trust Centre (Multipurpose Room) 57 Discovery Drive, Hamilton, Ontario, L8L 8K4		
Attendees:	Gord Gilmet, Ruetgers	Denis Corr, Chair	Sean Capstick, Golder
	Kyla Suchovs, Golder	Paul Widmeyer, MOECC	Cathy Grant, MOECC
	Mona Crivat, MOECC	Matt Lawson, City of Hamilton - Public Health	Jochen Bezner, Resident
	Ed Nowlan, Resident	Lynda Lukasik, Environment Hamilton	Kathleen Livingston, Resident
	Marsha Duncan, Resident	Liz Tobin, Resident	Pamela Misener, Resident
	Paul Weinberg, Resident	Cathy McPherson, Resident	Susan Noakes, Resident
	Ghosh Bobba, Resident		

Meeting Notes

Welcome and Introductions

- Gord Gilmet welcomed everyone to the meeting, introduced himself, and provided an overview of the meeting agenda.
- Introductions were made around the room, with attendees noting their name and their interest in the EMT.

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Approval of Terms of Reference

- A hardcopy of the proposed final Terms of Reference was distributed to EMT meeting attendees. Sean Capstick provided an overview of the Terms of Reference document, noting that comments were received on the draft Terms of Reference and were incorporated accordingly. The proposed final Terms of Reference was uploaded to the EMT SharePoint site on March 1, 2018. Sean Capstick requested that attendees who wished to be EMT members to sign the document.
- Jochen Bezner inquired about how stakeholders noted in the Terms of Reference were determined, since the Terms of Reference mentions only the need for representatives from Ruetgers, Golder and the community. Jochen Bezner noted that other stakeholders, such as the City of Hamilton Public Health, and Environment Hamilton, should be required attendees and not optional attendees. Jochen Bezner put forward the motion that these stakeholders be required to attend the meetings, and that the Terms of Reference should be revised to reflect this.
- Sean Capstick noted that the stakeholders outlined in the Terms of Reference are included because of the specific requirements outlined in the Order from the MOECC. Additional EMT members, including specific stakeholders, are more than welcome to join the EMT. Sean Capstick noted that if a representative from the City of Hamilton Public Health and Environment Hamilton sign the Terms of Reference, then these stakeholders would be official EMT members and as such would be accountable and responsible for attending EMT meetings. Sean Capstick reiterated that any individual that signs the Terms of Reference will officially be part of the EMT.
- Kathleen Livingston noted that the Terms of Reference appears to be vague in areas and that some sections of the Terms of Reference appear to lack accountability. In particular, Kathleen Livingston noted that on page 2 of the Terms of Reference, it was noted that "…a vote will take place amongst all persons attending the meeting…". Kathleen Livingston requested that this sentence be revised to indicate that when a vote takes place it will be amongst all EMT members attending the meeting. Attendees were unanimous in agreeing that this change to the Terms of Reference was suitable, and Sean Capstick noted that the change would be noted and made in a final copy to be distributed to EMT members.
- Kathleen Livingston inquired if a formal list of EMT members would be made available. Sean Capstick noted that once the Terms of Reference was signed, the individuals/stakeholders who sign the document will be the official EMT members. Sean Capstick noted that this list would be provided following the meeting, once it was determined who was signing the Terms of Reference and committing to be part of the EMT.
- Kathleen Livingston noted preference that for each stakeholder group (e.g., Environment Hamilton) only be given one vote (when voting is required). For example, if three members from a stakeholder group are present, then only one vote for that group as a collective would be recorded. Attendees were unanimous in agreeing that this change to the Terms of Reference was suitable.
- Denis Corr noted that a representative from a Stakeholder group (e.g. City of Hamilton Public Health, MOECC) would sign the Terms of Reference document; however, if the signee was unable to attendee an EMT meeting, the signee was responsible to find a person to attend on their behalf. Attendees were unanimous in agreeing that this approach and accountability was suitable.
- Paul Widmeyer noted that the MOECC would not be participating in any voting. Denis Corr noted that in general, all voting will only take place amongst community representatives and community groups. Denis Corr suggested that a sentence be added to the Terms of Reference to clarify that government resources (e.g. MOECC, City of Hamilton Public Health) will have no voting rights in the EMT. Ruetgers,

Golder, and Denis Corr will also not have voting rights in the EMT. Attendees were unanimous in agreeing that this change to the Terms of Reference was suitable.

- Sean Capstick noted that the aforementioned changes to the Terms of Reference could not be made during the meeting, since there was no capability to re-print the Terms of Reference at the meeting. As such, Sean Capstick inquired if attendees were comfortable signing the hardcopy Terms of Reference that was on-hand at the meeting, and then the discussed revisions would be made later and a revised (signed) Terms of Reference would be distributed to the group. Attendees were unanimous in agreeing that this approach was suitable.

Approval of Minutes from January Meeting and Follow-up Items

Sean Capstick noted that the meeting minutes from the previous EMT meeting (i.e., January 17, 2018) had been circulated in draft to the meeting attendees on January 22, 2018. Sean Capstick noted that no comments, or edits had been received; therefore, the meeting minutes would be finalized.

During the previous EMT meeting (i.e., January 17, 2018), numerous topics were discussed as having follow-up items to be discussed during the next EMT meeting (i.e., April 11, 2018). The follow-up items included the following topics:

1) Update on the December 5th incident
2) Information about what percentage of coal tar comes from local plants compared to what percentage comes from elsewhere
3) MOECC to provide information about the number of spills reporting's prior to June 2017
4) MOECC to provide a list of all spill reports/records from Ruetgers
5) MOECC to provide details regarding the other three spill events (i.e., not including the December 5th incident)
6) MOECC to provide reports for incidents for the past 24-month period, and the Order(s).
7) Information regarding the Order and efforts and progress made towards compliance.

The follow-up items generated the following comments and questions:

- Gord Gilmet provided a re-cap of the four incidents in 2017, including the one on December 5th, 2017, which resulted in an emission and liquid spill to the plant floor. Gord Gilmet noted that the MOECC issued an Order in response to the incident. As of present, the first four conditions of the Order have been met (in the necessary timeline), and Ruetgers has retained an independent engineer to conduct a root cause analysis, which will fulfill another condition of the Order. Gord Gilmet noted that the engineering team consists of three engineers, and they're currently reviewing the information and the next step will consist of the engineers talking to Ruetgers employees to aid in the root cause analysis, and then a recommended work plan will be prepared. Gord Gilmet noted that the recommended work plan will present methods to reduce the risk of future incidents occurring again.

- Jochen Bezner inquired whether all four incidents in 2017 were the same/similar. Gord Gilmet noted that two of the incidents involved material failure (e.g., hole(s) in the pipe liner), while the other two incidents were procedural failures.

- Kathleen Livingston inquired when the engineer's report is expected to be finished. Gord Gilmet noted that May 31st, 2018 is the date of delivery for the report; June 29th, 2018 is the date of implementation.

- Liz Tobin noted discomfort with the language “reducing the risk” and “minimizing the risk”. Gord Gilmet noted that nothing can be 100% guaranteed; therefore, wording such as “reducing” and “minimizing” is used to illustrate that there is no 100% guarantee.
- Jochen Bezner recapped that during the December 5th, 2017 incident, it was noted that some of the workers were affected by the incident and received medical attention. Jochen Bezner inquired about the health status of the workers and inquired if the workers have had any subsequent health issues as a result of the incident. Gord Gilmet reiterated that some personnel working at the plant experienced some minor health effects from their brief exposure to the vapour cloud, and were transported to hospital as a precautionary measure the day of the incident. All personnel transported to hospital were fine by the next day, and the health effects to employees were minor and short term. Gord Gilmet noted that no employees have noted additional health effects following the incident, and long-term health effects are not anticipated.
- Lynda Lukasik inquired if the December 5th, 2017 incident was a procedural or material related incident. Gord Gilmet noted that incident was a result of procedural failure, but noted he could not elaborate more due to the ongoing investigation being undertaken.
- Matt Lawson added that the City of Hamilton Public Health monitors data regarding number of hospital admittances per day etc. City of Hamilton Public Health looked into the data from December 5th, 2017 to see if any other members of the public were reporting health problems that day that were abnormal from the average. Matt Lawson noted that the data indicated that there were no hospital admittances or other health reporting’s that were above average on that day.
- Ghosh Bobba inquired if the December 5th, 2017 incident resulted in any impacts to aquatic life. Gord Gilmet noted he was not aware of any impacts or information pertaining to impacts to aquatic life.
- Paul Weinberg inquired about the type(s) of jobs that workers do, and the number of employees at the Ruetgers facility. Gord Gilmet recapped that Ruetgers Canada is a coal tar distillation company and recapped that the main products produced are coal tar pitches, refined tars and coal tar distillates. Ruetgers Canada employees 73 people. Gord Gilmet noted that Ruetgers produces materials for other industries and does not sell products directly to consumers. Gord Gilmet also noted that coal tar pitch is handled at ~~has~~ a high temperature and as such, employees must have appropriate PPE and must be careful to not be exposed to the product itself or any emissions from the product. Paul Weinberg inquired if changes will be made to the Ruetgers facility to make the operations safer for employees. Gord Gilmet noted that yes, improvements have been made, and such improvements will be outlined in the report from the engineers.
- Gord Gilmet addressed the follow-up item regarding the amount of coal tar that comes from local plants compared to what percentage comes from elsewhere. Gord Gilmet noted that in 2017, approximately 25% of the coal tar was brought from local facilities, while the remaining coal tar was imported from outside of Canada.
- Paul Widmeyer addressed the follow-up item regarding information about previous spills at Ruetgers. Paul Widmeyer noted that in the past ten years, Ruetgers had 28 coal tar related spills. Of these spills, eleven of the spills were atmospheric spills only, and 17 of the spills were liquid spills to the ground.
- Paul Widmeyer noted that in regard to the 2017 spills, the incident on June 2nd was caused by inadequate equipment, the October 13th spill was a result of wear and tear of a T-section joint, the October 31st spill was a result of a pipe lacking some thickness testing which resulted in pipe failure, and no details could be shared regarding the incident on December 5th.

- Gord Gilmet noted that coal tar pitch can be very corrosive and can wear the pipe over time. Gord Gilmet noted that Ruetgers tests the wear of the pipes over time, particularly the elbows and joints because the bend in the pipes have higher wear.
- In regard to the follow-up item regarding the request for incident reports for the past 24-month period, and the Order(s), Paul Widmeyer noted that the reports are available on the EMT SharePoint site.
- Sean Capstick inquired if the SharePoint site was working well for everyone. Meeting attendees noted no objection(s) with the use of the SharePoint site.
- Jochen Bezner noted that the SharePoint site does not allow all members of the public to easily access the information, since an invitation to the site is required. Jochen Bezner inquired if the reports and information on the SharePoint site could be made publicly available on a Ruetgers website. Gord Gilmet noted that having all information on the Ruetgers website is in the works. Gord Gilmet noted he would provide an update regarding the status of this at the next EMT meeting.

Regulatory Permitting Background

- Denis Corr recapped that during the previous EMT meeting (i.e. January 17, 2018) concern was expressed that Ruetgers may have received a “free pass” in getting the Site-Specific Standard.
- To address this comment Sean Capstick provided an overview of the regulatory permitting background, specifically the timeline for the preparation of the ESDM report, Site-Specific Standard application process, action plans updates, Ruetgers implementation of process improvement actions and how we got to this point. This provided context to the next item required by the SSS order, the Environmental Management System and Community Engagement Report.

Environmental Management System and Community Engagement Report

- Sean Capstick summarized that the Environmental Management System and Community Engagement Report is required by the benzene and benzo(a)pyrene Orders, and include the following information:
  - Documentation of all complaints received by Ruetgers relating to air emissions and the resolution of those complaints;
  - A written summary of the actions taken each calendar year to implement the Action Plan for benzene and benzo(a)pyrene, 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
  - The minutes of the EMT meetings held during the calendar year and any related follow-up actions.
- Sean Capstick provided an overview of the complaints received in 2017 and their resolution.
- Sean Capstick provided meeting attendees with a table outlining process improvement actions that Ruetgers has taken in 2016 and 2017. Gord Gilmet gave a presentation to provide an overview of the improvements (with illustrations of the equipment). The presentation generated the following comments and questions:
  - In regard to the improvement of the seal on top of the unloading station, Ghosh Bobba noted understanding that the improved seal means that there are no air emissions; however, Ghosh Bobba inquired if there are any liquid releases. Gord Gilmet noted that no liquid is being released.

- Kathleen Livingston inquired about the lifetime of the gasket. Gord Gilmet noted that the Operator inspects the gasket and checks it for cracks etc. and replaces the gasket if needed. Gord Gilmet noted that it is the responsibility of the Operator to check the gasket.
- In regard to the improved seal on the bottom unloading station, Lynda Lukasik inquired if some of the coal tar comes into the facility via truck. Gord Gilmet noted that much of the coal tar comes via truck locally, because the sources are about a fifteen-minute drive away. Lynda Lukasik inquired if Gord Gilmet would be discussing the loading/un-loading of coal tar from trucks (as opposed to just railcar). Gord Gilmet noted that coal tar un-loading from trucks wouldn't be discussed because railcar loading of products is the most significant source of benzo(a)pyrene, while un-loading of coal tar from trucks is not a significant source of benzo(a)pyrene.
- Liz Tobin inquired if the railcars are inspected. Gord Gilmet noted that railcars are regularly inspected, and added that inspection is also a requirement from Transport Canada. Gord Gilmet noted that railcars must be inspected before coal tar pitch can be loaded into them. Gord Gilmet noted that not all railcars are built the same way; however, to address this, Ruetgers has numerous types of gaskets on hand so that all railcars that enter the facility can be accommodated and an appropriate gasket is used.
- Since the coal tar pitch is high in temperature, Pamela Misener inquired if the railcars leaving the yard are hot to the touch. Gord Gilmet noted that the railcars are not hot, since the railcars are insulated and designed in such a way to not allow the heat of the coal tar pitch to be felt from the exterior of the railcar.
- Jochen Bezner inquired if the finished product leaving the Ruetgers facility is more dangerous than the product going into the facility. Gord Gilmet noted that for example coal tar pitch is loaded and transported at a higher temperature compared to coal tar that is received. Jochen Bezner inquired if the product leaving in the railcars is transported through the City of Hamilton and through the Niagara Escarpment. Gord Gilmet noted that the railcars leaving the Ruetgers facility are transported on main rail lines, which do traverse the City of Hamilton and are located within the Niagara Escarpment.
- In regard to the improvement of the seal on the rinsing station, Pamela Misener inquired how Ruetgers removes any residue from within the railcars. Gord Gilmet noted that hot coal tar oil is put into the car and "swished" around the car using an overhead mixer, which results in the melting of the residue. The solution of the residue in the coal tar oil is then bottom off-loaded to a storage tank onsite. Cathy McPherson inquired where the waste material from the cleaning process goes once it is off-loaded. Gord Gilmet noted that since coal tar oil is used to clean the tanks, the off-loaded material is sent to a storage tank onsite and then recycled in the process.

- Sean Capstick provided a summary of the impacts of the Action Plan on the dispersion modelling assessment. Sean Capstick presented the updated values for benzo(a)pyrene and noted that the table provided to the EMT meeting attendees illustrated the minor change in values. Sean Capstick noted that the Emission Summary and Dispersion Modelling Report itself is 100 or so pages and the majority of the report is calculations based on the production, the composition of the raw materials and products and the source or stack characteristics.
- Gord Gilmet provided a breakdown of the polyhydrocarbons and noted that this information all feeds into the calculations and the dispersion models.

Current ESDM Report (version 5.3) Version

- Sean Capstick provided an summary of the ESDM version 5.3 and noted that a summary of the report is available on the EMT SharePoint site.
- Lynda Lukasik noted preference for the tables provided to include the MOECC Standards, not just the Site Specific Standard information. Sean Capstick noted this information could be provided.
- Ghosh Bobba inquired about who developed the dispersion model. Sean Capstick noted that the US Environmental Protection Agency (EPA) developed the dispersion model and regularly updates it. The dispersion model predicts the maximum concentration based on a five-year meteorological data set, over a dispersion modelling grid that extend ten kilometres by ten kilometres on each side of the Facility.
- Ghosh Bobba noted the Hamilton Air Quality report dated September 2011, and provided the information to Sean Capstick.
- Sean Capstick stated that an error in calculations submitted in previous versions of the ESDM was identified and noted that the predicted concentrations for compounds with a 1-hour averaging period may change. Sean Capstick noted that the priority compounds: benzo(a)pyrene, benzene and naphthalene were based on source testing and not this calculation. Therefore, predicted concentration for these compounds will not change.
- Ruetgers has committed to update the calculations and provide the ESDM to the MOECC within seven weeks or so. Therefore, Sean Capstick noted that an update would be provided to the EMT at the next meeting.

Status of Monitoring Plan

- Sean Capstick noted that a draft Monitoring Plan has been submitted to the MOECC. The MOECC has asked some questions about the detection limit and analytical process. As such, Golder is working with a commercial lab to get to the same requirements for the Hamilton Monitoring Network. Sean Capstick noted that the concepts behind the Monitoring Plan were not questioned by the MOECC, and that questions raised were primarily surrounding the detection limit. Sean Capstick noted that a reply to the MOECC is required by April 23, 2018.
- Gord Gilmet noted that Ruetgers is ready to purchase the material and equipment needed to implement the monitoring plan, but are awaiting MOECC acceptance of the plan before proceeding with the material and equipment orders.
- Kathleen Livingston noted that she was appalled that given the business Ruetgers is in, that they were having such difficulty measuring the limits. Gord Gilmet clarified that Ruetgers collects the sample, but the actual analysis is conducted by a laboratory. Denis Corr noted that there has never been an issue with the analysis of benzo(a)pyrene in the past, because the limits could easily be measured; however, when the benzo(a)pyrene limits changed in 2016, the analysis became more of a challenge since the value dropped by orders of magnitude.
- Sean Capstick noted that there is a challenge to get the detection limits for sampling on a 24-hr basis to have the same value as the annual standard. This is because the samplers can only collect so much air over a 24 hour basis and the lab measures the material that is captured on the filter. Furthermore, the concentrations in any 24 hour period may be higher than an annual concentration due to variability in the

wind direction. The sampling detection limits will be comparable to the 24 hr concentration predicted by the dispersion model.

- Lynda Lukasik inquired about benzo(a)pyrene and the upper risk thresholds, specifically if there has been a monitored value in the past that was above the upper risk threshold(s). Gord Gilmet noted he believes there was an instance in 2014 when the monitored value was above the upper risk threshold. Lynda Lukasik formally requested that she be notified if the monitored value goes above the upper risk threshold. Sean Capstick noted that the monitoring involves taking samples over time, and then the samples are sent to a lab for analysis. Therefore, Sean Capstick noted that there will be some time between when the upper risk threshold was monitored and when people would be informed. Lynda Lukasik noted understanding of the delay in being informed. Sean Capstick noted that if concentrations above an upper risk threshold are monitored, and once the information is available, the information would be distributed right away.
- Cathy McPherson noted that the dispersion requirements are based on the US Environmental Protection Agency's dispersion model. Cathy McPherson noted that the environmental conditions in the United States are unknown at this time, and therefore if the United States becomes less strict, Cathy inquired how Ontario plans to address this. Cathy Grant (MOECC) noted that the MOECC is closely watching any changes that may be occurring in the United States, and is aware of the potential changes to environmental conditions in the United States. Cathy Grant noted that as of now, the dispersion requirements have still been regularly updated. If the United States makes changes that the MOECC does not agree with, then the MOECC will re-evaluate the situation and determine the appropriate model to be used moving forward.

Items for Discussion in Next Meeting and Closing Remarks

Denis Corr inquired whether there were any additional items to be discussed prior to closing the meeting. The following additional items were discussed:

- Sean Capstick recapped that the Leak Detection and Repair program would be discussed at the next EMT meeting.
- Gord Gilmet noted he would provide an update on action plan progress at the next EMT meeting.
- Kathleen Livingston requested a list of EMT members be provided at the next EMT meeting. Gord Gilmet noted this would be provided.
- Lynda Lukasik requested that ESDM version 5.4 be circulated to members when the report is ready, instead of waiting for the next meeting. Sean Capstick noted a similar summary of the report to the information discussed today would be provided once ready.
- Liz Tobin requested that water quality issues be added to agenda for the next EMT meeting, specifically the location of catch basins by the facility (i.e., around the perimeter), and water treatment information. Gord Gilmet noted this topic would be added to the agenda and discussed at the next EMT meeting.

Denis Corr thanked everyone for attending the EMT meeting and encouraged everyone to attend the next EMT meeting scheduled for Wednesday July 11, 2018. A formal meeting invite will be circulated to EMT members and meeting attendees.

MEETING MINUTES

TO Ruetgers Environmental Monitoring Team (EMT)

CC Gord Gilmet, Ruetgers Canada Inc.

FROM Sean Capstick **EMAIL** RuetgersEMT@golder.com

SUBJECT: RUETGERS EMT MEETING (JULY 11, 2018)

Date, Time and Location:	July 11, 2018 6:00 p.m. to 8:00 p.m. Hamilton Waterfront Trust Centre (Multipurpose Room) 57 Discovery Drive, Hamilton, Ontario, L8L 8K4		
Attendees:	Gord Gilmet, Ruetgers	Denis Corr, Chair	Sean Capstick, Golder
	Kyla Suchovs, Golder	Paul Widmeyer, MOECC	Hans-Peter Boergers, Resident
	Ed Nowlan, Resident and Chair of Hamilton Beach Community	Ghosh Bobba, Resident	Jochen Bezner, Resident
	Kat Bezner, Resident	Lynda Lukasik, Environment Hamilton	Liz Tobin, Resident
	Marsha Duncan, Resident	Pamela Misener, Resident	Joanna Kadlubowska, Resident
	Paul Weinberg, Resident	Cathy McPherson, Resident	Susan Noakes, Resident
	Ute Schmid-Jones, Resident		

Meeting Notes

Welcome and Introductions

- Gord Gilmet welcomed everyone to the meeting, introduced himself, and provided an overview of the meeting agenda.
- Introductions were made around the room, with attendees noting their name and their interest in the EMT.

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Approval of Terms of Reference

Sean Capstick recapped that during the last EMT meeting (i.e., April 11, 2018) attendees who wished to be EMT members were asked to sign the Terms of Reference; sixteen individuals/organizations signed the Ruetgers EMT Terms of Reference. Sean Capstick reiterated that at the time of signing, a few revisions were requested to be made to the Terms of Reference. The requested edits have since been made, and Sean Capstick noted that the final (signed) EMT Terms of Reference was uploaded onto the Ruetgers SharePoint site on April 25, 2018 and sent via email to all EMT members and meeting attendees.

Approval of Minutes from April Meeting and Follow-up Items

Sean Capstick noted that the meeting minutes from the previous EMT meeting (i.e., April 11, 2018) had been circulated in draft to the meeting attendees on April 25, 2018. Sean Capstick noted that no comments, or edits had been received. Denis Corr inquired with meeting attendees if there were any comments or if the meeting minutes could be finalized. Attendees were unanimous in agreeing that the meeting minutes could be finalized.

During the previous EMT meeting (i.e., April 11, 2018), numerous topics were discussed as having follow-up items to be discussed during the next EMT meeting (i.e., July 11, 2018). The follow-up items included the following topics:

1) Leak Detection and Repair Program
2) Action Plan process
3) List of EMT members (i.e., Terms of Reference)
4) ESDM version 5.4
5) Location of stormwater catch basins by the Ruetgers facility (i.e., around the perimeter), and water treatment information.

Sean Capstick noted that all of the follow-up items, except for the inquiry regarding stormwater catch basins and water treatment information, are included in the current EMT meeting agenda. Therefore, Sean Capstick noted that stormwater catch basins and water treatment information would be discussed at the moment, with the other follow-up items being discussed in further detail later in the meeting.

The stormwater catch basins and water treatment information generated the following comments and questions:

- Gord Gilmet noted that at the Ruetgers facility there are two different types of water that are treated: 1) process waste water, generated from the processing of the coal tar; and, 2) stormwater (rain) that falls within the facility/process area. Gord Gilmet noted that Ruetgers treats both types of waste water on-site before the water is discharged into the City of Hamilton's water treatment system. Gord Gilmet noted that no stormwater discharges directly from the Ruetgers site without being treated.
- Gord Gilmet provided an overview of the Ruetgers' facility's process water treatment system, noting that all process water is collected into a tank (i.e., Tank 6) which can hold almost one-million imperial gallons. The process water from Tank 6 then goes into a biological treatment plant, which has bacteria in it that cleans the water, and then the water goes through an ultrafiltration process. Gord Gilmet noted that the type of bacteria used in the biological treatment plant is a mix of over 300 different species and Ruetgers obtained this bacteria culture mixture from Stelco, since Stelco has been successfully using the bacteria culture in their facility for many years. Gord Gilmet noted that the filters in the ultrafiltration process filters the water down to 0.04 microns, so the water is basically particle free. After the ultrafiltration, the water passes through

activated carbon, which further helps absorb organics. Lastly, the water goes through a hydrogen peroxide addition step which chemically treats the water and is specifically useful in reducing cyanide concentrations. Gord Gilmet presented a table showing that the process wastewater treatment system is effective in meeting the Sewer-use By-law limits for the comtaminants of concern.

- Lynda Lukasik inquired if Ruetgers has an over-strength agreement with the City of Hamilton for water discharged to the City of Hamilton water system. Lynda Lukasik further inquired if there are any further treatment plans in the future to deal with the contaminant that has the over-strength. Gord Gilmet noted that Ruetgers does have an over-strength agreement for one contaminant, total Kjeldahl nitrogen or TKN. TKN is the sum of nitrogen in bound in organic substances, nitrogen in ammonia (NH3-N) and in ammonium. Gord Gilmet noted that the City of Hamilton has approved this over-strength agreement and there are no plans for additional treatment at the site.
- Jochen Bezner noted that for cyanide, it appears that Ruetgers is above the City of Hamilton's sewer use bylaw limit. Gord Gilmet noted that the cyanide concentration is typically above the limit before the hydrogen peroxide water treatment step. Once the waste water has gone through the hydrogen peroxide treatment step, the cyanide concentrations in the water is then lowered below the Sewer use By-law limit.
- Ghosh Bobba asked where monitoring of the waste water takes place. Gord Gilmet noted that monitoring occurs at the discharge point to the City sewer system.
- Liz Tobin asked how many gallons of water go through the water treatment facility per day, on average. Gord Gilmet noted that approximately 10,000 to 13,000 imperial gallons of water are treated per day.
- Liz Tobin inquired whether the runoff from the facility goes. Gord Gilmet noted that the entire Ruetgers property is surrounded by an earth dike, except for where the property entrance is located.
- Liz Tobin and Gord Gilmet discussed the City of Hamilton's stormwater catch basins located adjacent to the Ruetgers facility, noting that there are five catch basins located along Strathearne Avenue. Liz Tobin noted that these five catch basins are an older design used by the City of Hamilton. Liz Tobin inquired if Ruetgers is aware of any contamination in the stormwater catch basins adjacent to the facility. Gord Gilmet reiterated that rain water that comes into contact with the Ruetgers facility is treated on-site and Ruetgers does not discharge any water into the City of Hamilton's stormwater catch basins.
- In the case of a power outage at the Ruetgers facility, Jochen Bezner inquired if the stormwater treatment system would be impacted by a loss of power, specifically if the water storage tank (i.e., Tank 6) has the capacity to store excessive water that may accumulate as a result of a power failure. Gord Gilmet noted that the water treatment plant has sufficient capacity to hold water for an extended period if a power outage were to occur.
- Jochen Bezner noted the assumption that the loading and unloading areas in the facility are all sealed so that any rainwater that comes into contact with these areas does not become runoff. Gord Gilmet noted that this assumption was accurate. Gord Gilmet added that the loading and unloading areas are all asphalt and these areas contain sumps that collect all the water that comes into contact with the asphalt.
- Lynda Lukasik inquired if Ruetgers could provide a copy of Ruetgers' over-strength agreement with the City of Hamilton. Gord Gilmet committed to providing the over-strength agreement before the next EMT meeting.
- Ghosh Bobba inquired about what Ruetgers does with the solid waste produced at the facility. Gord Gilmet noted that the solid waste collected is classified as hazardous waste and thus the waste must be registered

with the Ministry of the Environment, Conservation and Parks (MECP, formerly the Ministry of the Environment and Climate Change [MOECC]) before being sent to an approved hazardous waste receiving site for disposal or treatment.

Emission Summary and Dispersion Modelling (ESDM) Report

- Sean Capstick provided a summary of the ESDM version 5.4 and noted that a summary of the report is available on the EMT SharePoint site (and a hardcopy was distributed to meeting attendees). Version 5.4 corrects the historical calculation error regarding the release of certain compounds from Tank-84 and the boiler. The changes are limited to compounds that were not source tested but rather relied on engineering calculations.
- Sean Capstick noted that this ESDM report (i.e., version 5.4) also reflects an updated assessment of the Fume Gathering and Incineration System, including Tank-84 and the boiler, through two operating scenarios (i.e., normal and venting operations) that meets new MECP requirements that are required after July 1st. For air dispersion modelling purposes, the MECP procedures require that the modelling scenarios to represent both normal and upset conditions. Therefore, the venting operations scenario was conducted to represent the worst-case emissions, which included 22-hours of venting everyday. The other modelling scenario, the normal operation, assumed 1.9-hours of venting everyday. Sean Capstick noted that for venting operations, assuming the worst-case day, only one compound is above the criterion (i.e., Naphthalene).
- Sean Capstick noted that Naphthalene is the simplest polyaromatic hydrocarbon (PAH), and for example, moth balls are made of Naphthalene. Naphthalene has a 24-hour guideline that has been in place for many years and the Ministry has made no indication that the guideline will be updated anytime soon. Sean Capstick noted that more detailed dispersion modelling should be done near residential properties to study the exposure of Naphthalene to assess the actual venting under the observed meteorological conditions. Meeting attendees noted no objection to this modelling being conducted.
- Jochen Bezner inquired about the footnote at the bottom of the table provided in the ESDM version 5.4 summary document. Jochen Bezner noted that the second footnote (i.e., B(a)P remains to be above the URT. There are no further actions as the Facility has previously notified the MOECC of the URT exceedance) seems to contradict itself because it mentions that no updates can be done, yet the Leak Detection Repair Program and additional action plan items are being undertaken. Sean Capstick noted that Jochen Bezner was correct, the footnote is inaccurate and is left over from the ESDM version that supported the site-specific standard application and was referring to the s.30 notification that was made in the past. Actions are being taken to reduce the concentrations.
- Lynda Lukasik inquired if two modelling scenarios will now be needed/expected from all other facilities (i.e., not just Ruetgers). Sean Capstick noted that the number of modelling scenarios needed depends on the facility and how many circumstances the facility could operate under.
- Lynda Lukasik inquired if the ESDM is for the entire Ruetgers facility. Sean Capstick and Gord Gilmet noted that yes, the ESDM is for the entire facility.
- Cathy McPherson noted concern regarding Naphthalene, noting that the compound can be absorbed not just by the air, but also by the soil etc. Cathy McPherson noted concern that the Naphthalene is only being tested from the air and not other ways in which it may come into contact with the environment. Cathy McPherson added that Naphthalene is a carcinogen. Sean Capstick noted that Naphthalene is classified as a likely carcinogenic compound. Cathy McPherson noted uncertainty about this; therefore, Sean Capstick noted that additional information regarding Naphthalene would be provided at the next EMT meeting.

- Gord Gilmet noted that Ruetgers has one water discharge point and the water tested at this discharge point meets the 5-ppb bylaw limit for PAHs. With regards to soil, Gord Gilmet noted that when soil has to be removed off-site (e.g., during construction), the soil gets tested to see if it can be classified as non-hazardous, and it is tested for PAHs. Gord Gilmet offered to look into the soil testing that took place in the past to see what the Naphthalene levels were noted and provide this information at the next EMT meeting.
- Ghosh Bobba inquired if the modelling included an assessment for uncertainty. Sean Capstick noted that the modelling includes the worst-case scenario.
- Ute Schmid-Jones inquired if the compounds being measured are being measured against humans (i.e., adults and children), and non-humans (i.e., plants and animals). Sean Capstick noted that the Ministry sets standards for humans and the environment. Sean Capstick noted that for Benzene and Benzo-pyrene, the standards are set for the most sensitive human population (i.e., elderly people and children). Sean Capstick noted that the standard for Naphthalene is quite dated and thus does not have this level of detail. Denis Corr added that normally the standards are set based on the most sensitive receptor. For example, the standard for lead is set against air and children, while fluoride's standard is against cattle because fluoride can be on the grass and then cattle eat the grass.
- Jochen Bezner noted that when the facility has accidents, the residents' confidence in the facility's operations and the Ministry becomes tarnished. Jochen Bezner noted that the modelling does not include accidents, and when looking at Ruetgers' accident history in the past two years, many residents are concerned. Jochen Bezner noted that he would hope that the Ministry understands the residents' concern.
- Kat Bezner added that it is understood that the Ministry sets modelling standards based on the fenceline. However, Kat Bezner noted concern regarding cumulative effects, particularly in Hamilton since there are many industries present in the area and thus their cumulative effects can be very harmful. Kat Bezner noted that individually each industry/facility may comply to the Ministry's standards, however if they were to be cumulatively assessed, then the effects may be classified as harmful.
- Paul Widmeyer noted that the Ministry is currently undertaking a cumulative effects study to look at the overall airshed in Hamilton. Paul Widmeyer noted that this cumulative effects study will impact when a new company seeks approvals, or when an existing company seeks Ministry approval for a change in their equipment, since then approval will need to be sought in consideration of the cumulative impacts. Paul Widmeyer noted that this new process would only be applied to new or expanding companies and thus the existing issues would still fall under the site-specific standard process.
- Denis Corr mentioned the CCME's Canadian Environmental Quality Guidelines and the airshed program. Denis Corr added that Ontario has disclosed the air zones, and Denis believes that Hamilton is within zone 3. Hamilton has been identified as a very industrial heavy area.
- Lynda Lukasik noted that with respect to cumulative effects, the Hamilton Air Monitoring Network is monitoring benzene and the results show that ambient air is above the limits for benzene.

Update on Action Plan Progress

- Gord Gilmet provided an overview on the air pollution control system and noted that Ruetgers continues to implement Process Improvement Action to reduce emissions. Gord Gilmet added that source testing and monitoring of emissions would allow for an assessment of the success of the Process Improvement Actions.

- Now that the new loading arms are installed, Joanna Kadlubowska inquired if the SOP must be updated because employees must be trained on the operation of the new arms. Gord Gilmet noted that current employees are made aware of the changes, and all other relevant documents are also being updated so that new employees will only be taught practices and procedures that apply to the new equipment.

Update on Ambient Air Monitoring Plan

- Gord Gilmet provided an update on the Monitoring Plan, noting that it includes installing a fenceline monitoring system around the facility at pre-determined locations. Gord Gilmet provided an overview of the systems used, such as the VOC canister and the high-volume air sampling (Hi-Vol) units.
- Gord Gilmet noted that the first sampling will be done by August 15, 2018.
- Gord Gilmet noted that he should be able to provide an update on the testing and some sampling results by the next EMT meeting.

Leak Detection and Repair Program

- Gord Gilmet provided a summary of where Ruetgers is with the Leak Detection and Repair (LDAR) Program and when Ruetgers is required to conduct the program. Gord Gilmet noted that Ruetgers completed the first survey on April 16, 2018. The program flagged a total of 784 components for the leak detection test. Of these components, 437 were tested during the first survey. Gord Gilmet noted that some components were not tested because they were inaccessible (e.g. many points are heavily insulated and/or surrounded by other equipment). Gord Gilmet noted that SNC-Lavalin was retained to undertake the first survey and to set up a database to collect the information.
- Gord Gilmet noted that only 12 of the 437 components tested were found to be “leaking” above the concentration level in the Ruetgers Site Specific Standard for benzene. Gord Gilmet provided an overview of what was defined as a leaking component, such as the component could be leaking a substance above a certain threshold or dripping (e.g., such as a certain number of drips per minute).
- Kat Bezner inquired if the water system and treatment system was checked as part of the LDAR Program. Gord Gilmet noted that these systems are not included in the LDAR Program, since the program only targets components that service materials that have at least 1% of benzene.
- Kat Bezner inquired if some of the water runoff could possibly have benzene in it. Gord Gilmet noted that runoff does have benzene in it, but not at concentrations of 1%.
- Gord Gilmet noted that for compressors, pumps and safety release valves, additional leak tests were required and thus operators must check these components daily (twice per day) for visible and audible leaks (e.g., drips, steam coming out).
- Gord Gilmet noted that the second LDAR Program survey will be conducted by SNC-Lavalin in August 2018 and that approximately 620 components will be checked during that survey.
- Kat Bezner noted that since more components would be tested during in August, she assumed that more leaks would be found, and thus inquired if the newly found leaking components would be included in the repair list for the plant shut down in the Fall. Gord Gilmet noted that any leaks that are found during the testing would be attempted to be repaired when found (e.g. such as tightening bolts on a leaking flange), but that replacements of any components would be done during a plant shut down.

- Paul Weinberg inquired if Ruetgers has been keeping track of what components frequently leak or are problem areas. Gord Gilmet noted that since Ruetgers has only undertaken one LDAR Program survey, there is not enough data yet to be able to see if there are trends in the components that are flagged as leaking. Once more testing has been done, it is Ruetgers' plan to compare the data over time to identify trends.
- Paul Weinberg asked how often leak testing occurs and how often components are tightened (if applicable). Gord Gilmet noted that testing will take place three times a year, and leaking components will be tightened close to the time that the leak is detected (if tightening is a suitable approach), and once the component is tightened, then testing will be conducted again to see if the tightening helped.
- Gord Gilmet noted that all the testing is being recorded and reiterated that SNC-Lavalin helped set up a database for Ruetgers to keep thorough records.
- Hans-Peter Boergers asked about how the leaks that are identified as having to wait until the plant shut down in the Fall are being dealt with in the meantime. Gord Gilmet noted that anything that is leaking that has to wait until the plant shut down to be fixed are currently being left in their current state.
- Kat Bezner inquired how often Ruetgers has plant shut downs. Gord Gilmet noted that the facility plans shut downs twice per year, once in the Spring and once in the Fall.
- Sean Capstick stated that the current ESDM Report includes the fugitive emissions from these components and the emission rate calculations are in accordance with US EPA guidelines for sites with no LDAR program. The term "leak" represents a very low measured concentration, approximately 500 parts per million detected in the area immediately adjacent to the component. The results of the measured values will be included in the next ESDM Report to calculate the emission rate from each component.

Items for Discussion in Next Meeting and Closing Remarks

Denis Corr thanked everyone for attending the EMT meeting and encouraged everyone to attend the next EMT meeting scheduled for Wednesday October 24, 2018. A formal meeting invite will be circulated to EMT members and meeting attendees.

https://golderassociates.sharepoint.com/sites/21499e/1791786ruetgers2018sitespecificstandardhamiltonexternal/shared documents/emt meeting - july 11, 2018/ruetgers emt_11july2018_meeting minutes_draft.docx

MEETING MINUTES

TO Ruetgers Environmental Monitoring Team (EMT)

CC Gord Gilmet, Ruetgers Canada Inc.

FROM Sean Capstick **EMAIL** RuetgersEMT@golder.com

SUBJECT: RUETGERS EMT MEETING (OCTOBER 30, 2018)

Date, Time and Location:	October 30, 2018 6:00 p.m. to 8:30 p.m. Hamilton Waterfront Trust Centre (Multipurpose Room) 57 Discovery Drive, Hamilton, Ontario, L8L 8K4		
Attendees:	Gord Gilmet, Ruetgers	Denis Corr, Chair	Sean Capstick, Golder
	Jean-Marc Crew, Golder	Paul Widmeyer, MECP	Charlene Anderson, MECP
	Pamela Misener, Resident	Liz Tobin, Resident	Hans-Peter Boergers, Resident
	Lynda Lukasik, Environment Hamilton	Kat Bezner, Resident	Jochen Bezner, Resident
	Kathleen Livingston, Resident	Ute Schmid-Jones, Resident	Cathy McPherson, Resident
	Susan Noakes, Resident	Trevor Imhoff, Senior Project Manager at City of Hamilton, Public Health Unit	

Meeting Notes

Welcome and Introductions

- Denis Corr welcomed everyone to the meeting, introduced himself, and provided an overview of the meeting agenda.
- Introductions were made around the room, with attendees noting their name and their interest in the EMT.

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Approval of Meeting Minutes from July Meeting and Follow-up Items

- Sean Capstick noted that the meeting minutes from the previous EMT meeting (i.e., July 11, 2018) had been circulated in draft to the meeting attendees on July 27, 2018. Sean Capstick noted that no comments, or edits had been received. Denis Corr inquired with meeting attendees if there were any comments or if the meeting minutes could be finalized. Attendees were unanimous in agreeing that the meeting minutes could be finalized.
- During the previous EMT meeting (i.e., July 11, 2018), numerous topics were identified as having follow-up items to be discussed during the next EMT meeting (i.e., October 30, 2018). The follow-up items included the following topics:

    1) Naphthalene health effects, modelling at residential receptors and soil testing
    2) Air Quality Monitoring Plan
    3) Leak detection and repair program
    4) Over-strength agreement with the City of Hamilton (the City)

- Denis Corr noted that all the follow-up items, except for the over-strength agreement with the City of Hamilton, are included in the current EMT meeting agenda. Therefore, Denis Corr stated that the over-strength agreement would be discussed now, with the other follow-up items being discussed in further detail later in the meeting. The over-strength agreement generated the following comments and questions:

    - Gord Gilmet noted that at the last EMT meeting, one question that was asked was regarding the over-strength agreement of effluent discharge that Ruetgers currently holds with the City. Gord Gilmet presented the overstrength agreement held by Ruetgers for TKN (Total Kjeldahl Nitrogen which is primarily ammonia in wastewater, noting that the City Sewer Use bylaw limit for discharge of this parameter is 100 ppm. The over-strength agreement allows for Ruetgers to discharge effluent with TKN concentrations at a stronger concentration than 100 ppm, adding that the effluent is sampled on a weekly basis and sent to a lab for analysis to ensure concentrations are not above the over-strength agreement. A quarterly report is required as part of the over-strength agreement which is sent to the City summarizing the sampling results. Gord Gilmet added that Ruetgers has held oversstrength agreements with the City for greater than 20 years and that the current agreement lasts three years and expires in December 2019 but can be renewed.
    - Liz Tobin asked if the City will or has ever changed their minds on issuing overstrength agreements. Gord Gilmet responded stating that yes, the City has changed their minds on the conditions of certain over-strength agreements in the past, recalling that in 2009, Ruetgers used to have an over-strength agreement for phenols as well, however the City determined that they would not longer issue over-strength agreements for this parameter.

Update on the Implementation of the Action Plan

- Gord Gilmet provided an update on the implementation of the action plan associated with the site-specific standards for benzene and benzo(a)pyrene [B(a)P] emissions. Gord Gilmet noted that Ruetgers is required by the Site Specific Standard (SSS) to complete engineering studies assessing the methods to address system efficiency and optimize operations of the Fume Scrubbing System (FSS), Fume Gathering and Incineration (FGI) System and wastewater treatment plant by the end of 2018. Gord Gilmet cautioned that these are complex systems, and the most experienced technical staff at Ruetgers completing the

assessment of these systems has retired and will be replaced by a third party, potentially causing a delay in the submission of the assessments. Gord Gilmet added that Ruetgers is also committed to completing an additional engineering study that assesses the effectiveness of all actions completed to date, which is above what is required by the SSS.

- Gord Gilmet presented the results of the second Leak Detection and Repair (LDAR) survey that was completed in August for benzene, reiterating the results of the first survey completed in April. Gord Gilmet stated that the August survey assessed a total of 619 components, with the remaining components on-site being deemed inaccessible and were therefore not capable of being assessed at this time. Of the 619 detected components, seven leaks were identified, three of which were immediately repaired through tightening while four were identified for repair during the next plant-wide shutdown. Gord Gilmet noted that during Ruetgers' last shutdown in October, two of the remaining four leaks were repaired. Unanticipated variables prevented the other two leaks from being repaired, such as one component with an identified leak was located above flammable material, preventing the repair process from being completed as the repair requires welding. Gord Gilmet stated that the next LDAR survey is scheduled for November, as a leak survey must be completed at least three times each calendar year with at least one component leak survey being completed during each of the following periods:

  i. The period starting April 1 and ending June 30,

  ii. The period starting July 1 and ending September 30, and

  iii. The period starting October 1 and ending December 31.

- Sean Capstick clarified that the detection of leaks involves placing sensitive instrumentation next to these components and receiving a measurement of volatile organic compounds (VOCs). The benzene Order states that repairs are required when the concentration of VOCs discharged to air from a leaking component is greater than or equal to 500 ppm by volume and/or when a component has a liquid leak rate of three drops per minute or greater. Sean Capstick added that these are not open emissions leaks, as the term would suggest.

- Gord Gilmet noted that the FGI System takes overpressure vapours from storage tanks and directs these gases to the on-site boiler where they are combusted and destroyed. One of the requirements of the SSS was to install instrumentation to monitor and record the flow of gases to the FGI System, the temperature of the gases and the residence time of the gases in the boiler. Ruetgers has hired a third party to design and install measurement equipment for these gases, however it was determined by the third party that the current arrangement of equipment leaves limited space for typical measurement equipment. Gord Gilmet stated that due to this impediment, the firm identified an indirect way of measuring the gases and is preparing a report with their results for the end of this year. At present, a flow meter is still required to be installed on the FGI System.

- Liz Tobin asked if the configuration of this system is typical of similar systems globally. Gord Gilmet responded, noting that the equipment in this plant is greater than 40 years old and designers may not have anticipated these issues; however, it may be possible that the design has been configured for direct measurement in newer systems.

- Gord Gilmet noted that the remaining actions items for benzene and B(a)P have been completed and there are no further updates.

Naphthalene

- Sean Capstick noted that at the last meeting, Cathy McPherson asked what naphthalene's classification was. Sean Capstick stated that the classification for naphthalene is different based on the agencies that classify these compounds. Sean Capstick summarized the classification of naphthalene from the U.S. EPA, International Agency for Research on Cancer (IARC), and the California EPA, adding that there is no evidence of carcinogenicity in humans, although there is some evidence in animals.
- Lynda Lukasik asked where the "Group 2B" classification ranked on the IARC classification scale and asked for the definition of a Group 2A classification. Sean Capstick responded by stating that IARC classifies compounds into 5 groups: 1, 2A, 2B, 3A and 3C, adding that 2B is considered as a probable carcinogen and 2A is considered a possible carcinogen. Sean Capstick noted that the classifications are written to note that the carcinogenic risk is not definitive.
- Sean Capstick stated that another question from the last meeting inquired about the environmental fate of naphthalene in soil and water. Sean Capstick noted that through examination of the half life value of naphthalene, the compound can be deposited in soil but is not expected to be persistent (half life of 1.1 days), and that the compound is reactive and would, therefore, not persist in water. Sean Capstick stated that B(a)P would likely be more persistent in the environment based on the compound's volatility. Cathy McPherson stated that this is slightly concerning, as there is already a large amount of air pollution in the city.
- Sean Capstick presented the results of the dispersion modelling of naphthalene concentrations at residential receptors from venting operations at the Ruetgers facility. Sean Capstick explained that this operating scenario represents a worst-case scenario by assuming continuous venting of Tank-84 for 21 hours (the normal operating scenario uses 1.9 venting hours per day) on the worst-case meteorological day for a period of five calendar years. Sean Capstick stated that the maximum predicted concentrations presented are below the Ministry guideline at residential receptors.
- Lynda Lukasik asked if the Ministry guideline is comparable to the California guideline, as she is unsure if the Ministry guideline is old or outdated. Sean Capstick responded, stating that he is unsure, but will take this away and provide a response to Lynda Lukasik at the next meeting.
- Cathy McPherson asked if the staff was using protective equipment during these venting operations. Gord Gilmet responded by explaining the venting process, noting that these emissions are emitted out of the stack and would have negligible effects on employees working at the ground level. Gord Gilmet added that when employees work directly at the source of the venting machinery, they would use protective equipment.
- Cathy stated that this is problematic due to the possible carcinogenic effects. Gord Gilmet stated that although employees may be able to smell the compound due to the low odour threshold, the concentrations of naphthalene are very diluted at ground level. Sean Capstick further explained the FGI System's purpose is to control emissions from the storage tanks, noting that employees would likely not be within the area of the discharge when overpressure occurs, triggering the release of naphthalene through the stack.

Air Quality Monitoring Plan

- Sean Capstick stated that as part of the SSS, Ruetgers is required to implement an air quality monitoring plan for benzene and B(a)P, noting that this plan was approved by the Ministry and implemented in August 2018 and now has results from four of seven monitoring events that have taken place since August. Sean Capstick explained the monitoring methodology, noting that monitoring events take place at the same time

as the Hamilton Air Monitoring Network (HAMN). Sean Capstick concluded by stating that each month's benzene and B(a)P results must be reported to the Ministry through a monthly report; quarterly reports must be completed for B(a)P summarizing the results for each quarter. Sean Capstick added that additional reporting is required if values measure above a trigger level that was included in the SSS by the Ministry.

- Sean Capstick presented the locations of the monitors at the Ruetgers facility, noting that a monitor is placed near a predicted emission source in each cardinal direction (North, South, East, West). The location for each monitor is as follows:
  - West monitor is placed adjacent to the rail car loading area and is expected to have the highest concentrations.
  - South monitor is placed adjacent to the raw material storage.
  - East monitor is placed on a tank located adjacent to the wastewater treatment sources.
  - North monitor is placed adjacent to tanker truck loading area and available power source for the site.
- Sean Capstick noted that most benzene sources are emissions from the tall stacks or from fugitive emissions throughout the entire facility (LDAR survey).
- Sean Capstick noted that B(a)P is present in raw materials, and the distillation process concentrates the compounds in some final products. Sean Capstick added that the rail car and tanker truck loading areas are the main sources predicted to emit B(a)P.
- Jochen Bezner inquired if the numbers presented on the source summary slide are measurements or predictions. Sean Capstick responded that these are the predicted emission rates of source areas on the Ruetgers site, not the results of the air quality monitoring program (presented on a later slide).
- Gord Gilmet explained an unanticipated variable to consider in the results for the North monitor. Gord Gilmet stated that in July, Ruetgers was required to upgrade the ventilation of the tanker truck loading area due to concerns from workers regarding their exposure to fumes, and so, Ruetgers provided workers with respirators to complete the work. In the middle of the summer, it was becoming increasingly difficult for employees to complete the work with respirators, as the process of loading could take up to 45 minutes, with exposure lasting approximately 15 seconds when the loading arm detaches from the trucks and hatch is closed. To remediate this issue, Gord Gilmet noted that Ruetgers installed an exhaust system that pulls the air away from the work area and breathing zone of workers, so that workers could complete the work without respirators.
- Gord Gilmet continued, noting that the North monitor is located in close proximity to the tanker truck loading area. The new ventilation system is now discharging the exhaust towards the North monitor, when in absence of the exhaust system, vapours would be distributed from the building enclosure.
- Jochen Bezner noted that Ruetgers is now changing the airflow at the site, potentially leading to lower detection measurements of "true" emissions, specifically at the North monitor. Jochen Bezner added that by only having four monitors at the site, the monitoring program may not be comprehensive enough for Ruetgers to accurately capture emissions.
- Jochen Bezner asked if the Ministry could comment on this concern on redirecting air flow on-site near the air quality monitors, as this could lead to modified results. Paul Widmeyer stated any modification does result

in a consultant such as Sean Capstick to update the company's Emission Summary and Dispersion Modelling (ESDM) Report.

- Denis Corr noted that we've now reached the half way point of the meeting and called for a brief intermission.
- Sean Capstick presented the results of the Air Quality Monitoring Plan for benzene, stating that for each of the four sampling results taken from each monitoring location, all the measured values were below the modelled 24-hour maximum predicted concentration of 79.2 µg/m^3 included in the SSS. Sean Capstick noted that the highest concentration is on the west platform.
- Cathy McPherson asked why the concentration increased on the West monitor compared to previous measurements. Sean Capstick responded, stating that the concentration is dependant on the direction the wind is blowing, and whether the monitor is upwind or downwind of the sources of emissions.
- Jochen Bezner asked what would happen if measurements were above the 79.2 µg/m3 predicted maximum concentration. Sean Capstick responded that in this scenario, the results would indicate that there are additional sources that were not considered in the model, and the model would need to be updated to consider any additional sources.
- Pamela Misener inquired about the invalid samples, and if this was due to a leak in the process. Sean Capstick responded that this was due to a leak in the sampling system, not the process.
- Denis Corr clarified that the table should likely be read horizontally instead of vertically, as you are comparing across sampling stations during each sampling period, not between sampling periods. Denis Corr added that by looking at the different monitors, you will be able to get a sense of the wind direction.
- Liz Tobin asked whether wind direction is measured at these stations. Sean Capstick responded that wind direction is measured at HAMN monitoring stations as presented on a future slide. Liz Tobin stated that it is discouraging that there are two invalid samples.
- Jochen Bezner asked why on August 18th the East monitor registered the highest concentration, but during the September 11th sample, the West monitor registered the highest concentration. Sean Capstick noted that this is the beginning of the sampling regime, and it will take more monitoring events and analysis to identify potential causes for the results. Denis Corr added that the samples are taken on a 24-hour basis, and the wind could be rotating constantly, and also that this is a highly industrialized area and there is potential that concentrations of compounds could be originating from other sources.
- Kathleen Livingston requested that the numbers should be totaled. Denis Corr responded to Kathleen Livingston, noting that the values cannot be totaled, as they are concentrations measured at individual monitors but represent the overall facility conditions as well as surrounding conditions, and dependent on wind blowing across the Ruetgers facility.
- Hans-Peter Boergers noted that the highest sample was at the West monitor during low wind and low dispersion periods. Hans-Peter Boergers asked Gord Gilmet if there was a similar exhaust system that could be installed at the rail car loading area like the tanker truck loading area. Gord Gilmet responded that this is not available yet, explaining the logistics of the rail car loading area but that the Action Plan did include upgrades to the rail car loading system.
- Cathy McPherson stated that Hamilton is a windy city, and higher results should not be blamed on the direction of the wind. She noted that the sampling program needs to adapt to these conditions.

- Sean Capstick presented the results of the maximum measurements of B(a)P at HAMN monitoring stations over the last 11 years showing the variability of the monitoring results and noting that based on these data, measured concentrations of B(a)P are expected from the Ruetgers monitoring program.
- Lynda Lukasik inquired if it would be a fair statement to say that it is industrial sources that are contributing to measured concentration of B(a)P. Sean Capstick responded by stating that the monitor located on the beach strip may have a larger transportation contribution, but additional work would have to be completed to assess sources and that industrial sources are likely larger than the transportation sources. The MECP's cumulative effect study could be consulted for more information.
- Sean Capstick stated that when looking at the B(a)P results, all results are below the predicted maximum concentration of 0.2 µg/m^3 listed in the SSS. Two samples are above the URT level and this is anticipated based on the dispersion modelling. Sean Capstick stated that Ruetgers has submitted a section 30 Notice (above a Schedule 6 value) to the Ministry notifying them of monitoring data above the URT.
- Jochen Bezner wanted to redirect attention to the two measurements above the trigger level. Sean Capstick reiterated that the bolded measurements are the measurements that measured above the trigger value that requires reporting to the Ministry, clarifying that what is required is a description of the operations of the site on the day of that monitoring measurement. On that day, operations were similar, although additional investigation is required to further assess the measured concentrations on that day compared to meteorological conditions of that day.
- Jochen Bezner inquired whether Ruetgers has expedited the need for the engineering assessment on the rail car loading arms, as a result of measuring above the trigger level. Gord Gilmet stated that Ruetgers has contacted the external engineering firm involved with the upgrades to the rail car loading area emissions capture, and they will be investigating to assess the effectiveness of the capture improvements. Gord Gilmet noted that the measured values were at the West and North monitors, which makes sense due to the sources of B(a)P near these monitors.
- Kathleen Livingston voiced her concern that we are proceeding towards another engineering study compared to immediate remediation. Gord Gilmet noted that the process of procuring the study has commenced, but the firm contacted has not provided a scope of work or definitive timelines. Gord Gilmet predicted the study could be completed in the next few months.
- Ute Schmid-Jones asked what the health unit could do to mitigate the risks of health effects on windy days. Sean Capstick clarified that windy days lead to more dispersion and lower of concentrations of compounds, whereas calm days can result in higher concentrations. Sean Capstick noted that one day above this URT value is not an indicator of health exposure. The Schedule 3 standard is based on a 70-year exposure, and therefore one measured value above the URT may not necessarily lead to detrimental health effects. Trevor Imhoff added that Health Unit does educate the public on the HAMN and the Air Quality Index.
- Jochen Bezner asked Gord Gilmet that as Ruetgers waits for the completion of the engineering study, if there were any plans to increase the frequency of sampling, noting that additional measurements could determine how statistically frequent these high measurements are occurring. Gord Gilmet noted that since August 18th, samples have been taken every 12 days. Jochen Bezner stated that this is the regular frequency currently implemented and asked if Ruetgers would be willing to consider increasing this frequency. Jochen Bezner is concerned of the continually pushed timelines based on the outcomes and how elaborate the engineering study will be, potentially preventing corrective action not until the next shut down.

- Kat Bezner asked if the Air Quality Health Index considered the HAMN monitors. Trevor Imhoff stated that the Air Quality Health Index is a Provincial index and uses three Provincial monitors, while the local monitors are owned by the Hamilton Industrial Environmental Association and are not owned, operated or managed by the City.
- Cathy McPherson is concerned that if there are no monitors for the Air Quality Health Index where industry is situated in Hamilton, then monitoring stations contributing to the Air Quality Health Index are not considering industrial emissions. Denis stated that there used to be four AQI stations. The station located in Eastern Hamilton/Stoney Creek at Nash Rd. was decommissioned through various budget cuts, adding that there is no East End Air Quality Health Index , and that the other three stations are used to support a provincial and national network. Trevor Imhoff mentioned that the City does own two AirPointer systems which can provide an AQHI and that he would explore the possibility of one being located in this industrial area.
- Kathleen Livingston asked if it makes sense to correlate the meteorological conditions of the site and the monitored results with the industrial activities of the day. Sean Capstick stated that this is correct.
- Sean Capstick presented the wind meteorological conditions received from the HAMN monitors, noting that they are working with the Ministry to overlay the data with the data collected from the monitors to better understand the results.
- Jochen Bezner asked Ruetgers if the group can get an update on what the company intends to do regarding the measured values above the trigger level, noting that they would like an approximate timeline on the engineering study and on stepping up the frequency of air monitoring until it can be determined what is causing these above trigger value measurements. Denis Corr stated that this request will be included in the meeting minutes that the EMT has requested Ruetgers to prepare a response to these comments.
- Kathleen Livingston stated that she is discouraged the Ministry is not requesting additional monitoring. Paul Widmeyer noted that there is a statistical reason for 12 days of frequency but cannot comment on the reason why. Denis Corr noted that there is a Canada wide monitoring schedule so that comparison can be made between different monitoring stations.
- Cathy McPherson stated that there are two areas of larger pollution in Ontario, Hamilton and Sarnia, noting that these cities should not be following the same approach as other jurisdictions and additional monitoring frequency should be required by industry. Paul Widmeyer noted that although he is here to represent the Ministry, he works for a district office and does not have authority to implement these decisions, as changing these decisions would require the implementation of committees. He did note that he will voice these concerns to the Ministry and to the attention of people who may sit on these types of committees.
- Denis Corr stated that the EMT is formally requesting that Paul Widmeyer as a representative of the Ministry to bring the request that increased frequency of sampling be required. Paul Widmeyer agreed he would do so.
- Lynda Lukasik noted that the formal notice of this URT trigger is sent to the Hamilton Public Health Unit, and asked Trevor Imhoff what happens with this formal notice once it’s provided to the Hamilton Public Health Unit. Trevor Imhoff stated that he will prepare a response to this question by the EMT at the next meeting, as he wasn’t involved with this group when this formal notification was submitted.
- Ute Schmid-Jones asked Trevor Imhoff if the Hamilton Public Health Unit is concerned with health of animals in Hamilton due to air pollution. Trevor Imhoff noted that at present he does not think there is a program that monitors the effects to animal populations regarding air pollution. He noted that he has talked to toxicologists

who developed the standards on SO_2 and that this include both Human Health and the environment, and their assessment was primarily focused on the natural environment (plants).

ECA Application

- Gord Gilmet stated that Ruetgers is preparing an application for an Environmental Compliance Approval (ECA) with limited operation flexibility to be submitted to the MECP. This ECA will include: tanker truck loading area modification, one new storage tank and improvements to the wastewater treatment on-site. Gord Gilmet stated that the upgrade to the wastewater treatment on-site is not related to the SSS but will be included in the ECA. Gord Gilmet committed to update the EMT on the status of the application at the next meeting.
- Kathleen Livingston asked what an ECA is. Paul Widmeyer stated that it is an approval for site-wide environmental emissions. Denis Corr added that in the past, each emission source received its own approval. This becomes incredibly onerous as the amount of applications become cumbersome. Lynda Lukasik, Sean Capstick and Paul Widmeyer further clarified what an ECA was and how it applies to the current situation on the site. Sean Capstick added that the monitoring values above the trigger level of the SSS require further investigation as part of the Action Plan.

Items for Discussion in Next Meeting and Closing Remarks

- Sean Capstick noted that we will not be able to book this room as the City has taken ownership of this facility and are preventing us to book in January. One option was to book at the adjacent waterfront center if this area was good for the EMT. Kat Bezner suggested Tim Hortons field, as they have conference rooms you can book. Everyone agreed that the Tim Hortons field would be the first option, followed by the waterfront centre as the second option and the cotton factory, suggested by Hans-Peter Boergers, as the third option.
- Denis Corr thanked everyone for attending the EMT meeting and encouraged everyone to attend the next EMT meeting to be scheduled for January 2019. A formal meeting invite will be circulated to EMT members and meeting attendees once the new location is confirmed.

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