NEW GOLD INC.
RAINY RIVER MINE

AMBIENT AIR QUALITY MONITORING PROGRAM
FOURTH QUARTER 2020 REPORT

FEBRUARY 11, 2021

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
BCMOE	British Columbia Ministry of the Environment
CAAQS	Canadian Ambient Air Quality Standards
CFM	Cubic Foot Per Minute
Hi-Vol	High Volume Sampler
ICP/AES	Inductively Coupled Plasma / Atomic Emission Spectroscopy
LPM	Litres Per Minute
MECP	Ministry of the Environment, Conservation and Parks
NIST	National Institute of Standards and Technology
TSP	Total Suspended Particulate
$PM_{2.5}$	Particulate Matter less than 2.5 microns in diameter
US EPA	United States Environmental Protection Agency
$\mu g/m^3$	Microgram per Cubic Metre

newgold™ Rainy River

TABLE OF CONTENTS

PAGE

LIST OF TABLES

PAGE

LIST OF FIGURES

LIST OF APPENDICES

1.0 INTRODUCTION

The following is a summary of the Fourth Quarter (Q4) 2020 results for the ambient air quality monitoring program undertaken at New Gold Inc.'s Rainy River Mine located northwest of Emo, Ontario.

In Q4 of 2020, New Gold Inc. (New Gold) staff operated and maintained the ambient air quality monitoring sampling stations. They communicated with laboratory staff as required, prepared the data summary reports, and performed one calibration on November 10, 2020.

This Quarterly Ambient Air Quality Report addresses the required elements of a Quarterly Report defined in the Operations Manual for Air Quality Monitoring in Ontario (MECP, 2018), hereafter referred to as the Operations Manual. Specifically, the following information is provided:

- Summary statistics
  - Arithmetic Mean
  - Monthly Arithmetic Mean
  - Maximum for any averaging period for which the data is used for comparison to any limit applied to the emitter;
  - Maximum 24-hour, % valid hours, and other averaging periods, where applicable.
- Sampling dates (start and end, where applicable); and
- A summary of exceedances of an Ontario Ambient Air Quality Criterion (AAQC) or Canadian Ambient Air Quality Standard (CAAQS).

The purpose of the air monitoring program is to quantify potential air quality effects associated with mine activities. The monitoring program consists of two sampling stations established in May 2015: one located to the southwest of the site near McMillan Road along the realigned Highway 600 and one located to the northeast of the site along Gallinger Road (Figures 2-1, 2-2, and 2-3). Each sampling station consists of the following:

- One High Volume (Hi-Vol) sampler for discrete sampling of Total Suspended Particulate (TSP) and metals;
- One PQ200 sampler for discrete sampling of respirable particulate matter ($PM_{2.5}$);
- One standard passive dustfall collection unit; and
- One passive sampling enclosure measuring NO_2 and SO_2.

Figure 2-4 illustrates the Tait Road station.

Barron Site, located near Heatwole Road, also contains a meteorological station that provides real-time site wind speed, wind direction, temperature, relative humidity, precipitation data, and solar radiation. All measurements at this site are taken at a height of ten (10) metres above grade.

The Ambient Air Monitoring Program was conducted per ECA No. 0412-A2LR4V, issued on September 24, 2015, and the MECP program approval letter dated November 9, 2016.

Starting in December 2020 additional sampling locations were added to the monitoring program. One sampling location northwest of the Tailings Management Area, which includes one High Volume (Hi-Vol) sampler for discrete sampling of Total Suspended Particulate (TSP) and metals, and one PQ200 sampler for discrete sampling of respirable particulate matter ($PM_{2.5}$). Additionally, a sampling location near the Stockpile Pond (SPP1), which includes a standard passive dustfall collection unit, has been added.

2.0 MONITORING STATIONS

The ambient air quality monitoring stations were sited in accordance with the criteria stipulated in the Operations Manual (MECP, 2018).

The general location for the four stations is shown in Figure 2-1. UTM co-ordinates for each station based on the NAD 83 co-ordinate system are presented in Table 2-1. Imagery showing each station is presented in Figures 2-2 and 2-3.

There were two stations added in Q4 2020.

Table 2-1: Ambient Air Monitoring Stations

Station	UTM Co-ordinates			Parameters Monitored
	Easting (m)	Northing (m)	Zone	
Tait Road Station (Southwest Station)	426 072	5 406 996	15	TSP, Metals, $PM_{2.5}$, NO_2, SO_2, Total Dustfall
Gallinger Road Station (Northeast Station)	431 133	5 410 534	15	TSP, Metals, $PM_{2.5}$, NO_2, SO_2, Total Dustfall
Northwest Station (Northwest Station)	419 797	5 413 042	15	TSP, Metals, $PM_{2.5}$
SPP1 (Stockpile Pond Dustfall station)	426 937	5 410 799	15	Total Dustfall

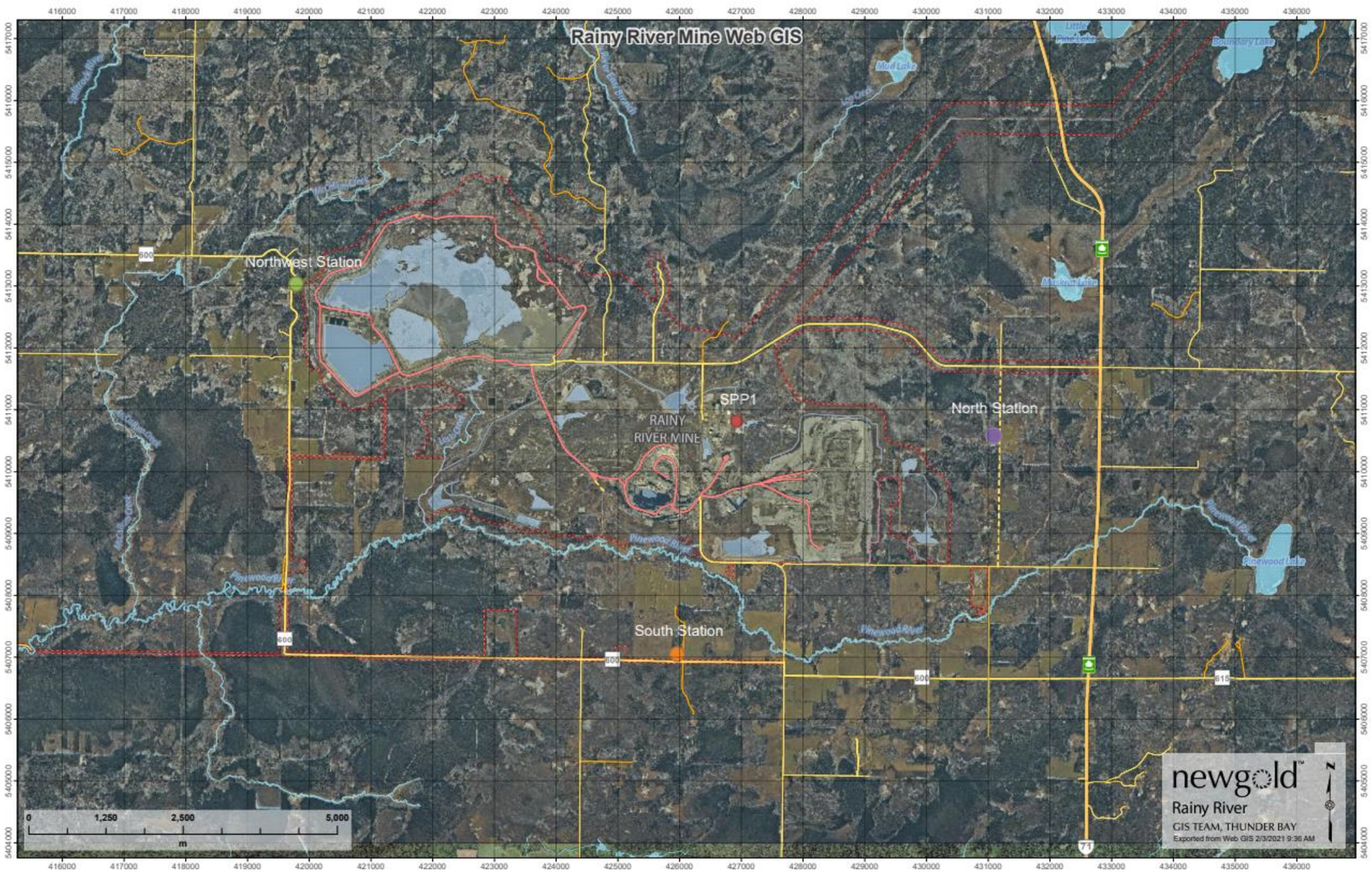

Figure 2-1: Ambient Air Monitoring Stations

Figure 2-2: Ambient Air Monitoring – Southwest Tait Road Monitoring Station

Figure 2-3: Ambient Air Monitoring – Northeast Gallinger Road Monitoring Station

Figure 2-4: Ambient Air Monitoring – Tait Road Station Air Quality Station

Figure 2-5: Ambient Air Monitoring – Northwest Station Air Quality Station

Figure 2-6: Ambient Air Monitoring – SPP1 Dustfall Station

3.0 ANALYTICAL AND MONITORING METHODS

3.1 TSP and Metals

Measurements of 24-hour average TSP and metal concentrations were collected as specified in the Operations Manual (MECP, 2018); samples of both TSP and metals were collected every sixth day as per the North American schedule (US EPA, 2017). Sampling was performed with Hi-Vol samplers (brush motor and mass flow controlled). Samples are collected on an 8 inch by 10 inch Hi-Vol quartz filter.

TSP concentrations were determined using the standard gravimetric reference methods approved by the United States Environmental Protection Agency (US EPA) and the Ontario Ministry of the Environment, Conservation and Parks (MECP), as described in the Operations Manual (MECP, 2018).

Metal concentrations were determined using standard Inductively Coupled Plasma Atomic Emission Spectroscopy (ICP/AES). The metals and metalloids analyzed included: 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 arsenic, that has both metallic and non-metallic properties.

The lowest detectable limit of total particulate on the filter is 2.3 milligrams (mg). A typical 24-hour sample volume of 1,630 cubic metres (m^3) results in a method detection limit of 1.4 micrograms per cubic metre ($\mu g/m^3$). Method detection limits for metals are given in Appendix A-1.

Total Volume is calculated for each run using sampler manufacturer recommended calculations. These calculations consider ambient temperature, ambient pressure, sample flow rate, and individual monitor specifications. These calculations are not corrected for humidity.

3.2 $PM_{2.5}$

Sampling was performed with PQ200 samplers. Samples are collected on a 47 millimetre (mm) diameter Teflon filter. Particulate samples were collected every sixth day as per the North American schedule (US EPA, 2017).

$PM_{2.5}$ concentrations were determined using the standard gravimetric reference methods approved by the US EPA and the MECP, as described in the Operations Manual (MECP, 2018). $PM_{2.5}$ measurements were collected over a 24-hour period to match the averaging time for the Canadian Ambient Air Quality Standard (CAAQS).

The lowest detectable limit of $PM_{2.5}$ on the Teflon filters is 15 micrograms (µg). A typical 24-hour sample volume of 24 m^3 results in a method detection limit of 0.6 $\mu g/m^3$.

Total Volume is recorded mechanically by the PQ200 samplers for each run.

3.3 Total Dustfall

Standard dustfall samplers were used to measure total dustfall deposition over a 30-day period. Samples are collected in jars measuring roughly 15.4 centimetre (cm) in diameter by 30.5 cm in height.

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 (MECP, 2018).

The method detection limit for total dustfall is 0.3 g/m²/30 days.

3.4 Passive Sampling for SO_2 and NO_2

Sulphur dioxide (SO_2) and nitrogen dioxide (NO_2) concentrations were monitored with passive sampling devices. Sample uptake is dependent on temperature, relative humidity, and wind speed. Analytical results are adjusted for these meteorological parameters measured during the exposure period (monthly averages). The required meteorological data were obtained from the Environment and Climate Change Canada website. Data for the Fort Frances meteorological station (Climate ID 6022474) is downloaded by Maxxam Analytics with each sample submission.

Testing was conducted using methodology 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.

For both SO_2 and NO_2, the analytical method detection limit is on the order of 0.1 parts per billion by volume (ppbv). Validation tests conducted in Alberta show that results from passive sampling are typically within ten percent (10%) of those obtained from sampling with continuous analyzers for 30-day exposure periods.

Since there are no MECP guidelines for monthly concentrations of SO_2 and NO_2 obtained from passive sampling, this data is used solely for screening purposes. For NO_2, the monthly results were compared to the Ontario 24-hour AAQC converted to an equivalent 30-day average (78 µg/m³) using the methodology outlined in the Procedure for Preparing an Emission Summary and Dispersion Modelling Report (MECP, 2018). For SO_2, the results were compared against the 30-day Alberta Ambient Air Quality Objective (AAAQO) of 30 µg/m^3 (AEP, 2016).

3.5 Field Operations

3.5.1 Hi-Vol and PQ200 Samplers

To meet the requirements of the 1 in 6-day sampling schedule, stations were visited once every six days and TSP, Metals, and PM2.5 samples were taken. The exposed filter was recovered, and a pre-weighed filter installed for the subsequent sample run. Additional visits were made to resolve instrumentation issues, perform flow calibration checks, and preventative/proactive

maintenance.

New Gold staff performed flow calibrations on Hi-Vol TE-5170 samplers using a Tisch Delta Calibration kit. The flow is calibrated to 1,133 litres per minute (LPM) for a total of 1,632 m^3 in a 24-hour period.

New Gold staff performed flow, temperature, and barometric pressure calibrations on PQ200 samplers using an electronic BGI flow calibrator. The flows were calibrated to 16.7 LPM for a total of 24.05 m^3 in a 24-hour period.

The Q4 calibration was performed on all Hi-Vol and PQ200 samplers on November 10, 2020. Calibration sheets can be found in Appendix D. Calibrations are completed at least once per quarter for each sampler. Calibrations are also completed in accordance with the manufacturer's specifications.

3.5.2 Dustfall Samplers

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

3.5.3 Passive Samplers

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

3.5.4 Performance and Site Audits

There were no MECP audits conducted in Q4 2020.

3.5.5 Equipment and Sampling Issues

During Q4 2020, 4 samples were invalidated, as discussed below:

- December 5: $PM_{2.5}$ sample at South station invalidated due to a runtime of 47.59 hours, which exceeds the upper range limit of 26.4 hours.

- December 23: TSP sample at Northwest station invalidated due to an air volume of 2,281 m^3, which exceeds the theoretical air volume upper range limit of 1,794 m^3.

- December 29: TSP sample at Northwest station invalidated due to an air volume of 2,502 m^3, which exceeds the theoretical air volume upper range limit of 1,794 m^3.

- December 23: $PM_{2.5}$ sample at Northwest station did not run because of a power issue.

4.0 RESULTS

Sampling program results for Q4 2020 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 performing statistical analyses following MECP protocol, a value of half the detection limit was substituted for concentrations less than the detection limit. Laboratory Certificates of Analysis for all the samples collected in Q4 2020 can be found in Appendix C.

For comparative purposes, the Ontario AAQC and Canadian AAQS values are presented, where available, noting that the Ontario AAQCs are numerically equivalent to the Ontario Regulation 419/05 standards.

Summaries of the statistical analyses for Q4 2020 for the TSP, metals, and $PM_{2.5}$ concentrations are presented in Tables 4-1, 4-2, and 4-3, respectively. The statistics in Tables 4-1 and 4-2 include valid and invalid data. During the quarter, the 1 in 6-day sampling schedule presented fifteen (15) possible sampling days between October 1 and December 31, 2020.

A summary of the statistical analyses for Q4 2020 for the total dustfall data is presented in Table 4-4. A summary of the statistical analysis for the Q4 2020 passive SO_2 and NO_2 results is presented in Table 4-5.

4.1 TSP and Metals

The Tait Road and Gallinger Road stations both collected fifteen (15) valid samples, resulting in 100% valid data for Q4 2020. Since this is above the 90% threshold, the statistics for TSP and Metals were created with only valid data.

The Northwest station was installed on December 17, 2020. Two samples were collected in Q4. Both samples were invalid due to flows exceeding the upper threshold. This issue was remedied after the December 29th sample.

For the quarter, the geometric mean TSP concentrations were 12.78 µg/m³ for the Tait Road station and 21.62 µg/m³ for the Gallinger Road station. Values reported by the laboratory as below the detection limit were substituted with one-half of the detection limit.

The maximum 24-hour concentration for TSP was 47.60 µg/m³ at the Tait Road station on December 23, 2020, and 158.31 µg/m³ at the Gallinger Road station on November 11, 2020. The arithmetic mean, maximum, and minimum values for TSP and Metals samples can be found in Appendix A-1.

Appendix A-1 and Figure 4-1 present individual sample data. The Q4 2020 TSP and metals summary statistics of valid and invalid data are summarized in Tables 4-1 and 4-2, respectively.

The concentrations presented in Tables 4-1 and 4-2, Appendix A-1, and Figure 4-1 are determined by dividing the mass reported by the laboratory by the total volume of the sample

taken. The equation below provides a sample of the calculation used to determine the 24-hour concentration.

$$Concentration = \frac{Mass\ Reported\ by\ Laboratory\ (\mu g)}{Total\ Volume\ (m^3)}$$

There was one (1) sample that exceeded the AAQC (120 µg/m³) in Q4 2020. The exceedance occurred on November 11, 2020 at North Station with a TSP of 158.31 µg/m³.

4.2 $PM_{2.5}$

The Tait Road station collected fourteen (14) valid samples, resulting in 93% valid data for Q4 2020. While the Gallinger Road station collected fifteen (15) valid samples, resulting in 100% valid data for Q4 2020.

The Northwest station was installed on December 17, 2020. Two samples were collected in Q4. One sample was invalid due to power supply issues. This issue was remedied in January 2021.

Values reported by the laboratory as below the detection limit (15 µg) were substituted with one-half the detection limit (7.5 µg).

The maximum 24-hour concentration for $PM_{2.5}$ was 14.98 µg/m³ at the Tait Road station on December 17, 2020, and 13.23 µg/m³ at the Gallinger Road station on December 17 2020.

The Q4 2020 $PM_{2.5}$ summary statistics are summarized in Table 4-3. Appendix A-1 and Figure 4-2 present individual sample data. The arithmetic mean, maximum and minimum values for $PM_{2.5}$ samples can be found in Appendix A-1.

The concentrations presented in Table 4-3, Appendix A-1, and Figure 4-2 are determined by dividing the mass reported by the laboratory by the total volume of the sample taken. The equation below provides a sample of the calculation used to determine the 24-hour concentration.

$$Concentration = \frac{Mass\ Reported\ by\ Laboratory\ (\mu g)}{Total\ Volume\ (m^3)}$$

There were no $PM_{2.5}$ exceedances of the Ontario AAQC of 30 µg/m³ or CAAQS (ECCC, 2013) of 28 µg/m³ measured in Q4 2020.

4.3 Total Dustfall

In Q4 2020, 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.

The SPP1 Dustfall Station was installed December 9th, 2020. Samples were collected each

week, which produced 3 valid samples.

Values reported by the laboratory as below the detection limit (0.1 mg/dm^2/day) were substituted with one-half the detection limit (0.05 mg/dm^2/day).

The maximum 30-day concentration for dustfall was 2.76 g/m^2 at the Tait Road station in November, 5.37 g/m^2 at the Gallinger Road station in November, and 17.67 g/m^2 at SPP1 station in the week of December 9th.

A summary of the results is presented in Table 4-4 and the monthly results are presented in Appendix A-2. The data is presented in Figures 4-3 and 4-6.

The concentrations presented in Table 4-4, Appendix A-2, and Figures 4-3 and 4-6 are determined by converting the units reported by the laboratory to the necessary units used for reporting. The equation below provides a sample of the calculation used to determine the maximum 30-day concentration.

$$30\ Day\ Concentration = Lab\ Concentration\ \left(\frac{mg}{dm^2 \cdot day}\right) \times \frac{1\ g}{1000\ mg} \times \frac{100\ dm^2}{1\ m^2} \times 30\ days$$

There were no dustfall exceedances of the 30-day Ontario AAQC of 7 g/m² measured in Q4 2020 at either Tait Road or Gallinger Road stations.

There were three (3) dustfall exceedances at the SPP1 sampling location on the weeks of December 9th, December 16th, and December 23rd (17.67 g/m^2, 11.46 g/m^2, and 10.35 g/m^2, respectively).

Table 4-6 compares the SPP1 dustfall samples to the Stockpile elevation and weather conditions.

4.4 Passive SO_2 and NO_2

In Q4 2020, three (3) valid samples were collected at each station for SO_2 and NO_2.

There are no MECP standards, guidelines, or Ontario AAQCs for SO_2 or NO_2 for a 30-day averaging period. Instead, the 30-day measured average SO_2 or NO_2 concentrations allow for future analysis of trends in the ambient concentrations, identification of notable increases, and comparison with dispersion modelling results.

Values reported by the laboratory as below the detection limit (0.1 ppbv) were substituted with one-half the detection limit (0.05 ppbv).

For NO_2, the monthly results were compared to the Ontario 24-hour AAQC converted to an equivalent 30-day average (78 µg/m³) using the methodology outlined in the Procedure for Preparing an Emission Summary and Dispersion Modelling Report (MECP, 2018).

For SO_2, the results were compared against the AAQO of 30 µg/m³ (AEP, 2017).

A summary of the passive results is presented in Table 4-5 and Figures 4-4 and 4-5, and the monthly results are presented in Appendix A-3.

The concentrations presented in the Table, Figures, and the Appendix are determined by converting the units reported by the laboratory to the necessary units required for comparison against the criteria mentioned above. The equation below provides a sample of the calculation used to determine the maximum concentration of NO_2 and SO_2.

$$Concentration\ (\mu g/m^3) = Concentration\ (ppbv) \times \frac{Molecular\ Weight}{Molar\ Volume\ (L)}$$

There were no exceedances in Q4 2020 for SO_2 or NO_2.

4.5 Evaluation of Effects of Abatement Measures on Monitored Concentrations

The Rainy River Mine has a comprehensive Best Management Practices Plan (BMPP) for Fugitive Dust approved by the MECP as part of the ECA review process. This BMPP effectively controls the generation and dispersion of dust such that the particulate matter measured at the two ambient monitoring stations was below the Ontario AAQC for all Q4 2020 samples.

Table 4-1: Summary Statistics for Q4 2020 TSP Concentration for Valid Data (Invalid Data include for Northwest Station)

Statistics	Tait Road (SW)	Gallinger (NE)	Northwest (NW)
Geometric mean (µg/m³)	12.78	21.62	4.70
Arithmetic mean (µg/m³)	16.53	36.27	4.84
Oct Maximum (µg/m³)	16.46	44.08	0.00
Nov Maximum (µg/m³)	20.68	158.31	0.00
Dec Maximum (µg/m³)	47.60	89.61	6.01
Maximum 24-hr (µg/m³)	47.60	158.31	5.89
90th percentile (µg/m³)	36.66	92.71	5.77
95th percentile (µg/m³)	47.40	113.83	5.89
24-hr AAQC (µg/m³)	120	120	120
No. Valid Samples	15	15	0
Valid Data	100%	100%	0%
No. Samples > AAQC (particulate)	0	1	0
No. Samples > AAQC (metals)	0	0	0

No. Samples > AAQC (metalloids)	0	0	0

Table 4-2: Summary Statistics for Q4 2020 Metals Concentration for Valid Data (Invalid Data included for Northwest Station)

Metal	24-hr AAQC (µg/m³)	Tait Road (SW)		Gallinger Road (NE)		Northwest (NW)	
		Maximum 24-hr Concentration (µg/m³)	Fraction of 24-hr AAQC	Maximum 24-hr Concentration (µg/m³)	Fraction of 24-hr AAQC	Maximum 24-hr Concentration (µg/m³)	Fraction of 24-hr AAQC
As	0.3	0.0010	0.34%	0.0024	0.79%	0.0007	0.22%
Cd	0.025	0.0007	2.69%	0.0007	2.66%	0.0004	1.75%
Cr	0.5	0.0060	1.19%	0.0078	1.57%	0.0030	0.61%
Co	0.1	0.0007	0.67%	0.0022	2.19%	0.0004	0.44%
Cu	50	0.0794	0.16%	0.0986	0.20%	0.0915	0.18%
Fe	4	1.7574	43.94%	3.5071	87.68%	0.1254	3.13%
Pb	0.5	0.0048	0.96%	0.0055	1.10%	0.0007	0.13%
Mn	0.4	0.0514	12.84%	0.1187	29.68%	0.0039	0.99%
Ni	0.2	0.0036	1.79%	0.0051	2.53%	0.0018	0.92%
Se	10	0.0034	0.03%	0.0033	0.03%	0.0022	0.02%
V	2	0.0037	0.18%	0.0060	0.30%	0.0011	0.05%
Zn	120	0.0450	0.04%	0.0682	0.06%	0.0120	0.01%

Table 4-3: Summary Statistics for Q4 2020 $PM_{2.5}$ Concentration Data

Statistics	Tait Road (SW)	Gallinger (NE)	Northwest (NW)
Arithmetic mean (µg/m³)	3.27	3.19	0.31
Oct Maximum (µg/m³)	2.96	3.00	0.00
Nov Maximum (µg/m³)	6.24	7.12	0.00
Dec Maximum (µg/m³)	14.98	13.23	0.31
Maximum 24-hr (µg/m³)	14.98	13.23	0.31
90th percentile (µg/m³)	5.34	6.34	0.31
95th percentile (µg/m³)	9.30	8.95	0.31
24-hr CAAQS (µg/m³)	28	28	28
No. Valid Samples	14	15	1
Valid Data	93%	100%	50%
No. Samples > AAQC (particulate)	0	0	0

Table 4-4: Summary Statistics for Q4 2020 Total Dustfall Data

Statistics	Tait Road (SW)	Gallinger (NE)	SPP1
Arithmetic mean ($g/m^2/30d$)	1.77	2.85	13.16
Monthly Maximum ($g/m^2/30d$)	2.76	5.37	17.67
30-day AAQC	7	7	7
No. > AAQC	0	0	3
No. Valid Samples	3	3	3
Valid Data	100%	100%	100%

Table 4-5: Summary Statistics for Q4 2020 Passive SO_2 and NO_2 Concentration Data

Statistics	Tait Road (SW)		Gallinger Road (NE)	
	SO_2	NO_2	SO_2	NO_2
Mean ($\mu g/m^3$)	0.480	0.846	0.262	2.632
Monthly Maximum ($\mu g/m^3$)	0.786	1.692	0.524	3.572
AAQC* 24-hr converted to 30 day ($\mu g/m^3$)	N/A	78	N/A	78
No. > AAQC	N/A	0	N/A	0
Alberta AAQO ($\mu g/m^3$)	30	N/A	30	N/A
No. > AAQO	0	N/A	0	N/A
No. valid samples	3	3	3	3
Valid data	100%	100%	100%	100%

Table 4-6: SPP1 Dustfall Samples Compared to Weather and Stockpile Conditions

Start Exposure Date	Stop Exposure Date	Stockpile Size (%)	Precip (Barwick)	Average Wind Speed (km/hr)	Average Direction (Degree)	Dustfall Total ($g/m^2/30days$)
2020-12-09	2020-12-16	88.6	11.2	8.4	189	17.67
2020-12-16	2020-12-23	81.4	10.6	12.1	166	11.46
2020-12-23	2020-12-30	90.5	6.8	9.4	254	10.35

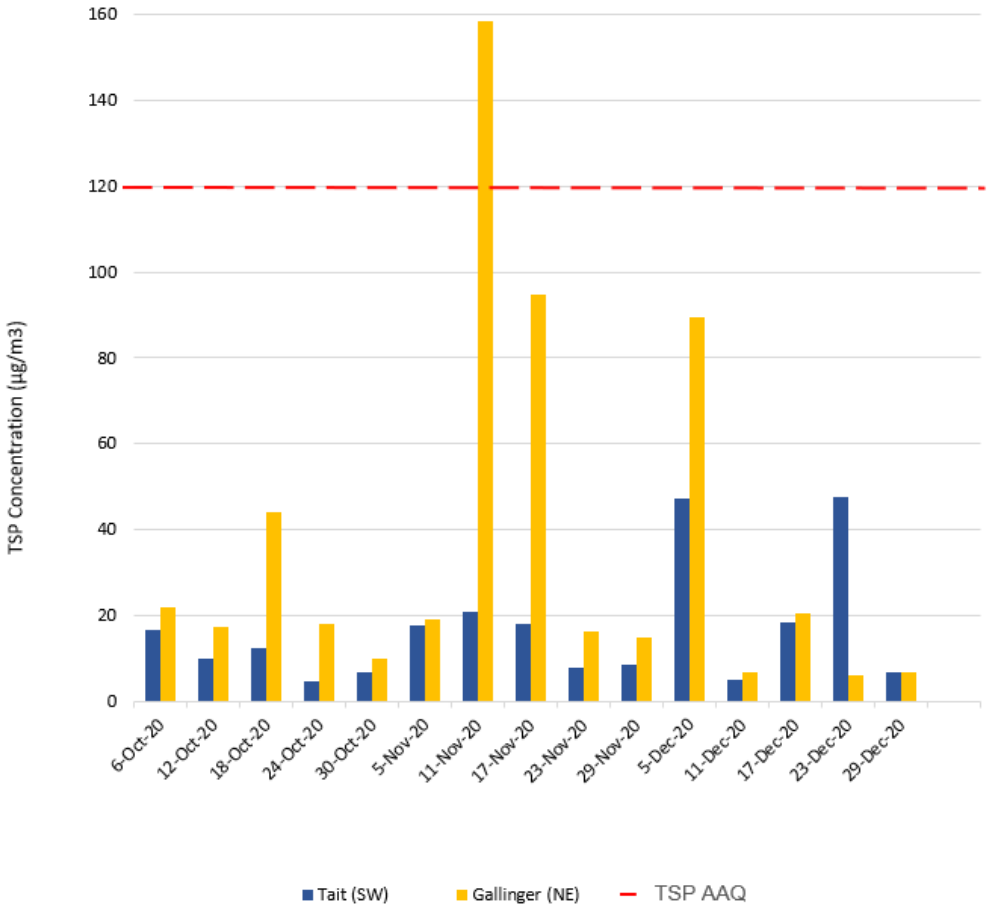

Figure 4-1: TSP Concentrations (Valid Data) (Q4 2020)

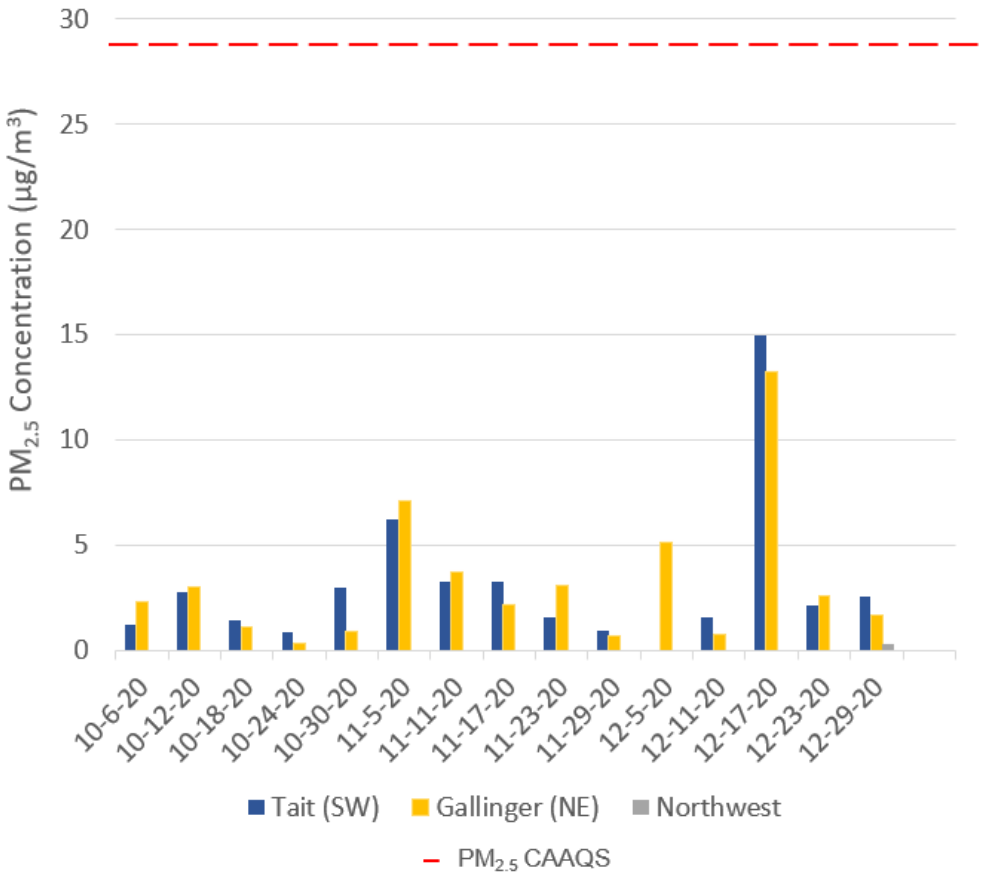

Figure 4-2: $PM_{2.5}$ Concentrations (Q4 2020)

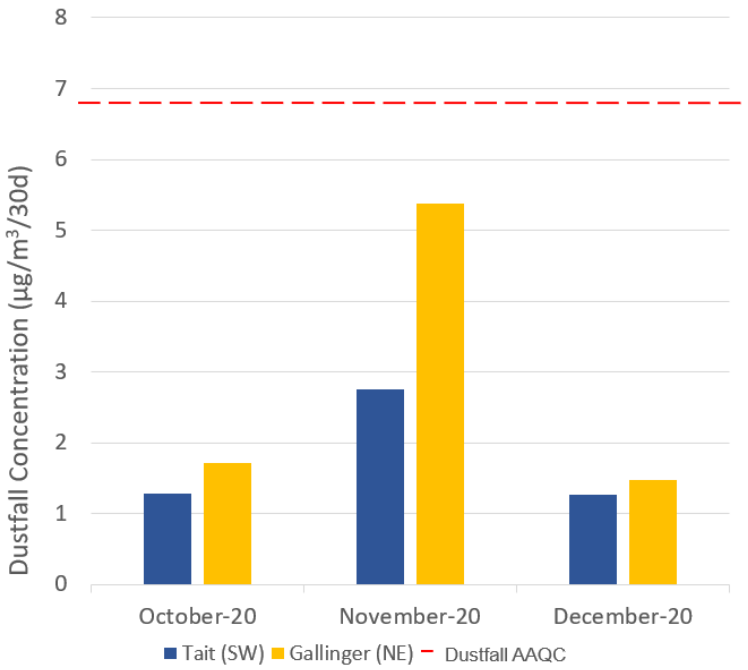

Figure 4-3: Dustfall Concentrations (Q4 2020)

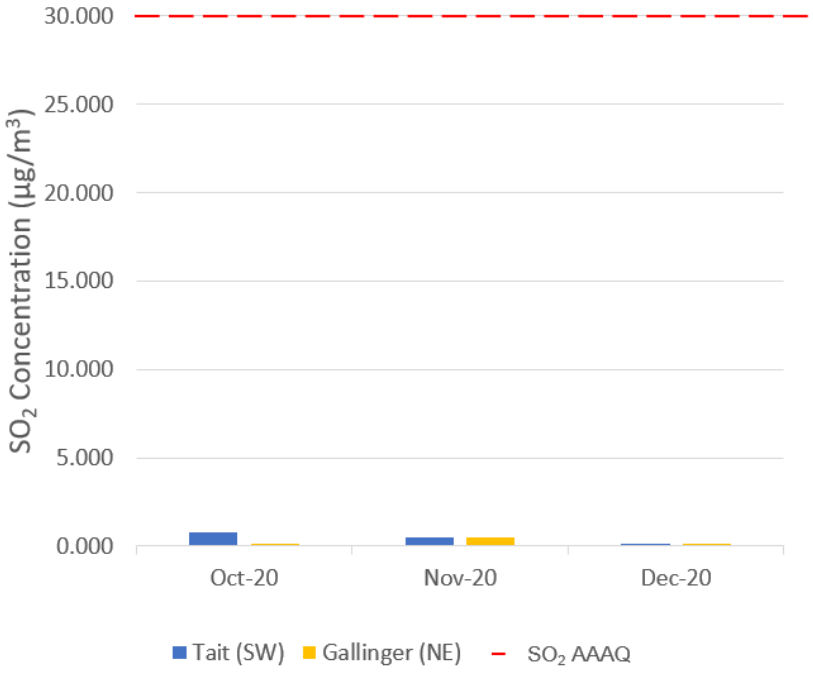

Figure 4-4: SO_2 Concentrations (Q4 2020)

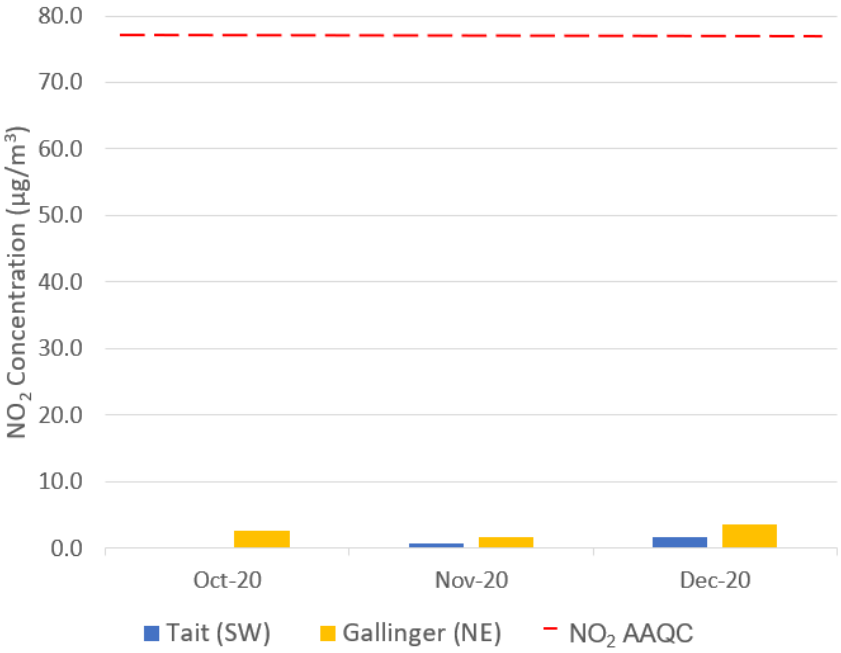

Figure 4-5: NO_2 Concentrations (Q4 2020)

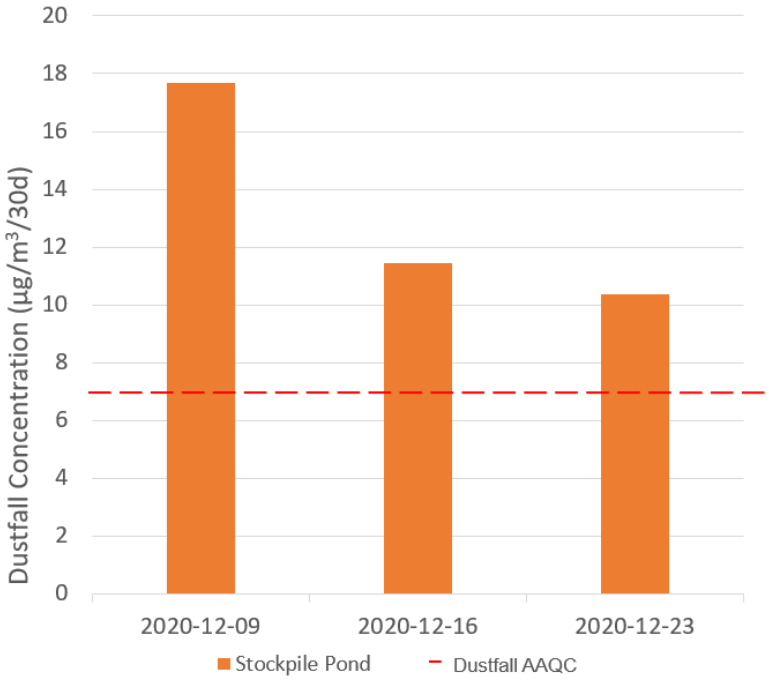

Figure 4-6: SPP1 Dustfall Samples (sampled weekly)

5.0 MITIGATION MEASURES

In Q1 2020, 23 out of the 30 TSP samples were invalid. The majority of which were due to variable flow through the Hi-Vol TE-5170. The measures listed below were implemented mid-May 2020 to mitigate the issues will invalid flows.

- Additions to the air quality sampling procedure such as:
    - A check of the flow controller to ensure that the flow is being maintained (controller alters the motor speed to maintain a constant flow rate) and confirmation of the correct time of day after each sample run.
    - Review of previous samples flow measurement and comparing it to the Operations manual's limits after each sample run.
    - A review will be performed of the ΔP from the pressure tap on the motor casing with a digital manometer to confirm that the ΔP is in the expected range.
    - The face plate gasket will be cleaned after each sample run.
    - The face plate will be cleaned with soap and water periodically, especially under the roof and the filter cassette supporting surface.
    - The filter holder, especially the gasket and horn, will be cleaned at every filter change and inspected for evidence of leakage.
    - Further training for New Gold Personnel on the maintenance and calibration of the equipment.
    - Replacement of brushes and replacement of motors for the Hi Vol TE-5170.
    - Development of a maintenance schedule for an assessment of the equipment.

In Q4 2020, at both stations 100% of the TSP data was valid. This shows that the above measures have significantly improved the sampling procedure. New Gold will continue to look for any improvements that could be made in the sampling procedures.

All three samples taken from SPP1 were above the AAQC. Since this site is located on the mine and not a point of impingement, no mitigation measures will be implemented in Q1 2021. Monitoring will continue at this site and the results will be compared to the stockpile size and weather conditions. If there are more exceedances of the AAQC at SPP1 in Q1 2021, discussions with regulators and our consultant will begin to develop mitigation measures that may be necessary.

6.0 CONCLUSIONS

A summary of the Q4 2020 ambient air quality monitoring program results is provided below:

- The Tait Road and Gallinger Road stations collected fifteen (15) valid TSP samples, resulting in 100% sample validity. Metal and metalloid concentrations were measured on each of the valid TSP filters. There was one exceedance in Q4 2020 at the Gallinger Station.

- Fourteen (14) and fifteen (15) valid $PM_{2.5}$ samples were collected at the Tait and Gallinger Road stations, respectively, resulting in 93% and 100% valid data. There were no exceedances of the 24-hour $PM_{2.5}$ CAAQS in Q4 2020.

- Three (3) valid dustfall samples were collected at Tait and Gallinger Road stations, resulting in 100% sample validity. There were no exceedances of the 30-day dustfall Ontario AAQC in Q4 2020.

- Three (3) valid dustfall samples were collected at SPP1 station. All three samples exceeded the 30-day dustfall Ontario AAQC in Q4 2020.

- Three (3) valid passive SO_2 and NO_2 samples were collected at each of the two stations, resulting in 100% sample validity. There were no exceedances of AAAQO for SO_2 or the 30-day equivalent Ontario AAQC for NO_2 in Q4 2020.

7.0 REFERENCES

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British Columbia Ministry of the Environment. 2007. Section G of Air Constituents – Inorganic. Environment Canada (ECCC). 2013. Canadian Environmental Protection Act, 1999 Sections 54 and 55. Ministry of the Environment Conservation and Parks (MECP). 2018. Procedure for Preparing and Emission Summary and Dispersion Modelling Report.

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Ministry of the Environment Conservation and Parks (MECP). 2018. Operations Manual for Air Quality Monitoring in Ontario.

Ministry of the Environment Conservation and Parks (MECP). 2016c. 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).

8.0 CLOSING

This *Rainy River Mine Ambient Air Quality Monitoring Program Fourth Quarter 2020 Report* was prepared by New Gold Inc. The quality of information, conclusions and estimates contained herein are based on:

- information available at the time of preparation;
- data supplied by outside sources; and
- the assumptions, conditions and qualifications set forth in this document.

If you require further information regarding the above or the mine in general, please contact the undersigned at (807) 482-0900 ext. 8064.

Sincerely,

New Gold Inc.
Rainy River Mine

Prepared by:

<original signed by>

Matthew Wilson
Environmental Specialist

Approved by:

<original signed by>

On behalf of

Sylvie St. Jean
Environment Manager

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

Southwest Tait Road Monitoring Results for TSP and Metals (Fourth Quarter 2020)														
(results expressed in µg/m³)														
Date	**PM2.5**	**TSP**	**As**	**Cd**	**Cr**	**Co**	**Cu**	**Fe**	**Pb**	**Mn**	**Ni**	**Se**	**V**	**Zn**
10-6-20	1.207	16.463	*1.01E-03*	*6.72E-04*	*1.68E-03*	*6.72E-04*	0.050	0.336	*1.01E-03*	0.017	*0.001*	*0.003*	*0.002*	0.008
10-12-20	2.788	10.094	*9.35E-04*	*6.23E-04*	4.05E-03	*6.23E-04*	0.038	0.199	*9.35E-04*	0.010	0.002	*0.003*	*0.002*	0.007
10-18-20	1.415	12.475	*9.17E-04*	*6.12E-04*	3.36E-03	*6.12E-04*	0.048	0.236	*9.17E-04*	0.009	*0.001*	*0.003*	*0.002*	0.007
10-24-20	0.832	4.618	*9.49E-04*	*6.33E-04*	*1.58E-03*	*6.33E-04*	0.038	0.106	*9.49E-04*	0.003	*0.001*	*0.003*	*0.002*	0.008
10-30-20	2.958	6.809	*9.92E-04*	*6.61E-04*	*1.65E-03*	*6.61E-04*	0.024	0.077	*9.92E-04*	0.002	*0.001*	*0.003*	*0.002*	0.007
11-5-20	6.242	17.577	*9.62E-04*	*6.41E-04*	3.46E-03	*6.41E-04*	0.044	0.315	*9.62E-04*	0.013	*0.002*	*0.003*	*0.002*	0.017
11-11-20	3.246	20.683	*9.85E-04*	*6.57E-04*	5.12E-03	*6.57E-04*	0.079	0.762	*9.85E-04*	0.018	0.003	*0.003*	*0.002*	0.018
11-17-20	3.246	18.135	*9.16E-04*	*6.11E-04*	5.37E-03	*6.11E-04*	0.051	0.467	*9.16E-04*	0.015	0.003	*0.003*	*0.002*	0.011
11-23-20	1.581	7.678	*9.52E-04*	*6.35E-04*	3.43E-03	*6.35E-04*	0.049	0.215	*9.52E-04*	0.006	*0.001*	*0.003*	*0.002*	0.008
11-29-20	0.958	8.376	*9.24E-04*	*6.16E-04*	3.26E-03	*6.16E-04*	0.057	0.204	*9.24E-04*	0.006	*0.001*	*0.003*	*0.002*	0.013
12-5-20	--	47.307	*9.60E-04*	*6.40E-04*	5.57E-03	*6.40E-04*	0.075	1.594	2.62E-03	0.040	0.004	*0.003*	0.004	0.036
12-11-20	1.581	5.145	*1.00E-03*	*6.68E-04*	3.41E-03	*6.68E-04*	0.054	0.160	*1.00E-03*	0.004	0.003	*0.003*	*0.002*	0.011
12-17-20	14.979	18.333	*1.00E-03*	*6.69E-04*	5.95E-03	*6.69E-04*	0.034	0.361	2.27E-03	0.022	0.003	*0.003*	*0.002*	0.021
12-23-20	2.122	47.605	*9.25E-04*	*6.17E-04*	4.75E-03	*6.17E-04*	0.059	1.757	4.81E-03	0.051	0.003	*0.003*	0.004	0.045
12-29-20	2.580	6.726	*9.09E-04*	*6.06E-04*	3.64E-03	*6.06E-04*	0.030	0.113	*9.09E-04*	0.004	*0.001*	*0.003*	*0.002*	0.011
Geometric mean	2.34	12.78	9.55E-04	6.37E-04	3.46E-03	6.37E-04	4.64E-02	2.96E-01	1.20E-03	9.74E-03	1.63E-03	3.18E-03	1.78E-03	1.27E-02
October 1, 2020	1.84	10.09	9.60E-04	6.40E-04	2.47E-03	6.40E-04	3.96E-02	1.91E-01	9.60E-04	8.09E-03	1.17E-03	3.20E-03	1.60E-03	7.53E-03
November 1, 2020	3.05	14.49	9.48E-04	6.32E-04	4.13E-03	6.32E-04	5.59E-02	3.93E-01	9.48E-04	1.16E-02	1.82E-03	3.16E-03	1.58E-03	1.34E-02
December 1, 2020	5.32	25.02	9.60E-04	6.40E-04	4.66E-03	6.40E-04	5.05E-02	7.97E-01	2.32E-03	2.42E-02	2.59E-03	3.20E-03	2.44E-03	2.47E-02
Q4 Arithmetic mean	3.27	16.53	9.56E-04	6.37E-04	3.75E-03	6.37E-04	4.87E-02	4.60E-01	1.41E-03	1.46E-02	1.86E-03	3.19E-03	1.87E-03	1.52E-02
Max. concentration	14.98	47.60	1.01E-03	6.72E-04	5.95E-03	6.72E-04	7.94E-02	1.76E+00	4.81E-03	5.14E-02	3.58E-03	3.36E-03	3.70E-03	4.50E-02
Min. concentration	0.83	4.62	9.09E-04	6.06E-04	1.58E-03	6.06E-04	2.39E-02	7.73E-02	9.09E-04	1.98E-03	9.09E-04	3.03E-03	1.51E-03	6.54E-03
90th percentile	5.34	36.66	1.00E-03	6.69E-04	5.49E-03	6.69E-04	6.87E-02	1.26E+00	2.48E-03	3.27E-02	2.95E-03	3.34E-03	2.86E-03	2.98E-02
95th percentile	9.30	47.40	1.00E-03	6.70E-04	5.68E-03	6.70E-04	7.63E-02	1.64E+00	3.28E-03	4.32E-02	3.23E-03	3.35E-03	3.66E-03	3.85E-02
CAAQS	28	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	14	15	15	15	15	15	15	15	15	15	15	15	15	15
No. samples < mdl	0	0	15	15	3	15	0	0	12	0	8	15	13	0
Detection limit (µg)	15	2300	3	2	5	2	4	20	3	1	3	10	5	5
Half detection limit (µg)	7.5	1150	1.5	1	2.5	1	2	10	1.5	0.5	1.5	5	2.5	2.5
% < detection limit	0	0	100	100	20	100	0	0	80	0	53	100	87	0
% valid data	93	100	100	100	100	100	100	100	100	100	100	100	100	100

Notes: All non detectable results were reported as 1/2 detection limit and are denoted by italics & underlining (If samples had differing detection limits, the highest is displayed here)

N/A: Not applicable

—: Invalid Sample

*Canadian Ambient Air Quality Standard, 24-hour standard

newgold™ Rainy River

Northeast Gallinger Road Monitoring Results for TSP and Metals (Fourth Quarter 2020)														
(results expressed in µg/m3)														
Date	**PM2.5**	**TSP**	**As**	**Cd**	**Cr**	**Co**	**Cu**	**Fe**	**Pb**	**Mn**	**Ni**	**Se**	**V**	**Zn**
10-6-20	2.290	21.866	*8.48E-04*	*5.65E-04*	*1.41E-03*	*5.65E-04*	0.079	0.376	*8.48E-04*	0.018	*0.001*	*0.003*	*0.001*	0.010
10-12-20	2.996	17.297	*9.33E-04*	*6.22E-04*	3.73E-03	*6.22E-04*	0.045	0.294	*9.33E-04*	0.012	*0.002*	*0.003*	*0.002*	0.012
10-18-20	1.082	44.079	*8.90E-04*	*5.93E-04*	3.80E-03	*5.93E-04*	0.072	0.807	2.43E-03	0.031	0.002	*0.003*	*0.001*	0.032
10-24-20	*0.312*	18.014	*9.32E-04*	*6.21E-04*	*1.55E-03*	*6.21E-04*	0.055	0.210	2.61E-03	0.009	*0.001*	*0.003*	*0.002*	0.022
10-30-20	0.874	9.784	*9.23E-04*	*6.15E-04*	*1.54E-03*	*6.15E-04*	0.068	0.125	*9.23E-04*	0.004	*0.001*	*0.003*	*0.002*	0.014
11-5-20	7.119	18.933	*9.28E-04*	*6.19E-04*	3.16E-03	*6.19E-04*	0.072	0.298	*9.28E-04*	0.012	*0.001*	*0.003*	*0.002*	0.014
11-11-20	3.745	158.307	2.37E-03	*6.09E-04*	7.18E-03	2.19E-03	0.099	3.507	5.48E-03	0.119	0.005	*0.003*	0.006	0.068
11-17-20	2.165	94.772	*9.54E-04*	*6.36E-04*	6.11E-03	1.84E-03	0.088	1.921	2.54E-03	0.055	0.003	*0.003*	0.003	0.031
11-23-20	3.081	16.340	*8.82E-04*	*5.88E-04*	3.64E-03	*5.88E-04*	0.040	0.354	*8.82E-04*	0.008	0.002	*0.003*	*0.001*	0.008
11-29-20	0.707	14.901	*9.24E-04*	*6.16E-04*	3.76E-03	*6.16E-04*	0.073	0.276	*9.24E-04*	0.007	0.002	*0.003*	*0.002*	0.013
12-5-20	5.162	89.615	*8.96E-04*	*5.97E-04*	7.83E-03	1.67E-03	0.076	2.473	2.57E-03	0.058	0.005	*0.003*	0.005	0.046
12-11-20	0.791	6.931	*9.28E-04*	*6.19E-04*	3.96E-03	*6.19E-04*	0.097	0.202	*9.28E-04*	0.004	0.002	*0.003*	*0.002*	0.009
12-17-20	13.233	20.430	*9.98E-04*	*6.65E-04*	3.99E-03	*6.65E-04*	0.064	0.389	2.20E-03	0.020	0.002	*0.003*	*0.002*	0.021
12-23-20	2.580	5.997	*9.37E-04*	*6.25E-04*	4.25E-03	*6.25E-04*	0.089	0.214	*9.37E-04*	0.006	0.002	*0.003*	*0.002*	0.018
12-29-20	1.665	6.809	*9.73E-04*	*6.48E-04*	3.44E-03	*6.48E-04*	0.049	0.156	*9.73E-04*	0.004	*0.001*	*0.003*	*0.002*	0.008
Geometric mean	2.08	21.62	9.84E-04	6.15E-04	3.53E-03	7.71E-04	6.87E-02	4.28E-01	1.44E-03	1.40E-02	1.81E-03	3.08E-03	1.92E-03	1.75E-02
October 1, 2020	1.51	22.21	9.05E-04	6.03E-04	2.41E-03	6.03E-04	6.39E-02	3.62E-01	1.55E-03	1.49E-02	1.33E-03	3.02E-03	1.51E-03	1.80E-02
November 1, 2020	3.36	60.65	1.21E-03	6.13E-04	4.77E-03	1.17E-03	7.42E-02	1.27E+00	2.15E-03	4.03E-02	2.65E-03	3.07E-03	2.80E-03	2.68E-02
December 1, 2020	4.69	25.96	9.46E-04	6.31E-04	4.69E-03	8.46E-04	7.50E-02	6.87E-01	1.52E-03	1.87E-02	2.40E-03	3.15E-03	2.27E-03	2.03E-02
Arithmetic mean	3.19	36.27	1.02E-03	6.16E-04	3.96E-03	8.74E-04	7.10E-02	7.74E-01	1.74E-03	2.46E-02	2.13E-03	3.08E-03	2.19E-03	2.17E-02
Max. concentration	13.23	158.31	2.37E-03	6.65E-04	7.83E-03	2.19E-03	9.86E-02	3.51E+00	5.48E-03	1.19E-01	5.05E-03	3.33E-03	6.03E-03	6.82E-02
Min. concentration	0.31	6.00	8.48E-04	5.65E-04	1.41E-03	5.65E-04	3.97E-02	1.25E-01	8.48E-04	4.21E-03	8.48E-04	2.83E-03	1.41E-03	7.91E-03
90th percentile	6.34	92.71	9.88E-04	6.43E-04	6.75E-03	1.78E-03	9.40E-02	2.25E+00	2.59E-03	5.71E-02	4.18E-03	3.22E-03	4.35E-03	4.02E-02
95th percentile	8.95	113.83	1.41E-03	6.54E-04	7.38E-03	1.95E-03	9.76E-02	2.78E+00	3.47E-03	7.65E-02	4.82E-03	3.27E-03	5.28E-03	5.25E-02
CAAQS	28	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	15	15	15	15	15	15	15	15	15	15	15	15	15	15
No. samples < mdl	1	0	14	15	3	12	0	0	9	0	6	15	12	0
Detection limit (µg)	15	2300	3	2	5	2	4	20	3	1	3	10	5	5
Half detection limit (µg)	7.5	1150	1.5	1	2.5	1	2	10	1.5	0.5	1.5	5	2.5	2.5
% < detection limit	7	0	93	100	20	80	0	0	60	0	40	100	80	0
% valid data	100	100	100	100	100	100	100	100	100	100	100	100	100	100

Notes: All non detectable results were reported as 1/2 detection limit and are denoted by italics & underlining (If samples had differing detection limits, the highest is displayed here)

N/A: Not applicable

—: Invalid Sample

*Canadian Ambient Air Quality Standard, 24-hour standard

Northwest Monitoring Results for TSP and Metals including Invalid Data (Fourth Quarter 2020)														
(results expressed in µg/m³)														
Date	**PM2.5**	**TSP**	**As**	**Cd**	**Cr**	**Co**	**Cu**	**Fe**	**Pb**	**Mn**	**Ni**	**Se**	**V**	**Zn**
12-23-20	--	6.007	*6.58E-04*	*4.38E-04*	3.03E-03	*4.38E-04*	0.085	0.125	*6.58E-04*	0.004	0.002	*0.002*	*0.001*	0.012
12-29-20	*0.312*	3.677	*5.99E-04*	*4.00E-04*	2.40E-03	*4.00E-04*	0.092	0.049	*5.99E-04*	0.002	0.001	*0.002*	*0.001*	0.010

Geometric mean	0.31	4.70	6.28E-04	4.19E-04	2.69E-03	4.19E-04	8.80E-02	7.82E-02	6.28E-04	2.81E-03	1.53E-03	2.09E-03	1.05E-03	1.08E-02
Arithmetic mean	0.31	4.84	6.29E-04	4.19E-04	2.71E-03	4.19E-04	8.81E-02	8.71E-02	6.29E-04	2.97E-03	1.56E-03	2.10E-03	1.05E-03	1.09E-02
Max. concentration	0.31	6.01	6.58E-04	4.38E-04	3.03E-03	4.38E-04	9.15E-02	1.25E-01	6.58E-04	3.95E-03	1.84E-03	2.19E-03	1.10E-03	1.20E-02
Min. concentration	0.31	3.68	5.99E-04	4.00E-04	2.40E-03	4.00E-04	8.46E-02	4.88E-02	5.99E-04	2.00E-03	1.28E-03	2.00E-03	9.99E-04	9.79E-03
90th percentile	0.31	5.77	6.52E-04	4.35E-04	2.96E-03	4.35E-04	9.08E-02	1.18E-01	6.52E-04	3.75E-03	1.79E-03	2.17E-03	1.09E-03	1.18E-02
95th percentile	0.31	5.89	6.55E-04	4.37E-04	2.99E-03	4.37E-04	9.12E-02	1.22E-01	6.55E-04	3.85E-03	1.81E-03	2.18E-03	1.09E-03	1.19E-02
CAAQS	28	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	1	2	2	2	2	2	2	2	2	2	2	2	2	2
No. samples < mdl	1	0	2	2	0	2	0	0	2	0	0	2	2	0
Detection limit (µg)	15	2300	3	2	5	2	4	20	3	1	3	10	5	5
Half detection limit (µg)	7.5	1150	1.5	1	2.5	1	2	10	1.5	0.5	1.5	5	2.5	2.5
% < detection limit	100	0	100	100	0	100	0	0	100	0	0	100	100	0
% valid data	50	100	100	100	100	100	100	100	100	100	100	100	100	100

Notes: All non detectable results were reported as 1/2 detection limit and are denoted by italics & underlining (If samples had differing detection limits, the highest is displayed here)

N/A: Not applicable

—: Invalid Sample

*Canadian Ambient Air Quality Standard, 24-hour standard

APPENDIX A-2

TOTAL DUSTFALL SAMPLING RESULTS

newgold™ Rainy River

Tait Road Monitoring Results for Dustfall (Fourth Quarter 2020) (results expressed in g/m^2/30days)				
Month	**No. Exposure Days**	**Dustfall (insoluble)**	**Dustfall (soluble)**	**Tait (SW)**
October-20	33	0.84	0.45	1.29
November-20	28	1.53	1.23	2.76
December-20	31	0.9	0.36	1.23
			Arithmetic mean	1.76
			Max. concentration	2.76
			Min. concentration	1.23
			AAQC	7
			No. > AAQC value**	0
			No. of valid samples	3
			% Valid data	100
			No. samples < mdl	0
			Detection limit*	0.1
			Half detection limit	0.05

Stockpile Pond Monitoring Results for Dustfall (Fourth Quarter 2020) (results expressed in g/m^2/30days)				
Week	**No. Exposure Days**	**Dustfall (insoluble)**	**Dustfall (soluble)**	**Stockpile Pond**
2020-12-09	7	15.78	1.89	17.67
2020-12-16	7	10.41	1.05	11.46
2020-12-23	7	8.97	1.38	10.35
			Arithmetic mean	13.16
			Max. concentration	17.67
			Min. concentration	10.35
			AAQC	7
			No. > AAQC value**	3
			No. of valid samples	3
			% Valid data	100
			No. samples < mdl	0
			Detection limit*	0.1
			Half detection limit	0.05

Gallinger Road Monitoring Results for Dustfall (Fourth Quarter 2020)				
(results expressed in g/m^2/30days)				
Month	**No. Exposure Days**	**Dustfall (insoluble)**	**Dustfall (soluble)**	**Gallinger (NE)**
October-20	33	1.02	0.69	1.71
November-20	28	3.03	2.31	5.37
December-20	31	1.02	0.45	1.50
			Arithmetic mean	2.86
			Max. concentration	5.37
			Min. concentration	1.5
			AAQC	7
			No. > AAQC value**	0
			No. of valid samples	3
			% Valid data	100
			No. samples < mdl	0
			Detection limit*	0.1
			Half detection limit	0.05

APPENDIX A-3

SO_2 AND NO_2 PASSIVE SAMPLING RESULTS

newgold™ Rainy River

Monitoring Results for Passive SO_2 and NO_2 (Fourth Quarter 2020)
(results expressed in µg/m^3)

	Southwest Tait Road	
Month	**SO_2**	**NO_2**
Oct-20	0.79	*0.09*
Nov-20	0.52	0.75
Dec-20	*0.13*	1.69
Arithmetic mean	0.48	0.85
Max. concentration	0.79	1.69
Min. concentration	*0.13*	*0.09*
AAQC* (24-hr AAQC converted to equivalent 30-day average)	N/A	78
Alberta Ambient Air Quality Objectives 2013	30	N/A
No. of valid samples	3	3
No. samples < mdl	1	1
Valid Data	100%	100%
Detection limit	0.1	0.1
Half detection limit	0.05	0.05

Monitoring Results for Passive SO_2 and NO_2 (Fourth Quarter 2020)
(results expressed in µg/m^3)

	Northeast Gallinger Road	
Month	**SO_2**	**NO_2**
Oct-20	*0.13*	2.63
Nov-20	0.52	1.69
Dec-20	*0.13*	3.57
Arithmetic mean	0.26	2.63
Max. concentration	0.52	3.57
Min. concentration	*0.13*	1.69
AAQC* (24-hr AAQC converted to equivalent 30-day average)	N/A	78
Alberta Ambient Air Quality Objectives 2013	30	N/A
No. of valid samples	3	3
Valid Data	100%	100%
No. samples < mdl	2	0
Detection limit	0.1	0.1
Half detection limit	0.05	0.05

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

—: Invalid Sample

*Ontario Ambient Air Quality Criteria

APPENDIX B

NOTICES OF EXCEEDANCE FOR Q4 2020

APPENDIX C

LABORATORY RESULTS – CERTIFICATES OF ANALYSIS

APPENDIX D

PQ200 & TE-5170 CALIBRATION SHEETS – Q4 2020