NEW GOLD INC.
RAINY RIVER PROJECT

AIR QUALITY MONITORING PROGRAM
THIRD QUARTER 2017 REPORT

Submitted by:

Amec Foster Wheeler Environment & Infrastructure
160 Traders Blvd. E., Suite 110
Mississauga, Ontario
L4Z 3K7

November 2017
TC111504

amec foster wheeler

November 14, 2017
TC111504

Mr. Darrell Martindale
New Gold Inc.
Rainy River Project
5967 Hwy 11 / 71, P.O. Box 5
Emo, Ontario
P0W 1E0

Dear Mr. Martindale:

Re: Rainy River Project, Air Quality Monitoring Program, Third Quarter 2017 Report

Amec Foster Wheeler Environment & Infrastructure, a Division of Amec Foster Wheeler Americas Limited (Amec Foster Wheeler), is pleased to submit to New Gold Inc. (New Gold) the attached summary report of the third quarter (Q3) 2017 results for the ambient air quality monitoring program at the Rainy River Project.

The monitoring program consists of two air quality sampling stations that were established in May 2015: one to the south of the Site near the beginning of the Highway 600 reroute on Tait Road, and one to the east of the Site on Gallinger Road. The sampling stations are operated and maintained by New Gold staff.

The key finding(s) of the Q3 2017 monitoring are as follow:

- There were no exceedances of the total suspended particulate (TSP), metals, or dustfall Ambient Air Quality Criteria; or the $PM_{2.5}$ Canadian Ambient Air Quality Standards measured in Q3 2017.

The measured TSP and $PM_{2.5}$ concentrations for the Q3 2017 are depicted in Figures CL-1 and CL-2.

Amec Foster Wheeler Environment & Infrastructure
160 Traders Blvd. E., Suite 110
Mississauga, Ontario, L4Z 3K7
Tel: (905) 568-2929
Fax: (905) 568-1686
amecfw.com

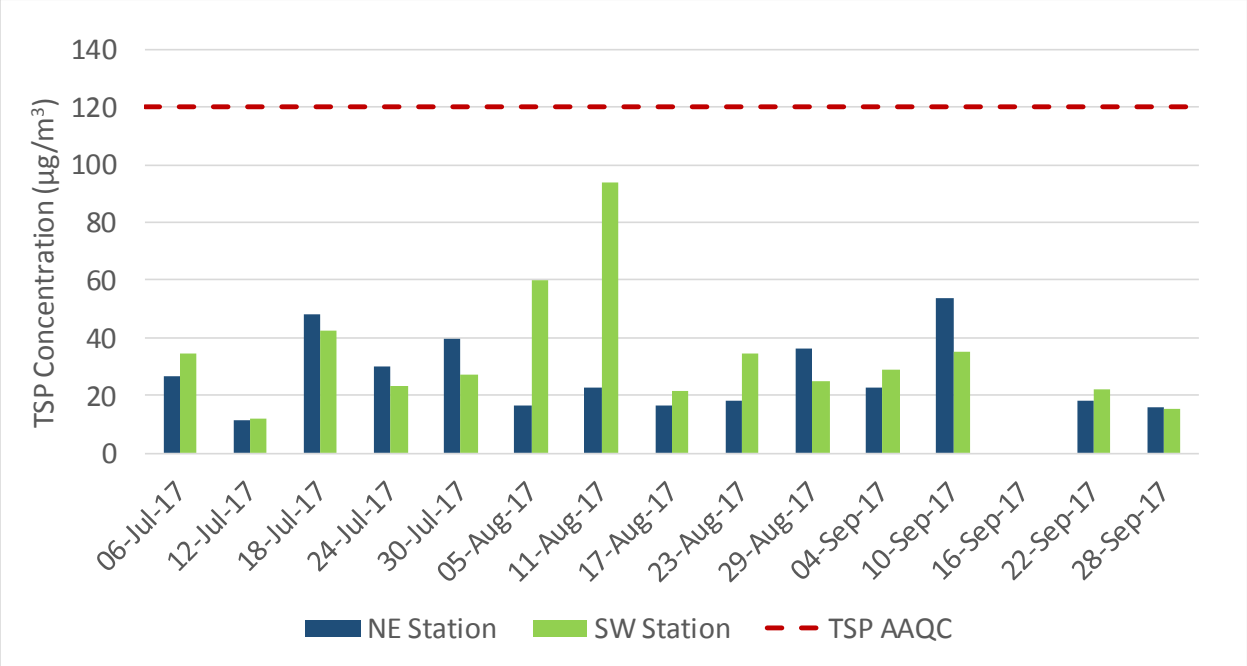

Figure CL-1: TSP Concentrations (Q3 2017)

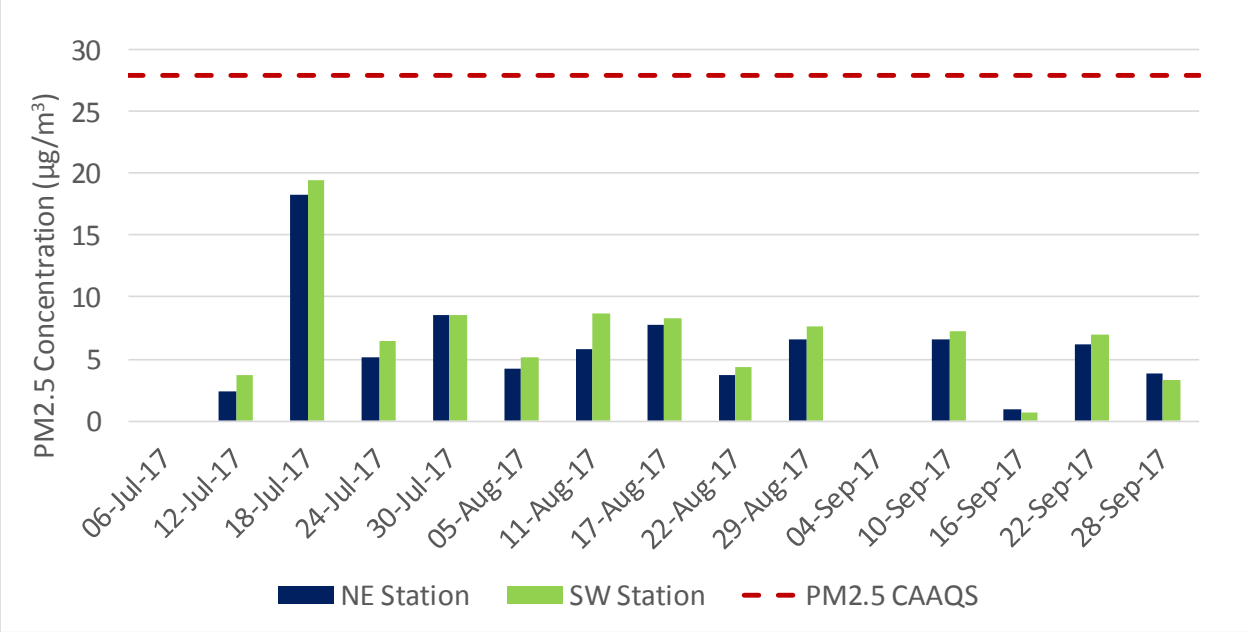

Figure CL-2: $PM_{2.5}$ Concentrations (Q3 2017)

Should you have any questions or wish to discuss the air monitoring program, please do not hesitate to contact the undersigned.

<Original signed by>

Caleb Vandenberg, P.Eng.
Air Quality Engineer

<Original signed by>

Sheila Daniel, M.Sc., P.Geo.
Principal Mining Environmental

ACRONYMS AND ABBREVIATIONS

AAQC	Ambient Air Quality Criteria
AAQO	Alberta Ambient Air Quality Objectives
ACFM	Cubic Feet Per Minute at Actual Conditions
AEP	Alberta Environment and Parks
ASTM	American Society for Testing and Materials
CAAQS	Canadian Ambient Air Quality Standards
Hi-Vol	High Volume Sampler
ICP/AES	Inductively Coupled Plasma Atomic Emission Spectroscopy
LPM	Litres Per Minute
MOECC	Ministry of the Environment and Climate Change
NIST	National Institute of Standards and Technology
TSP	Total Suspended Particulate
PM_{10}	Particulate Matter less than 10 microns in diameter
USEPA	United States Environmental Protection Agency
$\mu g/m^3$	Microgram per Cubic Metre

TABLE OF CONTENTS

PAGE

1.0 INTRODUCTION 1

2.0 ANALYTICAL AND MONITORING METHODS 5
2.1 TSP and Metals 5
2.2 $PM_{2.5}$ 5
2.2.1 Total Dustfall 5
2.3 Passive Sampling for SO_2 and NO_2 6
2.4 Field Operations 6
2.4.1 Hi-Vol Samplers 6
2.4.2 PQ300 Samplers 7
2.4.3 Dustfall Samplers 7
2.4.4 Passive Samplers 7

3.0 RESULTS 8
3.1 Total Suspended Particulates and Metals 8
3.2 $PM_{2.5}$ 9
3.3 Total Dustfall 9
3.4 Passive SO_2 and NO_2 9

4.0 CONCLUSIONS 13

5.0 REFERENCES 14

6.0 CLOSING 15

LIST OF APPENDICES

Appendix A Sampling Results
A-1 TSP, Metals, and $PM_{2.5}$ Sampling Results
A-2 Total Dustfall Sampling Results
A-3 SO_2 and NO_2 Passive Sampling Results

LIST OF TABLES

PAGE

Table 3-1: Summary Statistics for Q3 2017 TSP Concentration Data 10
Table 3-2: Summary Statistics for Q3 2017 Metals Concentration Data 10
Table 3-3: Summary Statistics for Q3 2017 $PM_{2.5}$ Concentration Data..... 11
Table 3-4: Summary Statistics for Q3 2017 Total Dustfall Data 11
Table 3-5: Summary Statistics for Q3 2017 Passive SO_2 and NO_2 Concentration Data..... 11

LIST OF FIGURES

Figure 1-1: Ambient Air Monitoring Stations 2
Figure 1-2: Ambient Air Monitoring – Southwest Monitoring Station 3
Figure 1-3: Ambient Air Monitoring – Northeast Monitoring Station..... 4
Figure 3-1: TSP Concentrations (Q3 2017) 12
Figure 3-2: $PM_{2.5}$ Concentrations (Q3 2017)..... 12

1.0 INTRODUCTION

Amec Foster Wheeler Environment & Infrastructure, a Division of Amec Foster Wheeler Americas Limited (Amec Foster Wheeler), is pleased to provide a summary of the Third Quarter (Q3) 2017 results for the air quality monitoring program undertaken at the Rainy River Project located in northwestern Ontario. Two sampling stations were established in May 2015: one to the south of the Site near the beginning of the Highway 600 reroute on Tait Road, and one to the east of the Site on Gallinger Road (Figures 1-1, 1-2 and 1-3).

New Gold Inc. (New Gold) staff operate and maintain the sampling stations. Amec Foster Wheeler staff performed quarterly calibrations, provided technical guidance to New Gold field staff, communicated with the laboratory staff as required, and prepared the data summary report.

This Quarterly Air Quality Report addresses the required elements of a Quarterly Report defined in the Operations Manual for Air Quality Monitoring in Ontario (MOECC 2016), hereafter referred to as the Operations Manual. Specifically, the following information is provided:

- Summary statistics;
- Sampling dates (start and end where applicable); and
- A summary of exceedances of an Ontario Ambient Air Quality Criteria (AAQC).

The purpose of the air monitoring program is to quantify any potential air quality effects associated with activities related to the Project. The monitoring program consists of:

- Two High Volume (hi-vol) samplers for discrete sampling of Total Suspended Particulate (TSP) and metals;
- Two PQ200 samplers for discrete sampling of respirable particulate matter ($PM_{2.5}$);
- Two standard passive dustfall collection units;
- Two passive sampling enclosures each measuring NO_2 and SO_2; and
- One meteorological station to obtain real-time site wind speed, wind direction, temperature, relative humidity, and precipitation.

410000 415000 420000 425000 430000 435000 440000 445000 450000

5425000 5420000 5415000 5410000 5405000

Hwy 600
Hwy 600
Hwy 600
Hwy 600
Hwy 600
Hwy 600
Hwy 71
Hwy 404 East Rd
Hwy 615
Hwy 617
Burditt Lake
Beadle Lake
Preachers Lake
Spring Lake
Little Pine Lake
Boundary Lake
Pony Lake
Off Lake
Manomin Rd
Muskrat Lake
Finland
Korpi Road
Lampi Rd
Existing Transmission Line
Flaming Rd
Tailings Management Area
Marri Rd
Roen Rd
Overburden
West Mine Rock
Open Pit
Clark Road
East Mine Rock
Teeple Road
Dearlock
Pinewood River
Pump House
Northeast Monitoring Station (Gallinger Road)
Southwest Monitoring Station (Tait Road)
Tait Road
Black Hawk
Heatwole Road
Pinewood Lake

P:\EM\Projects\2011\TC111504 Rainy River\GIS\Air Baseline\MXD_Maps\RR_NG_Property Ambient quality_monitoring6.mxd

LEGEND

- Ambient Air Quality Monitoring Stations
- New Gold - Rainy River Property Boundary
- New Gold Lands with No Current Access Control

Proposed Site Features

- Underground Portal
- Open Pit
- Plant Site / Ancillary Facilities
- Explosives Facilities
- Overburden / West Mine Rock Stockpile
- Ore / East Mine Rock Stockpile
- Proposed Pump House
- Tailings Management Area
- Aggregate Pit / Quarry
- Site Roads
- Roads
- Existing Transmission Line
- First Nation Land

NOTES:
- Road and Utility data and topographic data extracted from Land Information Ontario, Ontario Road Network, MNR Queen's Printer for Ontario, 2011-2012
- Land tenure information and parcels provided by NewGold, December 16, 2016

Datum: NAD83
Projection: UTM Zone 15N

0 2 4 8 12 16 20 Kilometres

N W E S

newgold™ Rainy River Project — amec foster wheeler

RAINY RIVER PROJECT

Ambient Air Monitoring Stations

PROJECT Nº: TC111504 | **FIGURE: 1-1**

SCALE: 1:100,000 | DATE: August 2017

425950
426000
426050
426100
426150
426200
5407000
5406950
5406900
69 m
TAIT ROAD
P:\EM\Projects\2011\TC111504 Rainy River\GIS\Air Baseline\MXD MapsRR NG Ambient quality monitoring stationTait 2.mxd

LEGEND

- Southwest Monitoring Station (Tait Road)
- Highway Re-alignment

Notes:
- Aerial imagery provided by RRR Pleiades imagery (June 2017).

Datum & Projection:
NAD 1983 UTM Zone 15N

0 10 20 40 60 80 100 Meters

N W E S

newgold™ Rainy River Project

amec foster wheeler

RAINY RIVER PROJECT

Ambient Air Monitoring
Southwest Monitoring Station

PROJECT Nº: TC111504 | **FIGURE: 1-2**

SCALE: 1:700 | DATE: August 2017

P:\EMP\projects\2017\11TC111504 Rainy River\GIS\Air Baseline\MXD_Maps\RR_NG Ambient quality_monitoring_station Gallinger 2.mxd

LEGEND

- Northeast Monitoring Station (Gallinger Road)
- Gallinger Road

0 10 20 40 60 80 100 Meters

Notes:
- Aerial imagery provided by RRR Plieades imagery (June 2017).

Datum & Projection:
NAD 1983 UTM Zone 15N

N W E S

newgold™ Rainy River Project

amec foster wheeler

RAINY RIVER PROJECT

Ambient Air Monitoring
Northeast Monitoring Station

PROJECT Nº: TC111504	**FIGURE: 1-3**
SCALE: 1:700	DATE: August 2017

2.0 ANALYTICAL AND MONITORING METHODS

2.1 TSP and Metals

The TSP concentrations were determined using the standard gravimetric method following the reference methods approved by the United States Environmental Protection Agency (US EPA) and the Ontario Ministry of the Environment and Climate Change (MOECC) as described in the Operations Manual (MOECC 2016). Measurements of 24-hour average TSP and metal concentrations were undertaken as this is the averaging time of the relevant AAQC (MOECC 2012); particulate samples are collected every sixth day on the North American schedule (US EPA 2017). Sampling was performed with hi-vol samplers (brush motor and mass flow controlled). The metals and metalloids analyzed included the following: arsenic (As), cadmium (Cd), chromium (Cr), cobalt (Co), copper (Cu), iron (Fe), lead (Pb), manganese (Mn), nickel (Ni), selenium (Se), vanadium (V) and zinc (Zn). A metalloid is an element such as As that has both metallic and non-metallic properties.

The lowest detectable limit is 2.3 milligrams (mg) of total particulate on the filter, resulting in a method detection limit of 1.4 micrograms per cubic metre (µg/m^3) based on a typical 24-hour sample volume of 1,630 m^3.

The metal concentrations were determined with the standard Inductively Coupled Plasma Atomic Emission Spectroscopy (ICP/AES) method. The method detection limits are as shown in the data sheets in Appendix A-1.

2.2 $PM_{2.5}$

The $PM_{2.5}$ concentrations were determined using the standard gravimetric method following the reference methods approved by the US EPA and the MOECC as described in the Operations Manual (MOECC 2016). Measurement of 24-hour average $PM_{2.5}$ was undertaken to match the averaging time for the Canadian Ambient Air Quality Standard (CAAQS); particulate samples are collected every sixth day on the North American schedule (US EPA 2017). Sampling was performed with PQ200 samplers.

The lowest detectable limit on the Teflon filters is 1 µg of $PM_{2.5}$, resulting in a method detection limit of 0.04 µg/m^3 (based on a typical 24-hour sample volume of 24 m^3).

2.2.1 Total Dustfall

The water soluble and insoluble portions of dustfall were determined using ASTM method D-1739-98 and the British Columbia Ministry of Environment method outlined in Section G of Air Constituents – Inorganic. Standard dustfall samplers were used to measure total dustfall deposition. The method detection limit for total dustfall is 0.3 g/m^2/30 days. Bird deterrents were added in Q3 2017 with the goal of reducing contamination.

2.3 Passive Sampling for SO_2 and NO_2

SO_2 and NO_2 concentrations were monitored with passive sampling devices. The exposed permeation filters were analyzed using the methodology employed by the Maxxam Analytics Inc. laboratory located in Edmonton, Alberta. The methodology was developed, approved and validated by Alberta Environment with the support of the Alberta Research Council, the Clean Air Strategic Alliance of Alberta, and the National Research Council of Canada.

The sample uptake is dependent on temperature, relative humidity and wind speed, the analytical results are adjusted for these meteorological parameters measured during the exposure period (monthly averages). The required meteorological data are taken from the Environment and Climate Change Canada Fort Frances meteorological station (Climate ID 6022474) by Maxxam Analytics to use with each sample submission. The method detection limit is in the order of 0.1 parts per billion (ppb) for both SO_2 and NO_2. Validation tests conducted in Alberta show that results from passive sampling are typically within 10% of those obtained from sampling with continuous analyzers for 30-day exposure periods.

Since there are no MOECC guidelines for monthly concentrations of SO_2 and NO_2 obtained from passive sampling, the data is only used for screening purposes. For NO_2, the monthly results were compared to the MOECC 24-hour AAQC converted to an equivalent 30-day average (78 µg/m^3) using the methodology outlined in the *Procedure for Preparing an Emission Summary and Dispersion Modelling Report* (MOE 2009). For SO_2, the results were compared against the 30-day Alberta Ambient Air Quality Objective of 30 µg/m^3 (AEP 2016).

2.4 Field Operations

2.4.1 Hi-Vol Samplers

The two stations were visited once every six days to recover the exposed filter and install a pre-weighed filter for the subsequent sample in order to meet the requirements of the 1 in 6 day sampling schedule. Additional visits were made to resolve instrumentation issues and perform flow calibration checks and preventative maintenance.

Amec Foster Wheeler staff performed calibrations on the hi-vol samplers using a BGI direct reading hi-vol electronic flow calibrator. The flows were calibrated to 40 actual cubic feet per minute (ACFM) for each station using mass flow controllers. Calibrations used in the quarter were performed on:

- April 4, 2017: All hi-vols calibrated; and
- July 25, 2017; All hi-vols calibrated.

There were no MOECC audits during this quarter.

2.4.2 PQ200 Samplers

The stations were visited once every six days to recover the exposed filter and install a pre-weighed filter for the subsequent sample in order to meet the requirements of the 1 in 6 day sampling schedule with one exception: the August 23, 2017 $PM_{2.5}$ samples were accidentally collected a day early (on August 22, 2017). Additional visits were made to resolve instrumentation issues and perform flow calibration checks and preventative maintenance.

Amec Foster Wheeler staff performed flow, temperature, and barometric pressure calibrations using an electronic BGI flow calibrator. The flows were calibrated to 16.7 litres per minute (LPM) for each station. Calibrations used in Q3 2017 were performed on:

- April 4, 2017: all PQ200s calibrated; and
- July 25, 2017; all PQ200s calibrated.

There were no MOECC audits during this quarter.

2.4.3 Dustfall Samplers

The dustfall samplers containing algaecide were changed every month, as required. Dustfall jars were provided by the laboratory with screw-on lids to prevent sample loss during transport.

2.4.4 Passive Samplers

The permeation filters in the passive samplers were changed every month, as required. Permeation filters were kept in filter cassettes inside Ziploc bags until deployed to prevent premature exposure. After the sample is collected, the filter is placed back in its cassette and into a Ziploc bag for shipment to the lab.

3.0 RESULTS

The results for the Q3 2017 sampling program are presented in Appendix A-1 for the particulate and metals data, Appendix A-2 for the dustfall data and Appendix A-3 for the passive SO_2 and NO_2 data. For the purpose of performing statistical analyses, and in keeping with MOECC protocol, a value of half the detection limit was substituted for concentrations less than the detection limit.

For comparative purposes, the MOECC AAQC and CAAQS values are presented, where available, noting that the AAQCs are numerically equivalent to the 419 standards.

Summaries of the statistical analyses for Q3 2017 for the TSP, metals, and $PM_{2.5}$ concentrations are presented in Tables 3-1, 3-2, and 3-3 respectively. During the quarter, the 1 in 6 day sampling schedule results in a possible 15 sampling days between July 1 and September 30, 2017.

A summary of the statistical analyses for Q3 2017 for the total dustfall data is presented below in Table 3-4.

A summary of the statistical analysis for the Q3 2017 passive SO_2 and NO_2 results is presented in Table 3-5.

3.1 TSP and Metals

Both stations collected 14 valid samples in Q3 2017, resulting in 93% valid data. The samples to be collected at both stations on September 16, 2017 were lost due to an operator error.

For the quarter, the geometric mean TSP concentrations were 29.7 µg/m^3 for the Tait Road station and 24.3 µg/m^3 for the Gallinger Road station. Values reported by the laboratory as below the detection limit were, by convention, substituted with one-half of the detection limit. The maximum 24-hour concentration for TSP was 93.6 µg/m^3 at the Tait Road station (August 11, 2017), and 53.8 µg/m^3 at the Gallinger Road station (September 10, 2017).

In the quarter, the 24-hour metal concentrations were all below the AAQCs. The rolling 30-day average lead concentrations at both stations were less than 1% of the 30-day lead AAQC (0.2 µg/m^3) in Q3 2017.

There were no exceedances of the MOECC AAQC measured for any of TSP metals, or metalloids in Q3 2017.

Appendix A-1 and Figure 3-1 present individual sample data. The Q3 2017 TSP and metals summary statistics are summarized in Tables 3-1 and 3-2 respectively.

3.2 $PM_{2.5}$

Both stations collected 13 valid samples in Q3 2017, resulting in 87% valid data. The July 6, 2017 and September 4, 2017 samples that were to be collected at both stations were lost due to an operator error.

Values reported by the laboratory as below the detection limit were, by convention, substituted with one-half of the detection limit. The maximum 24-hour concentration for $PM_{2.5}$ was 19.4 µg/m^3 at the Tait Road station (July 18, 2017), and 18.2 µg/m^3 at the Gallinger Road station (July 18, 2017). There were no $PM_{2.5}$ exceedances of the AAQC of 30 µg/m^3 or CAAQS (ECCC 2013) of 28 µg/m^3 measured in Q3 2017. Appendix A-1 and Figure 3-2 present individual sample data.

The Q3 2017 $PM_{2.5}$ summary statistics are summarized in Table 3-3.

3.3 Total Dustfall

In Q3 2017, three valid samples were collected at each station. Each dustfall jar was exposed for approximately 30-days to coincide with each calendar month in the quarter.

A summary of the results are presented in Table 3-4 and the monthly results are presented in Appendix A-2.

3.4 Passive SO_2 and NO_2

In Q3 2017, two valid samples were collected at each station for each of SO_2 and NO_2; the August samples were lost during shipment to the laboratory

There are no MOECC standards, guidelines or AAQCs for SO_2 or NO_2 for a 30-day averaging period.

The 30-day average SO_2 and NO_2 concentrations measured allow for future analysis of trends in the ambient concentrations, to identify any notable increases, and for potential comparison with dispersion modelling results. For NO_2, the monthly results were compared to the MOECC 24-hour AAQC converted to an equivalent 30-day average (78 µg/m^3) using the methodology outlined in the *Procedure for Preparing an Emission Summary and Dispersion Modelling Report* (MOECC 2009). For SO_2, the results were compared against the Alberta Ambient Air Quality Objective of 30 µg/m^3 (AEP 2016).

A summary of the passive results are presented in Table 3-5 and the monthly results are presented in Appendix A-3.

Table 3-1: Summary Statistics for Q3 2017 TSP Concentration Data

Statistic	Q3	
	Tait Road (SW)	Gallinger Road (NE)
Geometric mean (µg/m³)	29.7	24.3
Arithmetic mean (µg/m³)	34.0	26.9
July Maximum (µg/m³)	42.4	47.9
August Maximum (µg/m³)	93.6	36.3
September Maximum (µg/m³)	35.2	53.8
Maximum 24 hour (µg/m³)	93.6 (Aug.11)	53.8 (Sept.10)
90th percentile	54.7	45.4
95th percentile	71.7	49.9
24-hour AAQC	120	120
No. of valid samples	14	14
% valid data	93	93
No. samples > AAQC (particulate)	0	0
No. samples > AAQC (metals)	0	0
No. samples > AAQC (metalloids)	0	0

Table 3-2: Summary Statistics for Q3 2017 Metals Concentration Data

Metal	24-hr AAQC (µg/m³)	Tait Road Q3 2017 Maximum 24-hour Concentration (µg/m³)	% 24-hr AAQC	Gallinger Road Q3 2017 Maximum 24-hr Concentration (µg/m³)	% 24-hr AAQC
As	0.3	9.70E-04	0.32%	9.65E-04	0.32%
Cd	0.025	4.98E-04	1.99%	1.34E-04	0.54%
Cr	0.5	1.06E-02	2.12%	6.19E-03	1.24%
Co	0.1	1.32E-03	1.32%	3.72E-04	0.37%
Cu	50	1.05E-01	0.21%	5.94E-01	1.19%
Fe	4	2.76E+00	69.08%	7.17E-01	17.91%
Pb	0.5	2.17E-03	0.43%	1.72E-03	0.34%
Mn	0.4	5.91E-02	14.78%	1.92E-02	4.80%
Ni	0.2	3.85E-03	1.92%	1.51E-03	0.75%
Se	10	1.49E-03	0.01%	1.81E-03	0.02%
V	2	7.87E-03	0.39%	1.61E-03	0.08%
Zn	120	2.76E-02	0.02%	1.54E-02	0.01%

Table 3-3: Summary Statistics for Q3 2017 $PM_{2.5}$ Concentration Data

Statistic	Q3	
	Tait Road (SW)	Gallinger Road (NE)
Arithmetic mean (µg/m³)	6.93	6.16
July Maximum (µg/m³)	19.4	18.2
August Maximum (µg/m³)	8.66	7.70
September Maximum (µg/m³)	7.20	6.62
Maximum 24 hour (µg/m³)	19.4 (Jul.18)	18.2 (Jul.18)
90th percentile	8.63	8.40
95th percentile	13.0	12.4
24-hour CAAQS	28	28
No. of valid samples	13	13
% valid data	87	87
No. samples > CAAQS	0	0

Table 3-4: Summary Statistics for Q3 2017 Total Dustfall Data

Statistic	Tait Road (SW)	Gallinger Road (NE)
Arithmetic mean (g/m²/30d)	1.7	1.2
Maximum (g/m²/30d)	2.6	2.4
30-day AAQC	7	7
No. > AAQC	0	0
No. valid samples*	3	3
% Valid data	100	100

Table 3-5: Summary Statistics for Q3 2017 Passive SO_2 and NO_2 Concentration Data

Statistic	Tait Road (SW)		Gallinger Road (NE)	
	SO_2	NO_2	SO_2	NO_2
Mean (µg/m³)	0.1	1.7	0.3	0.6
Maximum (µg/m³)	0.1	2.4	0.3	0.7
AAQC 24-hr converted to 30-day (µg/m³)	N/A	78	N/A	78
Alberta AAQO (µg/m³)	30	N/A	30	N/A
No. valid samples	2	2	2	2
% Valid data	67	67	67	67

Note:
N/A: No applicable criterion

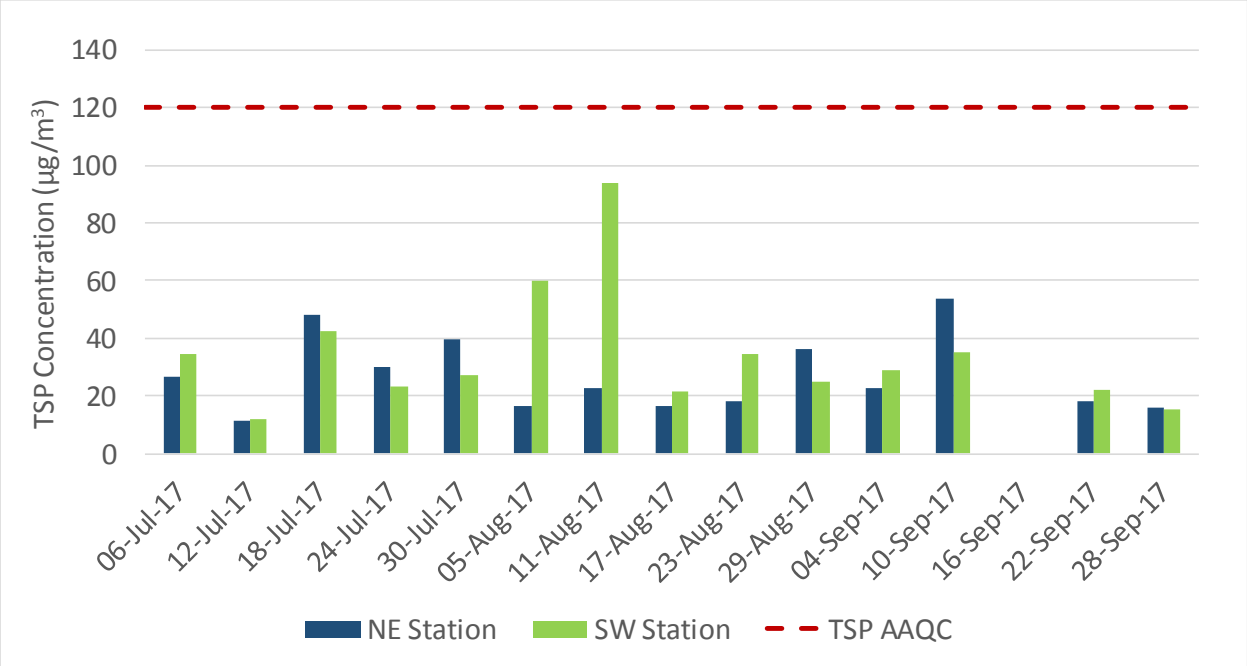

Figure 3-1: TSP Concentrations (Q3 2017)

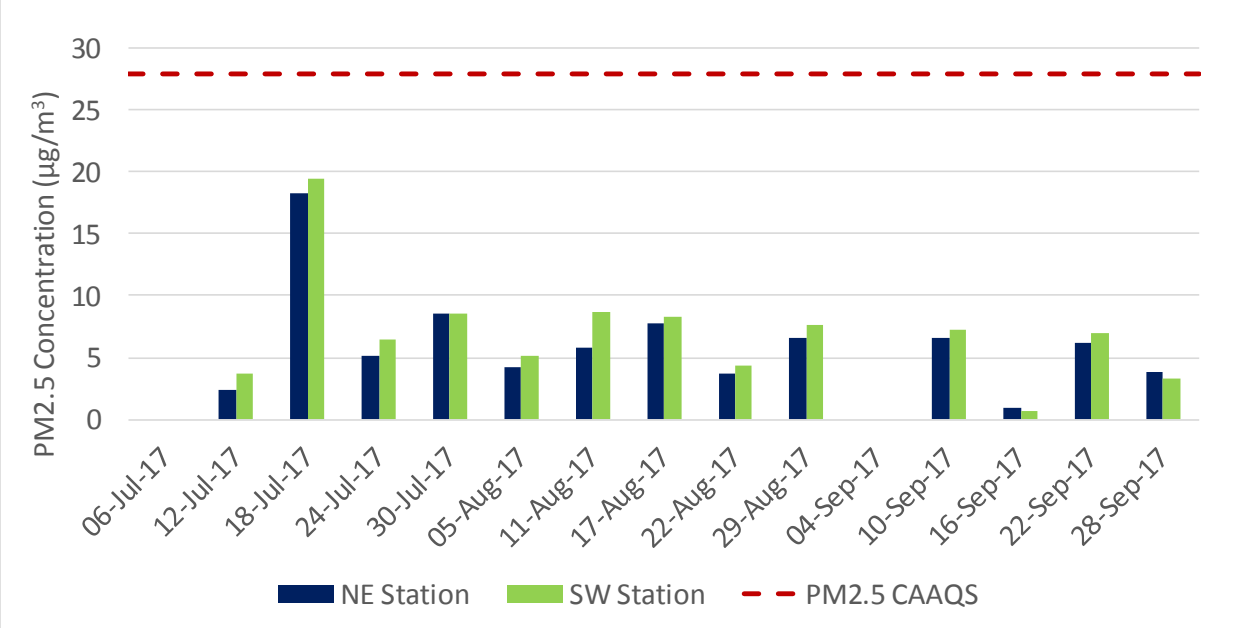

Figure 3-2: $PM_{2.5}$ Concentrations (Q3 2017)

4.0 CONCLUSIONS

Two ambient air quality monitoring stations were installed and commissioned in May 2015 at the Rainy River Project.

A summary of the Q3 2017 air quality sampling program is provided below:

- There were 14 valid TSP samples collected at both stations (93% sample validity), and no exceedances of the AAQC were measured for TSP, or for any of the metals and metalloids.

- There were 13 valid $PM_{2.5}$ samples collected at both stations (87% sample validity), and no exceedances of the CAAQS were measured.

- There were 3 valid dustfall samples collected at both stations (100% sample validity), and no exceedances of the AAQC were measured.

- There were 2 valid passive samples for each of SO_2 and NO_2 at both stations collected (67% sample validity). There were no exceedances of AEP Criterion for SO_2 of the 30-day equivalent AAQC for NO_2.

5.0 REFERENCES

Alberta Environment and Parks (AEP). 2016. Alberta Ambient Air Quality Objectives and Guidelines Summary.

American Society for Testing and Materials (ASTM). 2004. Standard Test Method for Collection and Measurement of Dustfall (Settleable Particulate Matter).

British Columbia Ministry of the Environment. 2007. Section G of Air Constituents – Inorganic.

Environment and Climate Change Canada (ECCC). 2013. Canadian Environmental Protection Act, 1999 *Sections 54 and 55.*

Ministry of the Environment (MOE). 2009. Procedure for Preparing and Emission Summary and Dispersion Modelling Report.

Ministry of the Environment p(MOE). 2012. Ontario's Ambient Air Quality Criteria, PIBS # 6570e01.

Ministry of the Environment and Climate Change (MOECC). 2016. Operations Manual for Air Quality Monitoring in Ontario.

Ministry of the Environment and Climate Change (MOECC). 2016. Determination of Total Dustfall in Air Particulate Matter by Gravimetry, E3043.

United States Environmental Protection Agency (USEPA). 2017. Sampling Schedule Calendar, https://www3.epa.gov/ttnamti1/calendar.html (Accessed February 10, 2017).

6.0 CLOSING

This air quality monitoring program, Third Quarter 2017 report was prepared by Amec Foster Wheeler for the sole benefit of New Gold Inc. for specific application to the Rainy River Project. The quality of information, conclusions and estimates contained herein are consistent with the level of effort involved in Amec Foster Wheeler's services and based on: i) information available at the time of preparation, ii) data supplied by outside sources and iii) the assumptions, conditions and qualifications set forth in this document.

This report is intended to be used by New Gold only, and its nominated representatives, subject to the terms and conditions of its contract with Amec Foster Wheeler. Any other use of, or reliance on, this report by any third party is at that party's sole risk. This report has been prepared in accordance with generally accepted industry-standard practices. No other warranty, expressed or implied, is made.

If you require further information regarding the above or the project in general, please contact the undersigned at (905) 568-2929. Thank you for the opportunity to be of service to New Gold Inc.

Yours truly,
Amec Foster Wheeler Environment & Infrastructure
a Division of Amec Foster Wheeler Americas Limited

Prepared by:

<Original signed by>

Caleb Vandenberg, P.Eng.
Air Quality Engineer

Reviewed by:

<Original signed by>

Sheila Daniel, M.Sc., P.Geo.
Principal Mining Environmental

APPENDIX A

SAMPLING RESULTS

Appendix A-1	**TSP, Metals and $PM_{2.5}$ Sampling Results**
Appendix A-2	**Total Dustfall Sampling Results**
Appendix A-3	**SO_2 and NO_2 Passive Sampling Results**

APPENDIX A-1

TSP, METALS AND $PM_{2.5}$ SAMPLING RESULTS

NORTHEAST (GALLINGER ROAD) PARTICULATE/METALS CONCENTRATIONS														
Date	PM2.5	TSP	Arsenic (As)	Cadmium (Cd)	Chromium (Cr)	Cobalt (Co)	Copper (Cu)	Iron (Fe)	Lead (Pb)	Manganese (Mn)	Nickel (Ni)	Selenium (Se)	Vanadium (V)	Zinc (Zn)
6-Jul-17	—	26.8	*9.63E-04*	4.62E-05	3.40E-03	1.07E-04	2.09E-01	2.48E-01	3.85E-04	8.67E-03	5.78E-04	1.35E-03	*1.60E-03*	9.63E-03
12-Jul-17	2.41	11.3	*9.35E-04*	*8.41E-06*	2.93E-03	*9.35E-06*	8.60E-02	2.24E-02	1.18E-04	1.10E-03	1.93E-04	1.12E-03	*1.56E-03*	3.12E-03
18-Jul-17	18.2	47.9	*9.30E-04*	7.38E-05	3.60E-03	2.08E-04	1.51E-01	4.63E-01	5.64E-04	1.52E-02	7.69E-04	1.36E-03	*1.55E-03*	9.36E-03
24-Jul-17	5.12	29.8	*9.19E-04*	8.02E-05	5.27E-03	3.72E-04	1.88E-01	7.17E-01	6.06E-04	1.54E-02	1.51E-03	1.10E-03	*1.53E-03*	8.94E-03
30-Jul-17	8.57	39.8	*9.23E-04*	8.86E-05	4.18E-03	2.73E-04	2.91E-01	6.34E-01	7.94E-04	1.92E-02	9.72E-04	1.48E-03	*1.54E-03*	8.43E-03
5-Aug-17	4.25	16.3	*9.37E-04*	9.56E-05	5.12E-03	1.05E-04	5.04E-01	1.20E-01	4.31E-04	6.75E-03	7.06E-04	1.81E-03	*1.56E-03*	8.12E-03
11-Aug-17	5.78	22.6	*9.48E-04*	9.73E-05	6.07E-03	2.41E-04	4.52E-01	4.24E-01	6.32E-04	9.98E-03	1.12E-03	*4.11E-04*	*1.58E-03*	8.72E-03
17-Aug-17	7.70	16.5	*9.55E-04*	8.73E-05	6.12E-03	6.94E-05	3.78E-01	1.00E-01	7.45E-04	3.13E-03	7.96E-04	*4.14E-04*	*1.59E-03*	8.85E-03
23-Aug-17	3.70	18.3	*9.49E-04*	7.53E-05	5.69E-03	1.11E-04	3.47E-01	1.85E-01	1.67E-03	5.61E-03	6.33E-04	*4.11E-04*	*1.58E-03*	1.54E-02
29-Aug-17	6.62	36.3	*9.39E-04*	1.34E-04	6.19E-03	3.02E-04	5.94E-01	5.49E-01	1.58E-03	1.55E-02	1.23E-03	*4.07E-04*	*1.56E-03*	1.30E-02
4-Sep-17	—	22.7	*9.11E-04*	6.14E-05	3.95E-03	5.77E-05	1.71E-01	6.02E-02	3.65E-04	4.79E-03	5.77E-04	*3.95E-04*	*1.52E-03*	7.11E-03
10-Sep-17	6.62	53.8	*8.99E-04*	9.17E-05	4.85E-03	3.10E-04	1.23E-01	4.24E-01	1.72E-03	1.82E-02	9.47E-04	*3.90E-04*	*1.50E-03*	1.19E-02
16-Sep-17	0.96	—	—	—	—	—	—	—	—	—	—	—	—	—
22-Sep-17	6.24	18.5	*9.07E-04*	7.14E-05	4.36E-03	5.81E-05	2.67E-01	8.47E-02	8.29E-04	5.61E-03	4.54E-04	*3.93E-04*	*1.51E-03*	8.05E-03
28-Sep-17	3.83	16.2	*9.65E-04*	7.08E-05	4.96E-03	8.62E-05	3.07E-01	1.44E-01	7.34E-04	5.97E-03	4.96E-04	*4.18E-04*	*1.61E-03*	1.36E-02
Geometric mean	N/A	24.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Arithmetic mean	6.16	26.9	9.34E-04	7.73E-05	4.76E-03	1.65E-04	2.91E-01	2.98E-01	7.98E-04	9.65E-03	7.85E-04	8.19E-04	1.56E-03	9.58E-03
Max. concentration	18.2	53.8	9.65E-04	1.34E-04	6.19E-03	3.72E-04	5.94E-01	7.17E-01	1.72E-03	1.92E-02	1.51E-03	1.81E-03	1.61E-03	1.54E-02
Min. concentration	0.96	11.3	8.99E-04	8.41E-06	2.93E-03	9.35E-06	8.60E-02	2.24E-02	1.18E-04	1.10E-03	1.93E-04	3.90E-04	1.50E-03	3.12E-03
90th percentile	8.40	45.4	9.61E-04	9.68E-05	6.10E-03	3.08E-04	4.88E-01	6.08E-01	1.64E-03	1.74E-02	1.20E-03	1.44E-03	1.60E-03	1.34E-02
95th percentile	12.4	49.9	9.64E-04	1.10E-04	6.14E-03	3.32E-04	5.35E-01	6.63E-01	1.69E-03	1.86E-02	1.33E-03	1.59E-03	1.61E-03	1.42E-02
CAAQS	28.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
No. > CAAQS value*	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
AAQC	N/A	120	0.3	0.025	0.5	0.1	50	4	0.5	0.4	0.2	10	2	120
No. > AAQC	0	0	0	0	0	0	0	0	0	0	0	0	0	0
No. of valid samples	13	14	14	14	14	14	14	14	14	14	14	14	14	14
No. samples < mdl	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Detection limit (µg)	6	5	6	2	5	2	5	50	3	50	3	10	5	5
Half detection limit (µg)	3	2.5	3	1	2.5	1	2.5	25	1.5	25	1.5	5	2.5	2.5
% < detection limit	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% valid data	87	93	93	93	93	93	93	93	93	93	93	93	93	93

Notes:
All non detectable results were reported as 1/2 detection limit and are denoted by italics and underlining
N/A: Not applicable
—: Invalid Sample
*Canadian Ambient Air Quality Standard, 24-hour standard

SOUTHWEST (TAIT ROAD) PARTICULATE/METALS CONCENTRATIONS														
Date	PM2.5	TSP	Arsenic (As)	Cadmium (Cd)	Chromium (Cr)	Cobalt (Co)	Copper (Cu)	Iron (Fe)	Lead (Pb)	Manganese (Mn)	Nickel (Ni)	Selenium (Se)	Vanadium (V)	Zinc (Zn)
6-Jul-17	—	34.7	*9.70E-04*	3.49E-05	4.01E-03	2.88E-04	6.08E-02	5.64E-01	4.98E-04	1.51E-02	9.83E-04	1.49E-03	*1.62E-03*	8.34E-03
12-Jul-17	3.66	12.2	*9.61E-04*	*8.65E-06*	3.33E-03	3.27E-05	2.02E-02	7.88E-02	2.24E-04	2.15E-03	3.27E-04	1.15E-03	*1.60E-03*	4.81E-03
18-Jul-17	19.4	42.4	*9.26E-04*	1.11E-04	3.64E-03	1.40E-04	8.71E-02	3.70E-01	7.72E-04	1.51E-02	5.80E-04	1.42E-03	*1.54E-03*	1.33E-02
24-Jul-17	6.41	23.1	*9.17E-04*	4.98E-04	3.79E-03	1.51E-04	1.05E-01	2.89E-01	6.54E-04	6.48E-03	7.28E-04	1.16E-03	*1.53E-03*	1.27E-02
30-Jul-17	8.49	27.1	*9.25E-04*	4.75E-05	3.02E-03	1.26E-04	6.54E-02	2.89E-01	6.54E-04	1.25E-02	5.00E-04	1.48E-03	*1.54E-03*	5.67E-03
5-Aug-17	5.12	59.9	*9.30E-04*	4.65E-05	7.68E-03	1.02E-03	1.03E-01	1.48E+00	8.12E-04	2.99E-02	2.42E-03	*4.03E-04*	*1.55E-03*	1.30E-02
11-Aug-17	8.66	93.6	*9.29E-04*	1.26E-04	1.06E-02	1.32E-03	8.92E-02	2.76E+00	1.73E-03	5.91E-02	3.85E-03	*4.03E-04*	7.87E-03	2.76E-02
17-Aug-17	8.24	21.5	*9.25E-04*	3.21E-05	4.87E-03	8.08E-05	5.33E-02	1.39E-01	4.87E-04	3.50E-03	4.69E-04	*4.01E-04*	*1.54E-03*	6.41E-03
23-Aug-17	4.37	34.6	*9.32E-04*	5.28E-05	5.91E-03	3.80E-04	5.54E-02	7.40E-01	1.14E-03	1.74E-02	1.58E-03	*4.04E-04*	*1.55E-03*	1.14E-02
29-Aug-17	7.62	25.3	*9.20E-04*	6.50E-05	5.27E-03	2.32E-04	7.24E-02	3.92E-01	1.54E-03	1.18E-02	9.63E-04	*3.99E-04*	*1.53E-03*	1.47E-02
4-Sep-17	—	29.1	*9.24E-04*	7.27E-05	3.88E-03	1.07E-04	5.49E-02	1.50E-01	4.31E-04	7.76E-03	4.19E-04	*4.01E-04*	*1.54E-03*	8.20E-03
10-Sep-17	7.20	35.2	*9.38E-04*	1.66E-04	4.63E-03	1.81E-04	4.17E-02	2.68E-01	2.17E-03	1.54E-02	7.32E-04	*4.07E-04*	*1.56E-03*	1.84E-02
16-Sep-17	0.71	—	—	—	—	—	—	—	—	—	—	—	—	—
22-Sep-17	6.91	21.9	*9.37E-04*	6.12E-05	5.06E-03	1.01E-04	6.04E-02	1.49E-01	1.12E-03	8.24E-03	6.06E-04	*4.06E-04*	*1.56E-03*	9.74E-03
28-Sep-17	3.29	15.7	*9.52E-04*	5.01E-05	5.01E-03	7.04E-05	8.89E-02	1.14E-01	1.11E-03	8.57E-03	4.76E-04	*4.13E-04*	*1.59E-03*	9.14E-03

Geometric mean	N/A	29.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Arithmetic mean	6.93	34.0	9.35E-04	9.80E-05	5.05E-03	3.02E-04	6.84E-02	5.56E-01	9.53E-04	1.52E-02	1.04E-03	7.38E-04	2.01E-03	1.17E-02
Max. concentration	19.4	93.6	9.70E-04	4.98E-04	1.06E-02	1.32E-03	1.05E-01	2.76E+00	2.17E-03	5.91E-02	3.85E-03	1.49E-03	7.87E-03	2.76E-02
Min. concentration	0.71	12.2	9.17E-04	8.65E-06	3.02E-03	3.27E-05	2.02E-02	7.88E-02	2.24E-04	2.15E-03	3.27E-04	3.99E-04	1.53E-03	4.81E-03
90th percentile	8.63	54.7	9.58E-04	1.54E-04	7.15E-03	8.26E-04	9.92E-02	1.26E+00	1.67E-03	2.61E-02	2.17E-03	1.46E-03	1.61E-03	1.73E-02
95th percentile	13.0	71.7	9.64E-04	2.83E-04	8.70E-03	1.12E-03	1.04E-01	1.93E+00	1.88E-03	4.01E-02	2.92E-03	1.48E-03	3.80E-03	2.16E-02
CAAQS	28.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
No. > CAAQS value*	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
AAQC	N/A	120	0.3	0.025	0.5	0.1	50	4	0.5	0.4	0.2	10	2	120
No. > AAQC	0	0	0	0	0	0	0	0	0	0	0	0	0	0
No. of valid samples	13	14	14	14	14	14	14	14	14	14	14	14	14	14
No. samples < mdl	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Detection limit (µg)	6	5	6	2	5	2	5	50	3	50	3	10	5	5
Half detection limit (µg)	3	2.5	3	1	2.5	1	2.5	25	1.5	25	1.5	5	2.5	2.5
% < detection limit	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% valid data	87	93	93	93	93	93	93	93	93	93	93	93	93	93

Notes:
All non detectable results were reported as 1/2 detection limit and are denoted by italics and underlining
N/A: Not applicable
—: Invalid Sample
*Canadian Ambient Air Quality Standard, 24-hour standard

APPENDIX A-2

TOTAL DUSTFALL SAMPLING RESULTS

SW (Tait Road) Monitoring Results for Dustfall (Q3 2017)
(results expresed in g/m^2/30days)

Month	No. Exposure Days	Dustfall (insoluble)	Dustfall (soluble)	Dustfall (total)
July	28	0.17	2.3	2.6
August	29	0.15	1.4	1.4
September	28	0.36	0.84	1.2

Arithmetic mean	1.7
Max. concentration	2.6
Min. concentration	1.2
AAQC	7
No. > AAQC value**	0
No. of valid samples	3
% Valid data	100
No. samples < mdl	0
Detection limit*	0.33
Half detection limit	0.165

NE (Gallinger Road) Monitoring Results for Dustfall (Q3 2017)
(results expresed in g/m^2/30days)

Month	No. Exposure Days	Dustfall (insoluble)	Dustfall (soluble)	Dustfall (total)
July	28	0.17	2.1	2.4
August	29	0.15	0.57	0.57
September	28	0.17	0.75	0.78

Arithmetic mean	1.2
Max. concentration	2.4
Min. concentration	0.57
AAQC	7
No. > AAQC value**	0
No. of valid samples	3
% Valid data	100
No. samples < mdl	0
Detection limit*	0.33
Half detection limit	0.165

Notes:

All statistics were calculated using 1/2DL for values reported as <DL

All non detectable results were reported as 1/2 detection limit and are denoted by italics and underlining

N/A: Not applicable

N/R: No Results Available

—: Invalid Sample

*If samples had differing detection limits, the highest is displayed here

**Ontario Ambient Air Quality Criteria, 30-day standard

APPENDIX A-3

SO_2 AND NO_2 PASSIVE SAMPLING RESULTS

Monitoring Results for Passive SO_2 and NO_2 (Q3 2017)
(results expresed in $\mu g/m^3$)

	SW (Tait Road)		NE (Gallinger Road)	
Month	**SO_2**	**NO_2**	**SO_2**	**NO_2**
July	*0.1*	0.9	0.3	0.6
August	N/R	N/R	N/R	N/R
September	*0.1*	2.4	0.3	0.7

Arithmetic mean	0.1	1.7	0.3	0.6
Max. concentration	0.1	2.4	0.3	0.7
Min. concentration	0.1	0.9	0.3	0.6
AAQC* 24-hr converted to 30-day	N/A	78 µg/m³	N/A	78 µg/m³
Alberta Ambient Air Quality Objectives 2013	30 µg/m³	N/A	30 µg/m³	N/A
No. of valid samples	2	2	2	2
% Valid Data	67%	67%	67%	67%
No. samples < mdl	2	0	0	0
Detection limit	0.3	0.2	0.3	0.2
Half detection limit	0.15	0.1	0.15	0.1

Notes:
All statistics were calculated using 1/2DL for values reported as <DL
All non detectable results were reported as 1/2 detection limit and are denoted by italics and underlining
All results reported by the lab in parts per billion (ppb) and are converted to µg/m3 assuming 101.23kPA and 25C
N/A: Not applicable
N/R: No Results Available
—: Invalid Sample
*Ontario Ambient Air Quality Criteria