

NEW GOLD RAINY RIVER MINE

APPENDIX E

2019 AIR QUALITY RESULTS



**NEW GOLD INC.
RAINY RIVER MINE**

**AMBIENT AIR QUALITY MONITORING PROGRAM
FIRST QUARTER 2019 REPORT**

MAY 2019

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
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
PM2.5	Particulate Matter less than 2.5 microns in diameter
US EPA	United States Environmental Protection Agency
µg/m ³	Microgram per Cubic Metre

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1.0 INTRODUCTION

The following is a summary of the First Quarter (Q1) 2019 results for the ambient air quality monitoring program undertaken at New Gold Inc.'s Rainy River Mine located northwest of Emo, Ontario.

In Q1 of 2019, New Gold Inc. (New Gold) staff operated and maintained the ambient air quality monitoring sampling stations, communicated with the laboratory staff as required, and prepared the data summary reports. Wood staff performed a Q1 calibration on March 6, 2019.

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;
- Sampling dates (start and end where applicable); and
- A summary of exceedances of an Ontario Standard, 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) samplers for discrete sampling of Total Suspended Particulate (TSP) and metals;
- One PQ200 samplers for discrete sampling of respirable particulate matter (PM_{2.5});
- One standard passive dustfall collection unit; and
- One passive sampling enclosure measuring NO₂ and SO₂.

The Tait Road station located near McMillan Road also contains a meteorological station that provides real-time site wind speed, wind direction, temperature, relative humidity, and precipitation data. Figure 2-4 illustrates the Tait Road station sampling and meteorological equipment.

The Ambient Air Monitoring Program was carried out per ECA 0412-A2LR4V and the MECP program approval letter dated November 9, 2019.

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 two stations is shown in Figure 2-1. UTM co-ordinates for each station based upon NAD 83, are presented in Table 2-1. Imagery showing each station are presented as Figures 2-2 and 2-3.

There were no changes to the station locations in Q1 2019.

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 Meteorological data (wind speed and direction, ambient temperature, relative humidity, rainfall)
Gallinger Road Station (Northeast Station)	431 133	5 410 534	15	TSP, metals, PM _{2.5} , NO ₂ , SO ₂ , total dustfall

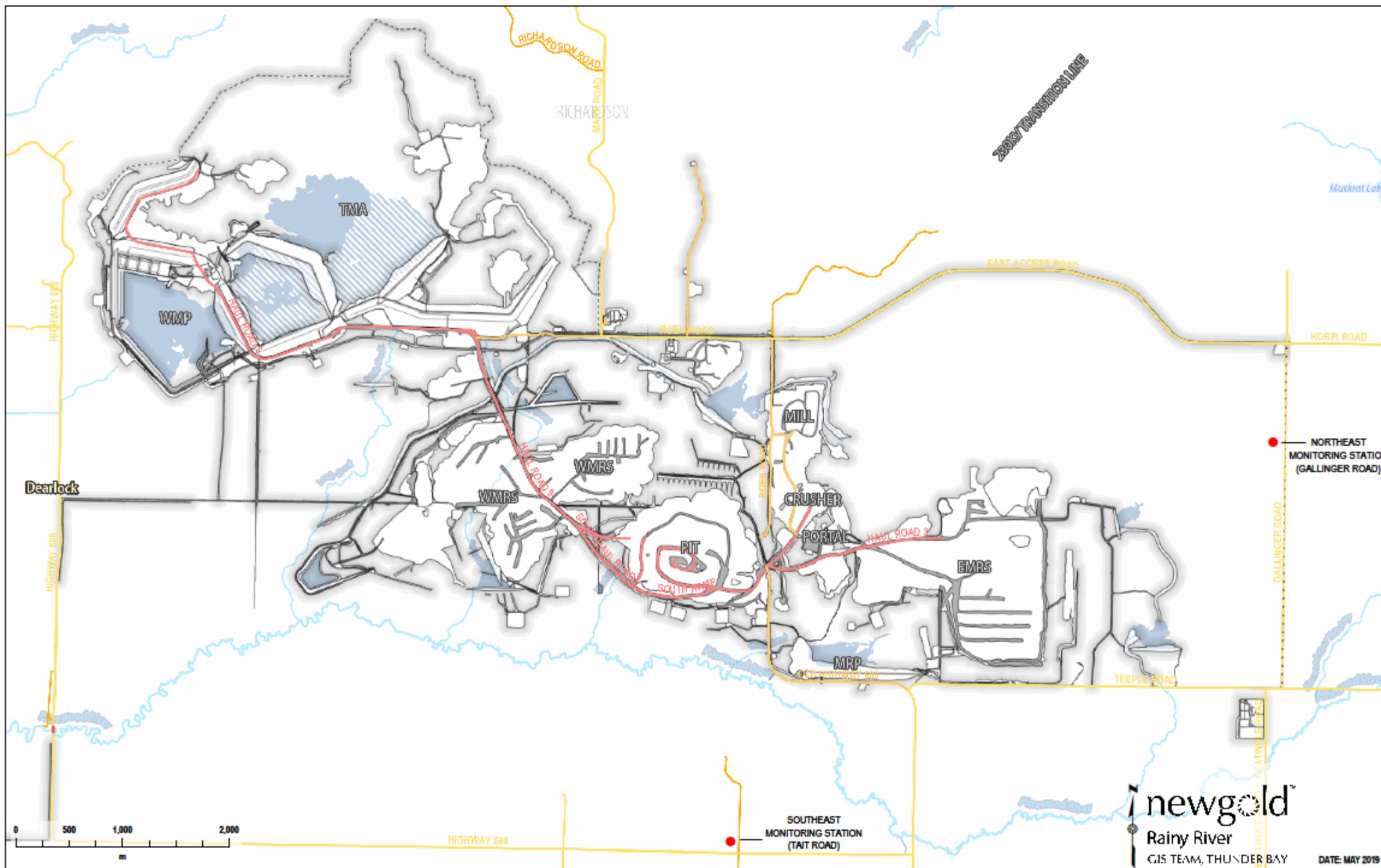


Figure 2-1: Ambient Air Monitoring Stations



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 And Meteorological Equipment

3.0 ANALYTICAL AND MONITORING METHODS

3.1 TSP and Metals

The 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). Measurements of 24-hour average TSP and metal concentrations were collected as specified in the Operations Manual (MECP 2018); particulate samples 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). 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 of total particulate on the filter is 2.3 milligrams (mg). A typical 24-hour sample volume of 1,630 m³ results in a method detection limit of 1.4 micrograms per cubic metre ($\mu\text{g}/\text{m}^3$).

Metal concentrations were determined using standard Inductively Coupled Plasma Atomic Emission Spectroscopy (ICP/AES) methodology. Method detection limits are as shown on the data sheets in Appendix A-1.

3.2 PM_{2.5}

Sampling was performed with PQ200 samplers. 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); particulate samples were collected every sixth day as per the North American schedule (US EPA 2017).

The lowest detectable limit of PM_{2.5} on the Teflon filters is 15 μg . A typical 24-hour sample volume of 24 m³ results in a method detection limit of 0.6 $\mu\text{g}/\text{m}^3$.

3.3 Total Dustfall

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). Standard dustfall samplers were used to measure total dustfall deposition. The method detection limit for total dustfall is 0.3 g/m²/30 days. Bird deterrents were added in Q3 2017 with the goal of reducing contamination.

3.4 Passive Sampling for SO₂ and NO₂

SO₂ and NO₂ concentrations were monitored with passive sampling devices. 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.

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). Required meteorological data were obtained from the Environment and Climate Change Canada website. Fort Frances meteorological station (Climate ID 6022474) is downloaded by Maxxam Analytics with each sample submission. For both SO₂ and NO₂, the analytical method detection limit is in the order of 0.1 parts per billion (ppb). 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 MECP guidelines for monthly concentrations of SO₂ and NO₂ obtained from passive sampling, the data is only used for screening purposes. For NO₂, the monthly results were compared to the MECP 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 SO₂, the results were compared against the 30-day Alberta Ambient Air Quality Objective of 30 µg/m³ (AEP 2016).

3.5 Field Operations

3.5.1 Hi-Vol and PQ200 Samplers

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

Wood 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. Q1 Calibrations were performed on:

- March 6, 2019 – All hi-vols and PQ200s calibrated.

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 deployed 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 Q1 2019.

3.5.5 Equipment and Sampling Issues

During Q1 2019, four samples were invalidated, as discussed below:

- January 3: TSP samples at the Tait Road and Gallinger Road Stations were invalidated due to excessive run times. PM2.5 sample at the Gallinger Road station was invalidated due to awaiting rental unit after previous pump issues.
- January 9: TSP and PM2.5 samples at the Tait Road and Gallinger Road Stations were invalidated due to a missed run.
- January 27: PM2.5 at the Gallinger Road Station was invalidated due to excessive run time.
- March 28: PM2.5 at the Gallinger Road Station was invalidated due to insufficient run time.

4.0 RESULTS

Sampling program results for Q1 2019 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 SO₂ and NO₂ data. For the purpose of performing statistical analyses following MECP 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 Ontario Regulation 419/05 standards.

Summaries of the statistical analyses for Q1 2019 for the TSP, metals, and PM_{2.5} concentrations are presented in Tables 4-1, 4-2, and 4-3, respectively. During the quarter, the 1 in 6-day sampling schedule presented a possible 15 sampling days between January 1 and March 31, 2019.

A summary of the statistical analyses for Q1 2019 for the total dustfall data is presented in Table 4-4.

A summary of the statistical analysis for the Q1 2019 passive SO₂ and NO₂ results is presented in Table 4-5.

4.1 TSP and Metals

The Tait Road and Gallinger Road stations both collected 13 valid samples, resulting in 87% valid data for Q1 2019 at each station.

For the quarter, the geometric mean TSP concentrations were 9.41 µg/m³ for the Tait Road station and 13.21 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 116.35 µg/m³ at the Tait Road station on March 16, 2019, and 79.71 µg/m³ at the Gallinger Road station on March 4, 2019.

There were no exceedances of an MECP AAQC measured for any of TSP, metals, or metalloids in Q1 2019 at either station.

Appendix A-1 and Figure 4-1 present individual sample data. The Q1 2019 TSP and metals summary statistics are summarized in Tables 4-1 and 4-2, respectively.

4.2 PM_{2.5}

The Tait Road station collected 14 valid samples, resulting in 93% valid data for Q1 2019. The Gallinger Road Station collected 11 valid samples, resulting in 73% valid data for Q1 2019. Delays in the delivery of the rental PQ200 unit and mechanical malfunction of the repaired unit resulted in sample invalidation.

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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 PM_{2.5} was 8.03 µg/m³ at the Tait Road station (March 10, 2019), and 7.54 µg/m³ at the Gallinger Road station (March 10, 2019).

There were no PM_{2.5} exceedances of the MECP AAQC of 30 µg/m³ or CAAQS (ECCC 2013) of 28 µg/m³ measured in Q1 2019. Appendix A-1 and Figure 4-2 present individual sample data.

The Q1 2019 PM_{2.5} summary statistics are summarized in Table 4-3.

4.3 Total Dustfall

In Q1 2019, 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.

Values reported by the laboratory as below the detection limit were substituted with one-half of the detection limit. The maximum 30-day concentration for dustfall was 0.84 µg/m³ at the Tait Road station (January), and 2.10 µg/m³ at the Gallinger Road station (February).

There were no dustfall exceedances of the 30-day MECP AAQC of 7 g/m² measured in Q1 2019.

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

4.4 Passive SO₂ and NO₂

In Q1 2019, 3 valid samples were collected at each station for each of SO₂ and NO₂.

There are no MECP standards, guidelines or AAQCs for SO₂ or NO₂ for a 30-day averaging period. The 30-day measured average SO₂ or NO₂ concentrations allow for future analysis of trends in the ambient concentrations, to identify any notable increases, and for potential comparison with dispersion modelling results.

For NO₂, the monthly results were compared to the MECP 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 SO₂, the results were compared against the Alberta Ambient Air Quality Objective of 30 µg/m³ (AEP 2017).

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

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 AAQC for all Q1 2019 samples.

Table 4-1: Summary Statistics For Q1 2019 TSP Concentration Data

Statistics	Tait Road (SW)	Gallinger (NE)
Geometric mean ($\mu\text{g}/\text{m}^3$)	9.41	13.21
Arithmetic mean ($\mu\text{g}/\text{m}^3$)	16.42	18.41
January Maximum ($\mu\text{g}/\text{m}^3$)	12	26.62
February Maximum ($\mu\text{g}/\text{m}^3$)	8.9	32.26
March Maximum ($\mu\text{g}/\text{m}^3$)	116.3	79.91
Maximum 24-hr ($\mu\text{g}/\text{m}^3$)	116.3	79.91
90th percentile	14.15	31.13
95th percentile	55.35	51.24
24-hr AAQC	120	120
No. Valid Samples	13	13
Valid Data	87%	87%
No. Samples > AAQC (particulate)	0	0
No. Samples > AAQC (metals)	0	0
No. Samples > AAQC (metalloids)	0	0

Table 4-2: Summary Statistics For Q1 2019 Metals Concentration Data

Metal	24-hr AAQC ($\mu\text{g}/\text{m}^3$)	Tait Road (SW)		Gallinger Road (NE)	
		Maximum 24-hr Concentration ($\mu\text{g}/\text{m}^3$)	Fraction of 24-hr AAQC	Maximum 24-hr Concentration ($\mu\text{g}/\text{m}^3$)	Fraction of 24-hr AAQC
As	0.3	9.03E-04	0.3%	9.82E-04	0.3%
Cd	0.025	6.02E-04	2.4%	6.55E-04	2.6%
Cr	0.5	8.54E-03	1.7%	4.54E-03	0.9%
Co	0.1	2.57E-03	2.6%	6.55E-04	0.7%
Cu	50	8.59E-02	0.2%	4.16E-01	0.8%
Fe	4	3.66E+00	91.5%	4.75E-01	11.9%
Pb	0.5	2.32E-03	0.5%	8.28E-03	1.7%
Mn	0.4	7.72E-02	19.3%	4.58E-02	11.5%
Ni	0.2	4.91E-03	2.5%	9.82E-04	0.5%
Se	10	3.01E-03	0.0%	3.27E-03	0.0%
V	2	5.79E-03	0.3%	3.04E-03	0.2%
Zn	120	2.69E-02	0.0%	7.66E-02	0.1%

Table 4-3: Summary Statistics for Q1 2019 PM_{2.5} Concentration Data

Statistics	Tait Road (SW)	Gallinger (NE)
Arithmetic mean ($\mu\text{g}/\text{m}^3$)	2.75	—
January Maximum ($\mu\text{g}/\text{m}^3$)	3.16	3.96
February Maximum ($\mu\text{g}/\text{m}^3$)	6.37	4.74
March Maximum ($\mu\text{g}/\text{m}^3$)	8.03	7.54
Maximum 24-hr ($\mu\text{g}/\text{m}^3$)	8.03	7.54
90th percentile	6.4	4.74
95th percentile	6.98	6.19
24-hr CAAQS	28	28
No. Valid Samples	14	11
Valid Data	93%	73%
No. Samples > AAQC (particulate)	0	0

Table 4-4: Summary Statistics for Q1 2019 Total Dustfall Data

Statistics	Tait Road (SW)	Gallinger (NE)
Arithmetic mean ($\mu\text{g}/\text{m}^3/30\text{d}$)	0.72	1.29
Maximum 24-hr ($\mu\text{g}/\text{m}^3/30\text{d}$)	0.84	2.1
30-day AAQC	7	7
No. > AAQC	0	0
No. Valid Samples	3	3
Valid Data	100%	100%

Table 4-5: Summary Statistics for Q1 2019 Passive SO₂ and NO₂ Concentration Data

Statistics	Tait Road (SW)		Gallinger Road (NE)	
	SO ₂	NO ₂	SO ₂	NO ₂
Mean ($\mu\text{g}/\text{m}^3$)	0.6	1.6	0.4	2.3
Maximum ($\mu\text{g}/\text{m}^3$)	0.8	1.9	0.5	3.1
AAQC* 24-hr converted to 30 day ($\mu\text{g}/\text{m}^3$)	N/A	78	N/A	78
Alberta AAQO ($\mu\text{g}/\text{m}^3$)	30	N/A	30	N/A
No. valid samples ($\mu\text{g}/\text{m}^3$)	3	3	3	3
Valid data ($\mu\text{g}/\text{m}^3$)	100%	100%	100%	100%

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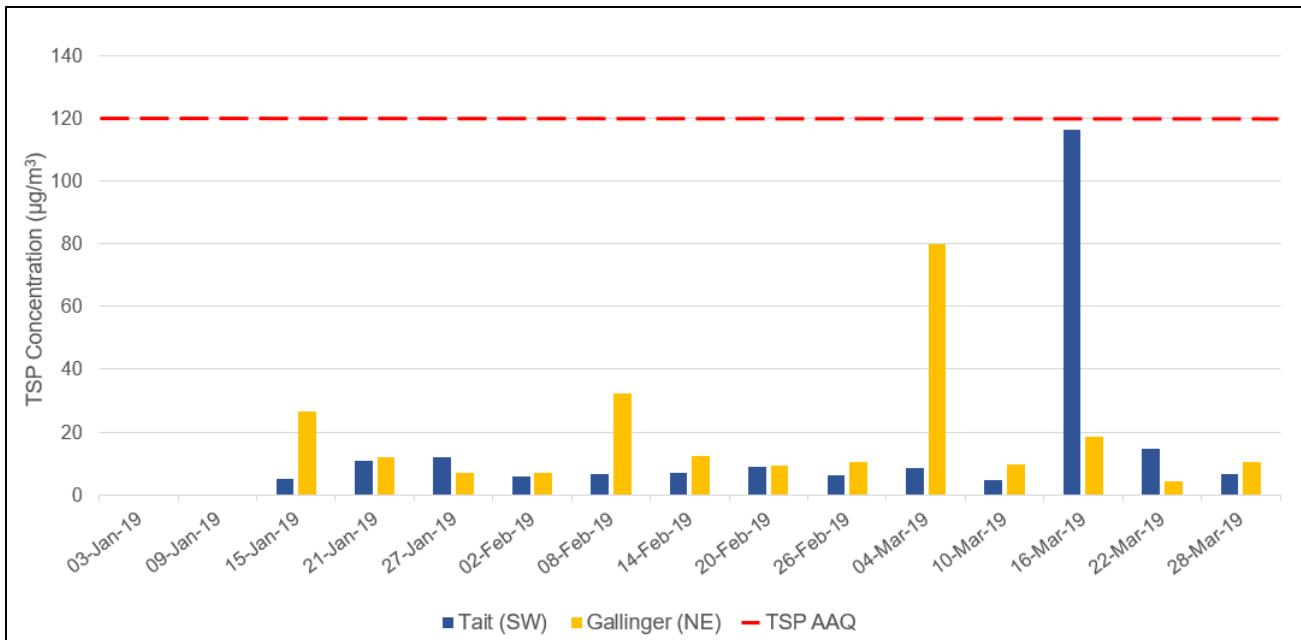


Figure 4-1: TSP Concentrations (Q1 2019)

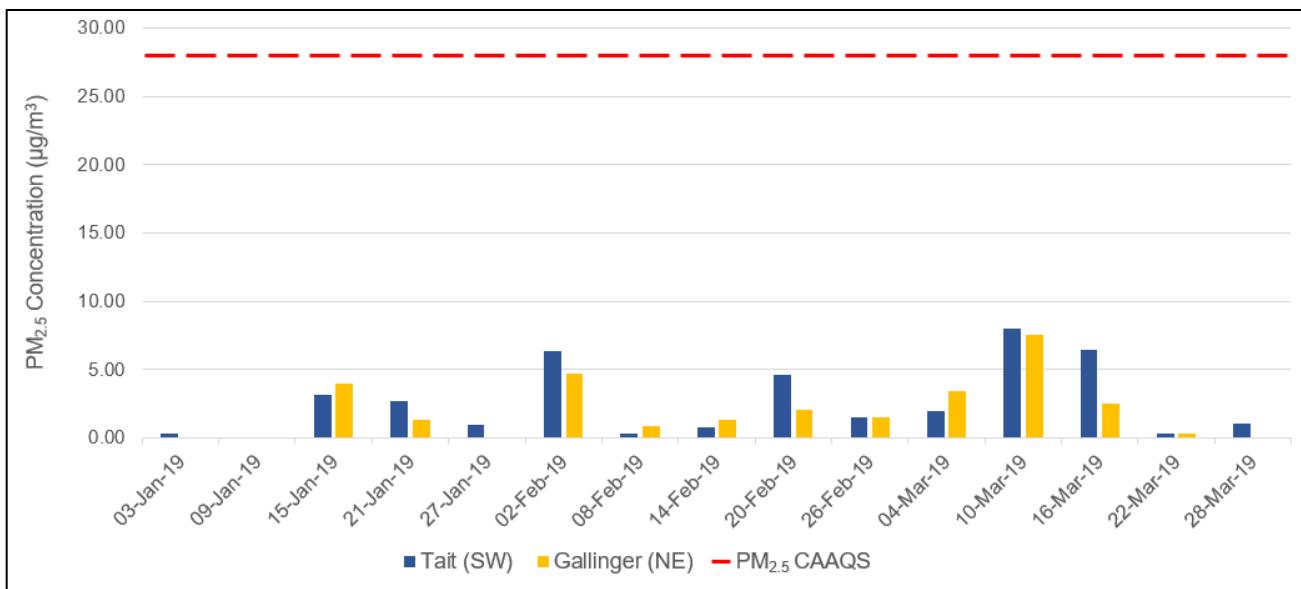


Figure 4-2: PM_{2.5} Concentrations (Q1 2019)

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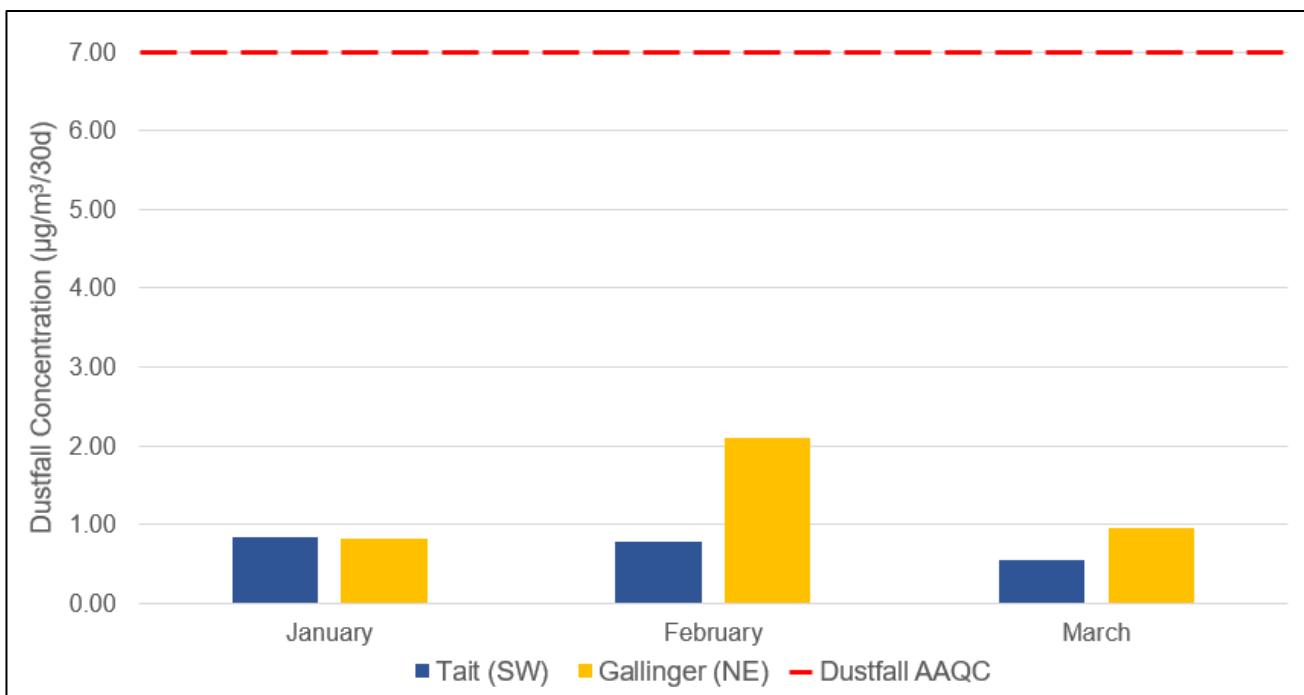


Figure 4-3: Dustfall Concentrations (Q1 2019)

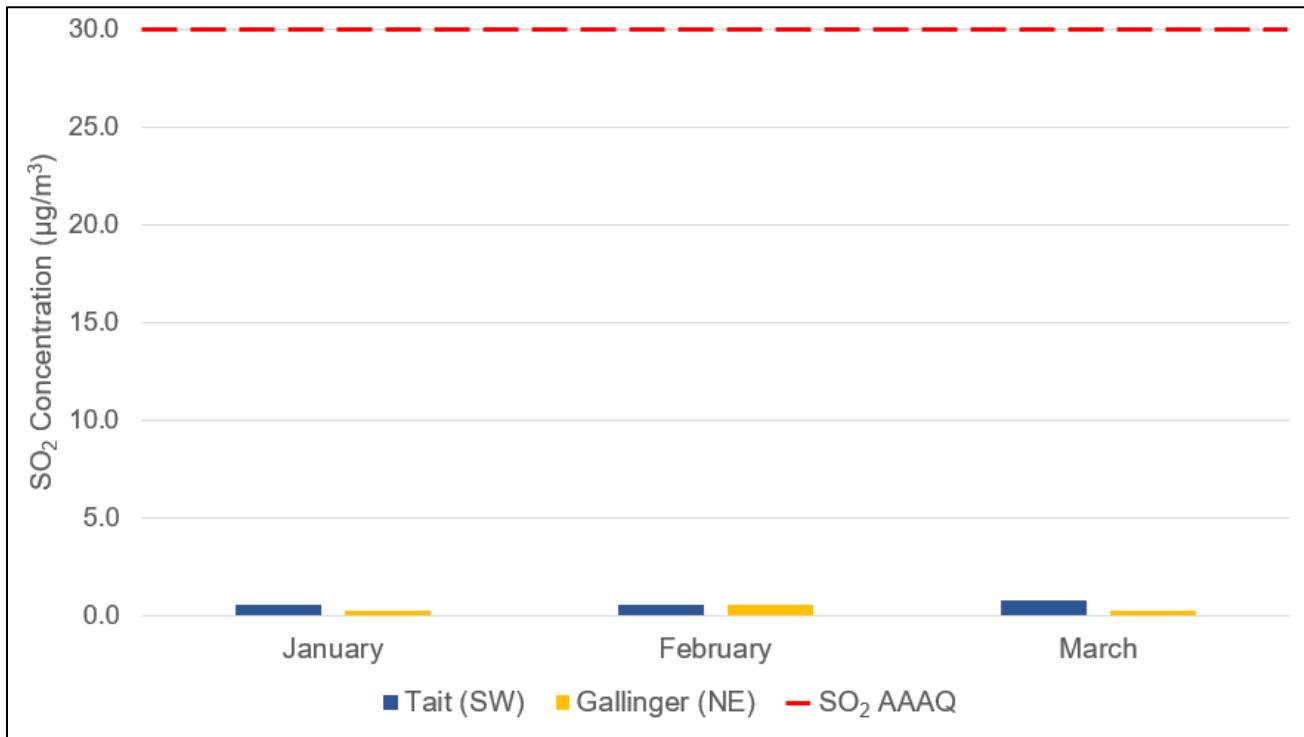


Figure 4-4: SO₂ Concentrations (Q1 2019)

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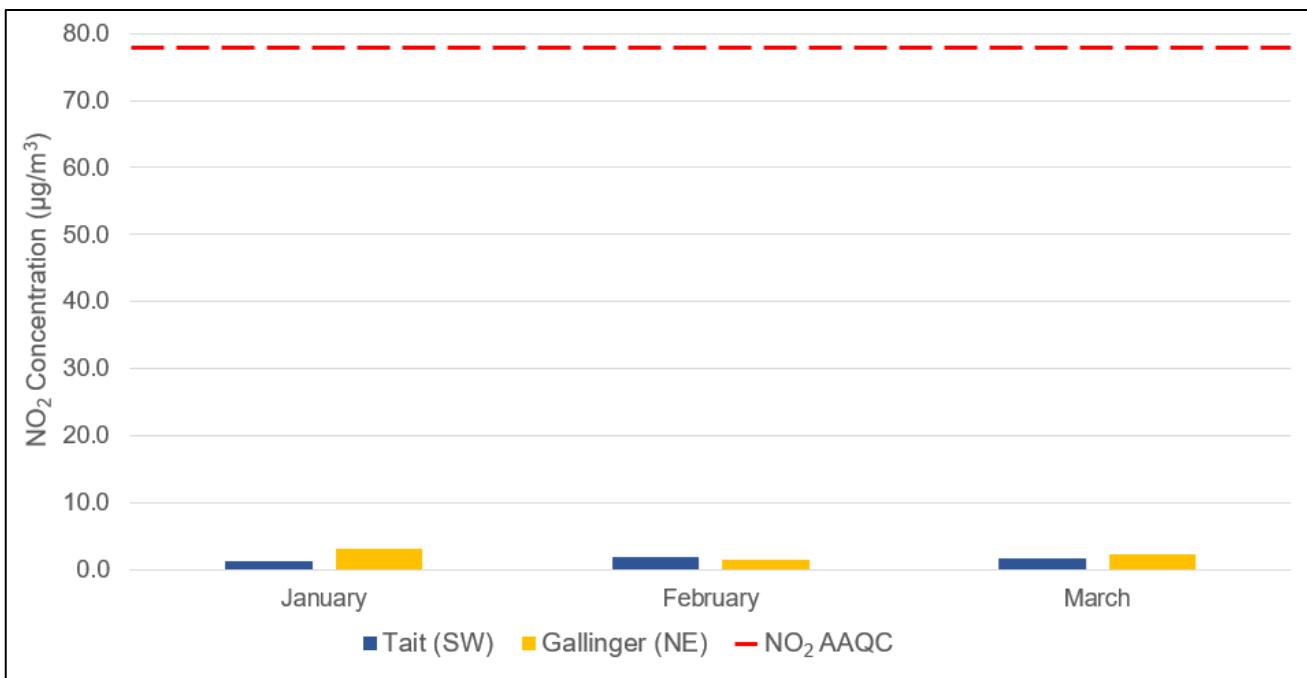


Figure 4-5: NO₂ Concentrations (Q1 2019)

5.0 CONCLUSIONS

A summary of the Q1 2019 ambient air quality monitoring program results is provided below:

- 13 valid TSP samples were collected at both stations resulting in 87% sample validity. Metal and metalloid concentrations were measured on each of the valid TSP filters.
- There were no measured exceedances of an MECP AAQC for TSP, metals, or metalloids in Q1 2019. Invalidated samples were due to excessive run times.
- 14 and 11 valid PM_{2.5} samples were collected at the Tait and Gallinger Road stations, resulting in 93% and 73% valid data, respectively. There were no exceedances of the 24-hour PM_{2.5} CAAQS in Q1 2019. Sample invalidation was attributed to mechanical malfunction of Northeast and Rented PQ200 samplers.
- 3 valid dustfall samples were collected at each station (100% sample validity). There were no exceedances of the 30-day dustfall AAQC in Q1 2019.
- 3 valid passive SO₂ and NO₂ samples were collected at each of the two stations (100% sample validity). There were no exceedances of AEP Criterion for SO₂ or the 30-day equivalent AAQC for NO₂ in Q1 2019.

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7.0 CLOSING

This *Rainy River Mine Ambient Air Quality Monitoring Program First Quarter 2019 Report* was prepared by New Gold Inc. The quality of information, conclusions and estimates contained herein are 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.

If you require further information regarding the above or the mine in general, please contact the undersigned at (807) 482-0900 ext. 8328.

Sincerely,

**New Gold Inc.
Rainy River Mine**

Prepared by:



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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 (First Quarter 2019)
(results expressed in $\mu\text{g}/\text{m}^3$)

Date	PM2.5	TSP	As	Cd	Cr	Co	Cu	Fe	Pb	Mn	Ni	Se	V	Zn
03-Jan-19	<u>0.31</u>	—	—	—	—	—	—	—	—	—	—	—	—	—
09-Jan-19	—	—	—	—	—	—	—	—	—	—	—	—	—	—
15-Jan-19	3.16	5.18	<u>8.44E-04</u>	<u>5.63E-04</u>	<u>1.41E-03</u>	<u>5.63E-04</u>	4.08E-02	1.38E-01	<u>8.44E-04</u>	4.67E-03	<u>8.44E-04</u>	<u>2.81E-03</u>	<u>1.41E-03</u>	1.14E-02
21-Jan-19	2.71	10.76	<u>8.92E-04</u>	<u>5.95E-04</u>	<u>1.49E-03</u>	<u>5.95E-04</u>	1.29E-02	1.87E-01	<u>8.92E-04</u>	8.38E-03	<u>8.92E-04</u>	<u>2.97E-03</u>	<u>1.49E-03</u>	9.28E-03
27-Jan-19	1.00	12.0	<u>8.70E-04</u>	<u>5.80E-04</u>	<u>1.45E-03</u>	<u>5.80E-04</u>	5.97E-02	1.91E-01	2.32E-03	7.54E-03	<u>8.70E-04</u>	<u>2.90E-03</u>	<u>1.45E-03</u>	2.69E-02
02-Feb-19	6.37	5.90	<u>9.03E-04</u>	<u>6.02E-04</u>	<u>1.50E-03</u>	<u>6.02E-04</u>	2.47E-02	1.31E-01	<u>9.03E-04</u>	4.69E-03	<u>9.03E-04</u>	<u>3.01E-03</u>	<u>1.50E-03</u>	1.24E-02
08-Feb-19	<u>0.31</u>	6.6	<u>8.37E-04</u>	<u>5.58E-04</u>	3.46E-03	<u>5.58E-04</u>	4.65E-02	7.98E-02	<u>8.37E-04</u>	3.79E-03	<u>8.37E-04</u>	<u>2.79E-03</u>	<u>1.40E-03</u>	1.15E-02
14-Feb-19	0.75	6.8	<u>8.74E-04</u>	<u>5.83E-04</u>	3.44E-03	<u>5.83E-04</u>	4.85E-02	9.21E-02	<u>8.74E-04</u>	3.55E-03	<u>8.74E-04</u>	<u>2.91E-03</u>	<u>1.46E-03</u>	1.57E-02
20-Feb-19	4.62	8.9	<u>8.58E-04</u>	<u>5.72E-04</u>	3.89E-03	<u>5.72E-04</u>	3.09E-02	1.42E-01	<u>8.58E-04</u>	5.89E-03	<u>8.58E-04</u>	<u>2.86E-03</u>	<u>1.43E-03</u>	1.85E-02
26-Feb-19	1.54	6.4	<u>8.71E-04</u>	<u>5.81E-04</u>	4.12E-03	<u>5.81E-04</u>	3.60E-02	1.31E-01	<u>8.71E-04</u>	3.60E-03	<u>8.71E-04</u>	<u>2.90E-03</u>	<u>1.45E-03</u>	9.46E-03
04-Mar-19	1.96	8.5	<u>8.59E-04</u>	<u>5.72E-04</u>	3.49E-03	<u>5.72E-04</u>	3.25E-02	1.99E-01	<u>8.59E-04</u>	6.18E-03	<u>8.59E-04</u>	<u>2.86E-03</u>	<u>1.43E-03</u>	1.27E-02
10-Mar-19	8.03	4.65	<u>8.41E-04</u>	<u>5.60E-04</u>	3.08E-03	<u>5.60E-04</u>	6.84E-02	7.40E-02	<u>8.41E-04</u>	2.02E-03	<u>8.41E-04</u>	<u>2.80E-03</u>	<u>1.40E-03</u>	1.08E-02
16-Mar-19	6.41	116.3	<u>8.77E-04</u>	<u>5.85E-04</u>	8.54E-03	2.57E-03	8.59E-02	3.66E+00	<u>8.77E-04</u>	7.72E-02	4.91E-03	<u>2.92E-03</u>	5.79E-03	1.82E-02
22-Mar-19	<u>0.31</u>	14.7	<u>8.75E-04</u>	<u>5.83E-04</u>	3.79E-03	<u>5.83E-04</u>	4.88E-02	2.43E-01	<u>8.75E-04</u>	8.80E-03	<u>8.75E-04</u>	<u>2.92E-03</u>	<u>1.46E-03</u>	1.33E-02
28-Mar-19	1.04	6.76	<u>8.44E-04</u>	<u>5.63E-04</u>	3.43E-03	<u>5.63E-04</u>	6.59E-02	1.60E-01	<u>8.44E-04</u>	4.00E-03	<u>8.44E-04</u>	<u>2.81E-03</u>	<u>1.41E-03</u>	5.24E-03

Geometric mean	1.63	9.41	8.65E-04	5.76E-04	2.90E-03	6.46E-04	4.18E-02	1.78E-01	9.32E-04	6.01E-03	9.87E-04	2.88E-03	1.60E-03	1.26E-02
Arithmetic mean	2.75	16.42	8.65E-04	5.77E-04	3.31E-03	7.30E-04	4.63E-02	4.18E-01	9.76E-04	1.08E-02	1.18E-03	2.88E-03	1.77E-03	1.35E-02
Max. concentration	8.03	116.35	9.03E-04	6.02E-04	8.54E-03	2.57E-03	8.59E-02	3.66E+00	2.32E-03	7.72E-02	4.91E-03	3.01E-03	5.79E-03	2.69E-02
Min. concentration	0.31	4.65	8.37E-04	5.58E-04	1.41E-03	5.58E-04	1.29E-02	7.40E-02	8.37E-04	2.02E-03	8.37E-04	2.79E-03	1.40E-03	5.24E-03
90th percentile	6.40	14.15	8.89E-04	5.93E-04	4.08E-03	6.00E-04	6.79E-02	2.34E-01	9.00E-04	8.72E-03	9.00E-04	2.96E-03	1.50E-03	1.84E-02
95th percentile	6.98	55.35	8.96E-04	5.97E-04	5.89E-03	1.39E-03	7.54E-02	1.61E+00	1.47E-03	3.62E-02	2.51E-03	2.99E-03	3.22E-03	2.19E-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	14	13	13	13	13	13	13	13	13	13	13	13	13	13
No. samples < mdl	3	0	13	13	4	12	0	0	12	0	12	13	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	21	0	100	100	31	92	0	0	92	0	92	100	92	0
% valid data	93	87	87	87	87	87	87	87	87	87	87	87	87	87

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

Northeast Gallinger Road Monitoring Results for TSP and Metals (First Quarter 2019)

(results expressed in $\mu\text{g}/\text{m}^3$)

Date	PM2.5	TSP	As	Cd	Cr	Co	Cu	Fe	Pb	Mn	Ni	Se	V	Zn
03-Jan-19	—	—	—	—	—	—	—	—	—	—	—	—	—	—
09-Jan-19	—	—	—	—	—	—	—	—	—	—	—	—	—	—
15-Jan-19	3.96	26.62	<i>9.08E-04</i>	<i>6.05E-04</i>	<i>1.51E-03</i>	<i>6.05E-04</i>	2.37E-01	3.62E-01	2.24E-03	1.48E-02	<i>9.08E-04</i>	<i>3.03E-03</i>	<i>1.51E-03</i>	2.56E-02
21-Jan-19	1.29	11.90	<i>9.06E-04</i>	<i>6.04E-04</i>	<i>1.51E-03</i>	<i>6.04E-04</i>	2.84E-01	2.91E-01	9.06E-04	1.08E-02	<i>9.06E-04</i>	<i>3.02E-03</i>	<i>1.51E-03</i>	1.33E-02
27-Jan-19	—	7.03	<i>9.17E-04</i>	<i>6.11E-04</i>	<i>1.53E-03</i>	<i>6.11E-04</i>	4.16E-01	1.25E-01	<i>9.17E-04</i>	4.83E-03	<i>9.17E-04</i>	<i>3.06E-03</i>	<i>1.53E-03</i>	1.21E-02
02-Feb-19	4.74	6.87	<i>9.20E-04</i>	<i>6.13E-04</i>	<i>1.53E-03</i>	<i>6.13E-04</i>	3.19E-01	9.44E-02	<i>9.20E-04</i>	3.13E-03	<i>9.20E-04</i>	<i>3.07E-03</i>	<i>1.53E-03</i>	1.05E-02
08-Feb-19	0.83	32.26	<i>9.11E-04</i>	<i>6.08E-04</i>	3.89E-03	<i>6.08E-04</i>	1.47E-01	2.87E-01	6.99E-03	2.93E-02	<i>9.11E-04</i>	<i>3.04E-03</i>	<i>3.04E-03</i>	4.24E-02
14-Feb-19	1.29	12.23	<i>9.36E-04</i>	<i>6.24E-04</i>	4.12E-03	<i>6.24E-04</i>	3.62E-01	1.57E-01	2.18E-03	7.24E-03	<i>9.36E-04</i>	<i>3.12E-03</i>	<i>1.56E-03</i>	2.56E-02
20-Feb-19	2.04	9.47	<i>8.99E-04</i>	<i>6.00E-04</i>	4.14E-03	<i>6.00E-04</i>	<i>1.20E-03</i>	1.35E-01	<i>8.99E-04</i>	5.70E-03	<i>8.99E-04</i>	<i>3.00E-03</i>	<i>1.50E-03</i>	1.15E-02
26-Feb-19	1.54	10.41	<i>9.46E-04</i>	<i>6.31E-04</i>	4.54E-03	<i>6.31E-04</i>	1.42E-01	1.56E-01	<i>9.46E-04</i>	7.19E-03	<i>9.46E-04</i>	<i>3.15E-03</i>	<i>1.58E-03</i>	1.41E-02
04-Mar-19	3.41	79.71	<i>9.20E-04</i>	<i>6.13E-04</i>	3.43E-03	<i>6.13E-04</i>	4.72E-02	4.75E-01	8.28E-03	4.58E-02	<i>9.20E-04</i>	<i>3.07E-03</i>	<i>1.53E-03</i>	7.66E-02
10-Mar-19	7.54	9.88	<i>9.56E-04</i>	<i>6.37E-04</i>	3.76E-03	<i>6.37E-04</i>	1.45E-01	1.13E-01	<i>9.56E-04</i>	5.23E-03	<i>9.56E-04</i>	<i>3.19E-03</i>	<i>1.59E-03</i>	1.18E-02
16-Mar-19	2.54	18.47	<i>9.82E-04</i>	<i>6.55E-04</i>	3.67E-03	<i>6.55E-04</i>	2.43E-01	2.12E-01	<i>9.82E-04</i>	8.38E-03	<i>9.82E-04</i>	<i>3.27E-03</i>	<i>1.64E-03</i>	1.18E-02
22-Mar-19	<i>0.31</i>	4.16	<i>9.76E-04</i>	<i>6.51E-04</i>	3.51E-03	<i>6.51E-04</i>	3.25E-01	9.76E-02	<i>9.76E-04</i>	2.47E-03	<i>9.76E-04</i>	<i>3.25E-03</i>	<i>1.63E-03</i>	4.29E-03
28-Mar-19	—	10.36	<i>9.66E-04</i>	<i>6.44E-04</i>	3.54E-03	<i>6.44E-04</i>	1.51E-01	1.77E-01	<i>9.66E-04</i>	5.73E-03	<i>9.66E-04</i>	<i>3.22E-03</i>	<i>1.61E-03</i>	8.56E-03

Geometric mean		13.21	9.34E-04	6.22E-04	2.88E-03	6.22E-04	1.38E-01	1.82E-01	1.48E-03	8.05E-03	9.34E-04	3.11E-03	1.64E-03	1.55E-02
Arithmetic mean		18.41	9.34E-04	6.23E-04	3.13E-03	6.23E-04	2.17E-01	2.06E-01	2.17E-03	1.16E-02	9.34E-04	3.11E-03	1.67E-03	2.06E-02
Max. concentration	7.54	79.71	9.82E-04	6.55E-04	4.54E-03	6.55E-04	4.16E-01	4.75E-01	8.28E-03	4.58E-02	9.82E-04	3.27E-03	3.04E-03	7.66E-02
Min. concentration	0.31	4.16	8.99E-04	6.00E-04	1.51E-03	6.00E-04	1.20E-03	9.44E-02	8.99E-04	2.47E-03	8.99E-04	3.00E-03	1.50E-03	4.29E-03
90th percentile	4.74	31.13	9.74E-04	6.49E-04	4.13E-03	6.49E-04	3.55E-01	3.48E-01	6.04E-03	2.64E-02	9.74E-04	3.25E-03	1.64E-03	3.90E-02
95th percentile	6.14	51.24	9.79E-04	6.52E-04	4.28E-03	6.52E-04	3.81E-01	4.02E-01	7.44E-03	3.51E-02	9.78E-04	3.26E-03	2.20E-03	5.61E-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	11	13	13	13	13	13	13	13	13	13	13	13	13	13
No. samples < mdl	1	0	13	13	4	13	1	0	9	0	13	13	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	9	0	100	100	31	100	8	0	69	0	100	100	100	0
% valid data	73	87	87	87	87	87	87	87	87	87	87	87	87	87

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

newgold™ Rainy River

Southwest Tait Road Monitoring Results for Dustfall (First Quarter 2019) (results expressed in g/m²/30days)

Month	No. Exposure Days	Dustfall (insoluble)	Dustfall (soluble)	Dustfall (total)
January	29	0.72	<u>0.15</u>	0.84
February	31	<u>0.15</u>	0.60	0.78
March	26	<u>0.17</u>	<u>0.17</u>	0.54
Arithmetic mean				0.72
Max. concentration				0.84
Min. concentration				0.54
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				0.17

Northeast Gallinger Road Monitoring Results for Dustfall (First Quarter 2019) (results expressed in g/m²/30days)

Month	No. Exposure Days	Dustfall (insoluble)	Dustfall (soluble)	Dustfall (total)
January	29	0.69	<u>0.15</u>	0.81
February	31	1.83	<u>0.15</u>	2.10
March	26	0.72	<u>0.17</u>	0.96
Arithmetic mean				1.29
Max. concentration				2.10
Min. concentration				0.81
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				0.17

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

—: Invalid Sample

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

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

RAINY RIVER MINE

Ambient Air Quality Monitoring Program
First Quarter 2019 Report



APPENDIX A-3

SO₂ AND NO₂ PASSIVE SAMPLING RESULTS

newgold™ Rainy River

Monitoring Results for Passive SO₂ and NO₂ (First Quarter 2019)

(results expressed in µg/m³)

Southwest Tait Road		
Month	SO ₂	NO ₂
January	0.5	1.3
February	0.5	1.9
March	0.8	1.7
Arithmetic mean	0.6	1.6
Max. concentration	0.8	1.9
Min. concentration	0.5	1.3
AAQC* (24-hr AAQC converted to equivalent 30 day average)	N/A	78 µg/m ³
Alberta Ambient Air Quality Objectives 2013	30 µg/m ³	N/A
No. of valid samples	3	3
No. samples < mdl	0	0
Detection limit	0.3	0.2
Half detection limit	0.15	0.1

Monitoring Results for Passive SO₂ and NO₂ (First Quarter 2019)

(results expressed in µg/m³)

Northeast Gallinger Road		
Month	SO ₂	NO ₂
January	0.3	3.1
February	0.5	1.5
March	0.3	2.3
Arithmetic mean	0.4	2.3
Max. concentration	0.5	3.1
Min. concentration	0.3	1.5
AAQC* (24-hr AAQC converted to equivalent 30 day average)	N/A	78 µg/m ³
Alberta Ambient Air Quality Objectives 2013	30 µg/m ³	N/A
No. of valid samples	3	3
No. samples < mdl	0	0
Detection limit	0.3	0.2
Half detection limit	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

—: Invalid Sample

*Ontario Ambient Air Quality Criteria

RAINY RIVER MINE

Ambient Air Quality Monitoring Program
First Quarter 2019 Report



**NEW GOLD INC.
RAINY RIVER MINE**

**AMBIENT AIR QUALITY MONITORING PROGRAM
SECOND QUARTER 2019 REPORT**

AUGUST 2019



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
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
PM2.5	Particulate Matter less than 2.5 microns in diameter
US EPA	United States Environmental Protection Agency
µg/m ³	Microgram per Cubic Metre

RAINY RIVER MINE

Ambient Air Quality Monitoring Program
Second Quarter 2019 Report

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1.0 INTRODUCTION

The following is a summary of the Second Quarter (Q2) 2019 results for the ambient air quality monitoring program undertaken at New Gold Inc.'s Rainy River Mine located northwest of Emo, Ontario.

In Q2 of 2019, New Gold Inc. (New Gold) staff operated and maintained the ambient air quality monitoring sampling stations, communicated with the laboratory staff as required, prepared the data summary reports, and performed a Q2 calibration on June 28, 2019.

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;
- Sampling dates (start and end where applicable); and
- A summary of exceedances of an Ontario Standard, 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 Heatwold Road also contains a meteorological station that provides real-time site wind speed, wind direction, temperature, relative humidity, and precipitation data.

The Ambient Air Monitoring Program was carried out per ECA 0412-A2LR4V and the MECP program approval letter dated November 9, 2016.

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 two stations is shown in Figure 2-1. UTM co-ordinates for each station based upon NAD 83, are presented in Table 2-1. Imagery showing each station are presented as Figures 2-2 and 2-3.

There were no changes to the station locations in Q2 2019.

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

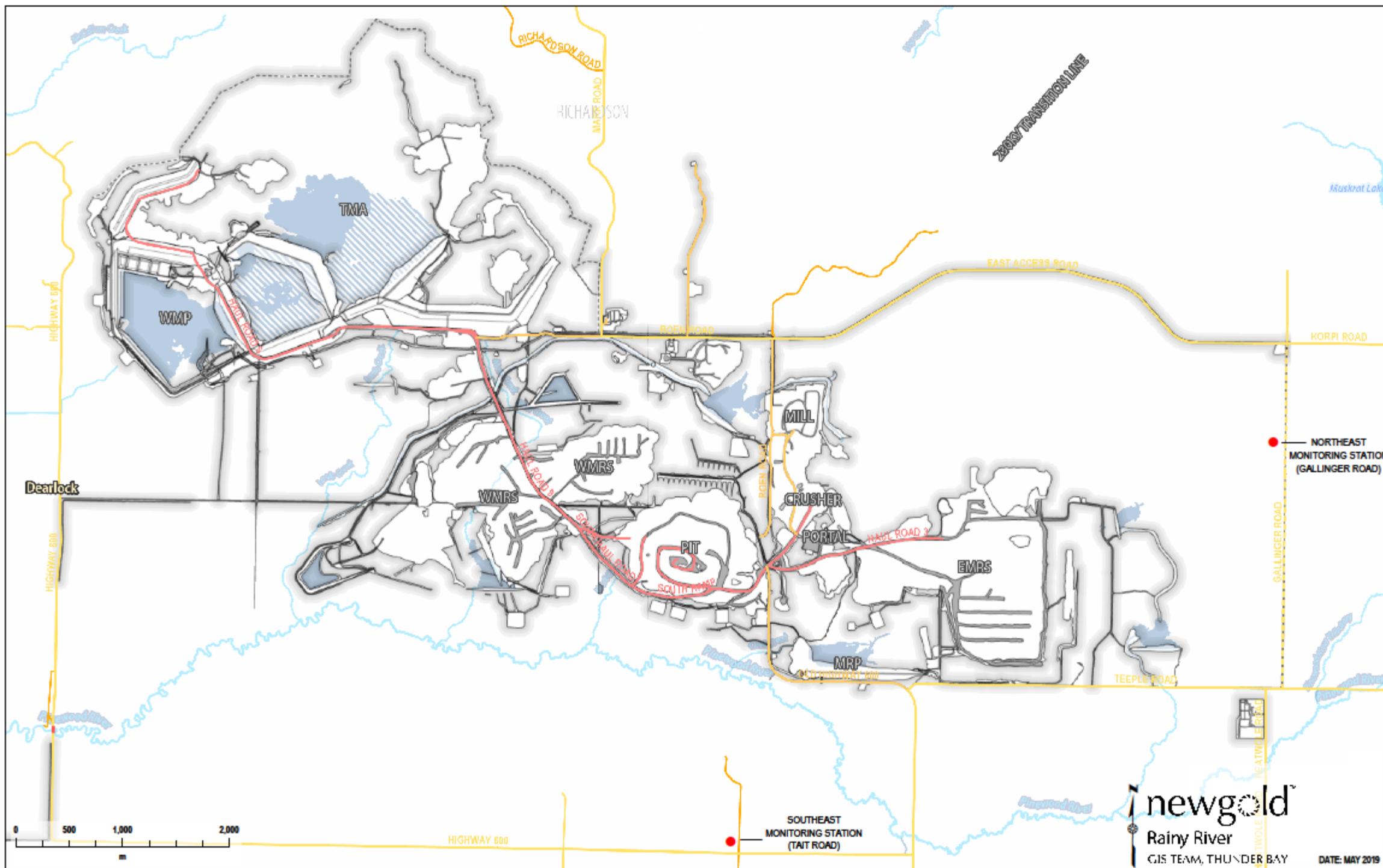


Figure 2-1: Ambient Air Monitoring Stations



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

3.0 ANALYTICAL AND MONITORING METHODS

3.1 TSP and Metals

The 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). Measurements of 24-hour average TSP and metal concentrations were collected as specified in the Operations Manual (MECP 2018); particulate samples 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). 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.

Metal concentrations were determined using standard Inductively Coupled Plasma Atomic Emission Spectroscopy (ICP/AES) methodology. Method detection limits are as shown on the data sheets in Appendix A-1.

The lowest detectable limit of total particulate on the filter is 2.3 milligrams (mg). A typical 24-hour sample volume of 1,630 m³ results in a method detection limit of 1.4 micrograms per cubic metre ($\mu\text{g}/\text{m}^3$).

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.

3.2 PM_{2.5}

Sampling was performed with PQ200 samplers. 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); particulate samples were collected every sixth day as per the North American schedule (US EPA 2017).

The lowest detectable limit of PM_{2.5} on the Teflon filters is 15 μg . A typical 24-hour sample volume of 24 m³ results in a method detection limit of 0.6 $\mu\text{g}/\text{m}^3$.

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

3.3 Total Dustfall

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). Standard dustfall samplers were used to measure total dustfall deposition. The method detection limit for total dustfall is 0.3 g/m²/30 days.

3.4 Passive Sampling for SO₂ and NO₂

SO₂ and NO₂ concentrations were monitored with passive sampling devices. 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.

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). Required meteorological data were obtained from the Environment and Climate Change Canada website. Fort Frances meteorological station (Climate ID 6022474) is downloaded by Maxxam Analytics with each sample submission. For both SO₂ and NO₂, the analytical method detection limit is in the order of 0.1 parts per billion (ppb). 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 MECP guidelines for monthly concentrations of SO₂ and NO₂ obtained from passive sampling, the data is only used for screening purposes. For NO₂, the monthly results were compared to the MECP 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 SO₂, the results were compared against the 30-day Alberta Ambient Air Quality Objective of 30 µg/m³ (AEP 2016).

3.5 Field Operations

3.5.1 Hi-Vol and PQ200 Samplers

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

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 litres per minute (LPM) for each station.

New Gold staff performed flow calibrations on Hi Vol TE-5170 samplers using a Tisch Delta Calibration kit.

Q2 Calibrations were performed on all Hi-Vol and PQ200 samplers on June 28, 2019. Calibration sheets can be found in Appendix D.

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 deployed 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 Q2 2019.

3.5.5 Equipment and Sampling Issues

During Q2 2019, 4 samples were invalidated, as discussed below:

- April 3: PM2.5 sample at the Gallinger Road station was invalidated due to insufficient run time.
- May 15: PM2.5 sample at the Gallinger Road Station was invalidated due to insufficient run time.
- May 21: PM2.5 sample at the Gallinger Road Station was invalidated due to insufficient run time.
- June 20: TSP and PM2.5 samples at the Gallinger Road Station were invalidated due to insufficient run time.

4.0 RESULTS

Sampling program results for Q2 2019 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 SO₂ and NO₂ data. For the purpose of 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 Q2 2019 can be found in Appendix C.

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

Summaries of the statistical analyses for Q2 2019 for the TSP, metals, and PM_{2.5} concentrations are presented in Tables 4-1, 4-2, and 4-3, respectively. During the quarter, the 1 in 6 day sampling schedule presented a possible 15 sampling days between April 1 and June 30, 2019.

A summary of the statistical analyses for Q2 2019 for the total dustfall data is presented in Table 4-4. A summary of the statistical analysis for the Q2 2019 passive SO₂ and NO₂ results is presented in Table 4-5.

4.1 TSP and Metals

The Tait Road station collected 15 valid samples, resulting in 100% valid data for Q2 2019. The Gallinger Road Station collected 14 valid samples, resulting in 93% valid data for Q2 2019.

For the quarter, the geometric mean TSP concentrations were 27.01 µg/m³ for the Tait Road station and 18.43 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 116.55 µg/m³ at the Tait Road station on June 2, 2019, and 110.14 µg/m³ at the Gallinger Road station on June 26, 2019.

There were no exceedances of an MECP AAQC measured for any of TSP, metals, or metalloids in Q2 2019 at either station.

Appendix A-1 and Figure 4-1 present individual sample data. The Q2 2019 TSP and metals summary statistics are summarized in Tables 4-1 and 4-2, respectively.

4.2 PM_{2.5}

The Tait Road station collected 15 valid samples, resulting in 100% valid data for Q2 2019. The Gallinger Road Station collected 11 valid samples, resulting in 73% valid data for Q2 2019. Continued issues with the Gallinger Road PQ200 unit resulted in insufficient runtimes and sample invalidation.

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 PM_{2.5} was 7.33 µg/m³ at the Tait Road station (June 8, 2019), and 8.28 µg/m³ at the Gallinger Road station (June 8, 2019).

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There were no PM_{2.5} exceedances of the MECP AAQC of 30 µg/m³ or CAAQS (ECCC 2013) of 28 µg/m³ measured in Q2 2019. Appendix A-1 and Figure 4-2 present individual sample data.

The Q2 2019 PM_{2.5} summary statistics are summarized in Table 4-3.

4.3 Total Dustfall

In Q2 2019, 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.

Values reported by the laboratory as below the detection limit were substituted with one-half of the detection limit. The maximum 30-day concentration for dustfall was 4.98 µg/m³ at the Tait Road station (June), and 13.23 µg/m³ at the Gallinger Road station (June).

There was one dustfall exceedance of the 30-day MECP AAQC of 7 g/m² measured in Q2 2019 at the Gallinger Road Station. The exceedance occurred during the month of June 2019. It was determined of the 13.23 µg/m³ total dustfall measurement, 9.99 µg/m³ was volatile (organic) matter (insects, bird droppings, etc.). The exceedance was reported to MECP on August 8, 2019 via Transmittal MECP-IFI-0031 Rev D. A copy of the report can be found In Appendix B.

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

4.4 Passive SO₂ and NO₂

In Q2 2019, 3 valid samples were collected at each station of each SO₂ and NO₂.

There are no MECP standards, guidelines or AAQCs for SO₂ or NO₂ for a 30-day averaging period. The 30-day measured average SO₂ or NO₂ concentrations allow for future analysis of trends in the ambient concentrations, to identify any notable increases, and for potential comparison with dispersion modelling results.

For NO₂, the monthly results were compared to the MECP 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 SO₂, the results were compared against the Alberta Ambient Air Quality Objective of 30 µg/m³ (AEP 2017).

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

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 AAQC for all Q2 2019 samples.

Table 4-1: Summary Statistics For Q2 2019 TSP Concentration Data

Statistics	Tait Road (SW)	Gallinger (NE)
Geometric mean ($\mu\text{g}/\text{m}^3$)	27.01	18.43
Arithmetic mean ($\mu\text{g}/\text{m}^3$)	35.05	29.2
April Maximum ($\mu\text{g}/\text{m}^3$)	71.04	19.54
May Maximum ($\mu\text{g}/\text{m}^3$)	48.89	70.67
June Maximum ($\mu\text{g}/\text{m}^3$)	116.55	110.14
Maximum 24-hr ($\mu\text{g}/\text{m}^3$)	116.55	110.14
90th percentile	62.18	64.87
95th percentile	84.69	84.48
24-hr AAQC	120	120
No. Valid Samples	15	14
Valid Data	100%	93%
No. Samples > AAQC (particulate)	0	0
No. Samples > AAQC (metals)	0	0
No. Samples > AAQC (metalloids)	0	0

Table 4-2: Summary Statistics For Q2 2019 Metals Concentration Data

Metal	24-hr AAQC ($\mu\text{g}/\text{m}^3$)	Tait Road (SW)		Gallinger Road (NE)	
		Maximum 24-hr Concentration ($\mu\text{g}/\text{m}^3$)	Fraction of 24-hr AAQC	Maximum 24-hr Concentration ($\mu\text{g}/\text{m}^3$)	Fraction of 24-hr AAQC
As	0.3	0.00210	0.7%	0.00102	0.3%
Cd	0.025	0.000681	2.7%	0.000680	2.7%
Cr	0.5	0.014	2.8%	0.0110	2.2%
Co	0.1	0.000681	0.7%	0.000680	0.7%
Cu	50	0.0990	0.2%	0.235	0.5%
Fe	4	2.17	54.3%	1.29	32.3%
Pb	0.5	0.00821	1.6%	0.00327	0.7%
Mn	0.4	0.0553	13.8%	0.0470	11.8%
Ni	0.2	0.00319	1.6%	0.00271	1.4%
Se	10	0.00340	0.03%	0.00340	0.03%
V	2	0.00365	0.2%	0.163	8.2%
Zn	120	0.0431	0.04%	0.0434	0.04%

Table 4-3: Summary Statistics for Q2 2019 PM_{2.5} Concentration Data

Statistics	Tait Road (SW)	Gallinger (NE)
Arithmetic mean ($\mu\text{g}/\text{m}^3$)	3.26	2.06
April Maximum ($\mu\text{g}/\text{m}^3$)	4.29	2.25
May Maximum ($\mu\text{g}/\text{m}^3$)	5.21	2.25
June Maximum ($\mu\text{g}/\text{m}^3$)	7.33	8.28
Maximum 24-hr ($\mu\text{g}/\text{m}^3$)	7.33	8.28
90th percentile	4.91	3.71
95th percentile	5.84	5.99
24-hr CAAQS	28	28
No. Valid Samples	15	11
Valid Data	100%	73%
No. Samples > AAQC (particulate)	0	0

Table 4-4: Summary Statistics for Q2 2019 Total Dustfall Data

Statistics	Tait Road (SW)	Gallinger (NE)
Arithmetic mean ($\mu\text{g}/\text{m}^3/30\text{d}$)	3.23	5.56
Maximum 24-hr ($\mu\text{g}/\text{m}^3/30\text{d}$)	4.98	13.23
30-day AAQC	7	7
No. > AAQC	0	1
No. Valid Samples	3	3
Valid Data	100%	100%

Table 4-5: Summary Statistics for Q2 2019 Passive SO₂ and NO₂ Concentration Data

Statistics	Tait Road (SW)		Gallinger Road (NE)	
	SO ₂	NO ₂	SO ₂	NO ₂
Mean ($\mu\text{g}/\text{m}^3$)	0.26	1.63	0.13	0.75
Maximum ($\mu\text{g}/\text{m}^3$)	0.52	1.88	0.13	0.94
AAQC* 24-hr converted to 30 day ($\mu\text{g}/\text{m}^3$)	N/A	78	N/A	78
Alberta AAQO ($\mu\text{g}/\text{m}^3$)	30	N/A	30	N/A
No. valid samples ($\mu\text{g}/\text{m}^3$)	3	3	3	3
Valid data	100%	100%	100%	100%

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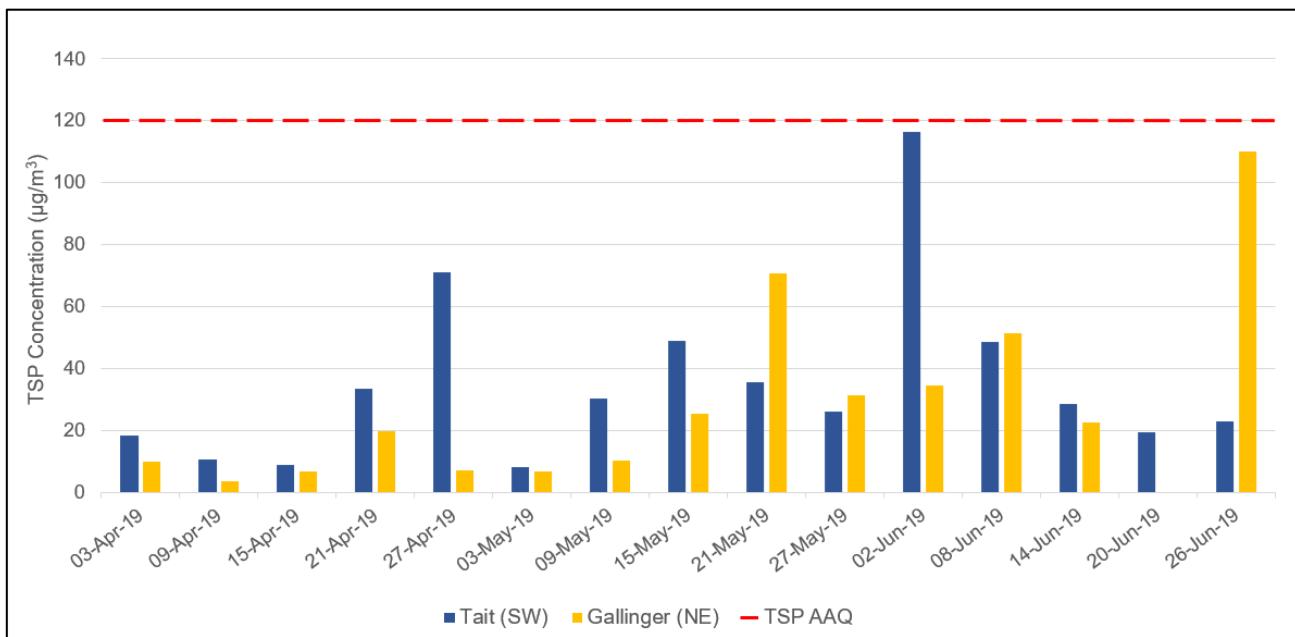


Figure 4-1: TSP Concentrations (Q2 2019)

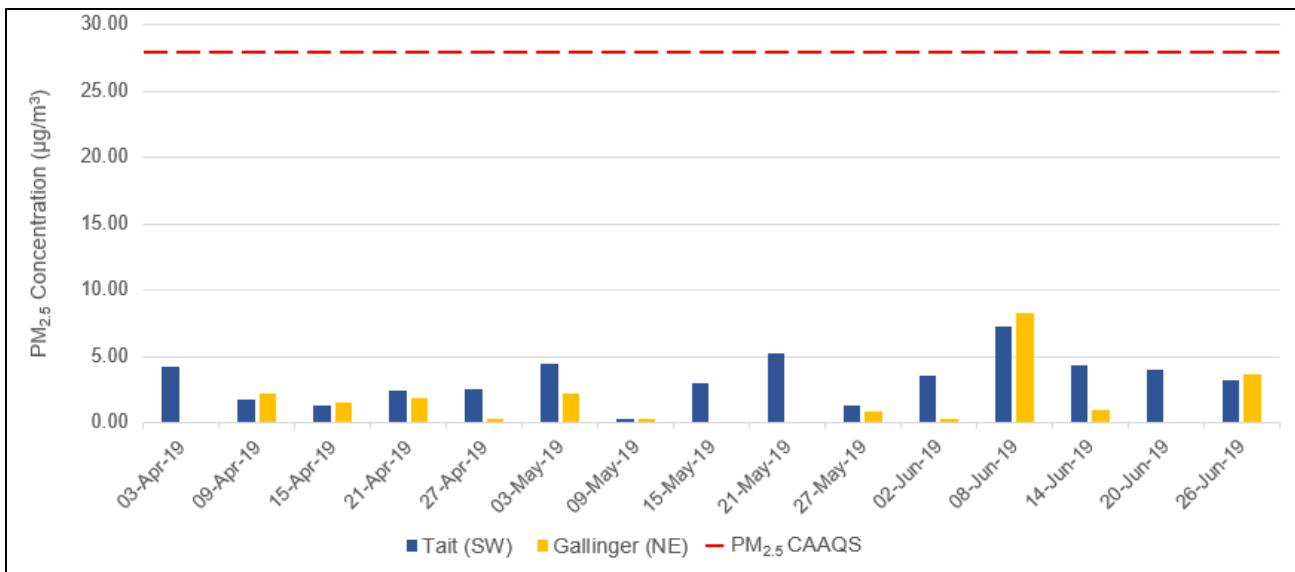


Figure 4-2: PM_{2.5} Concentrations (Q2 2019)

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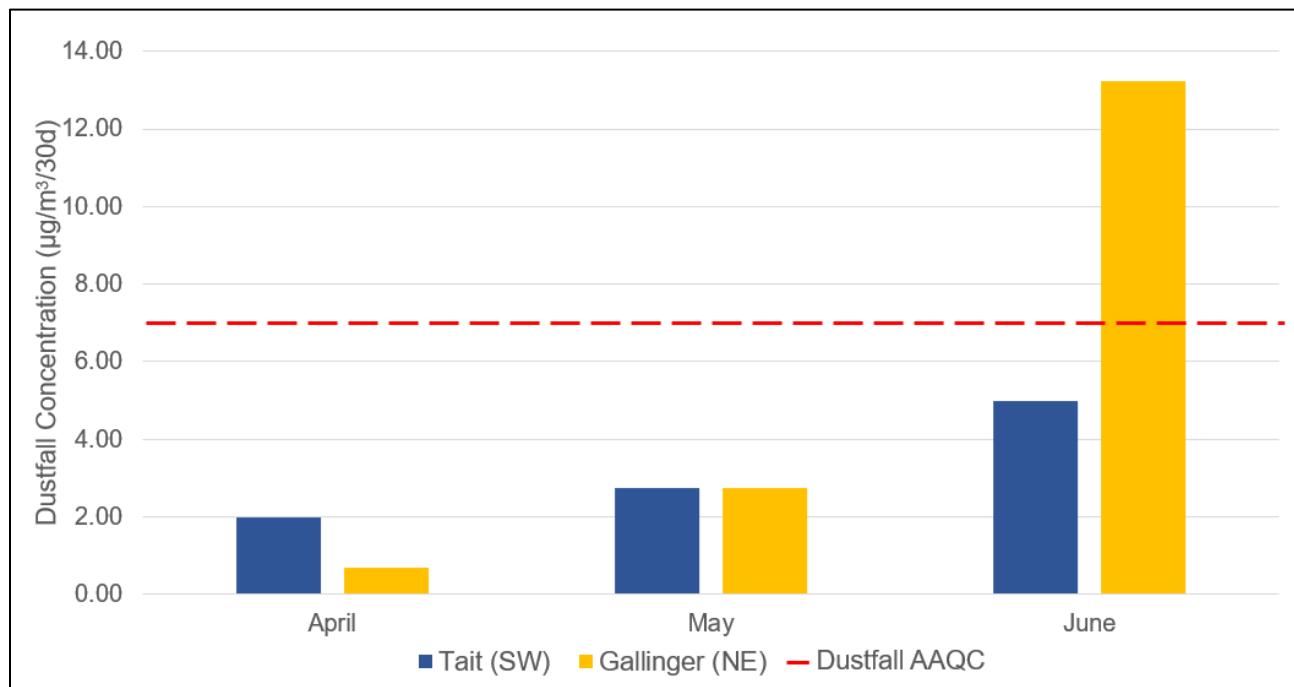


Figure 4-3: Dustfall Concentrations (Q2 2019)

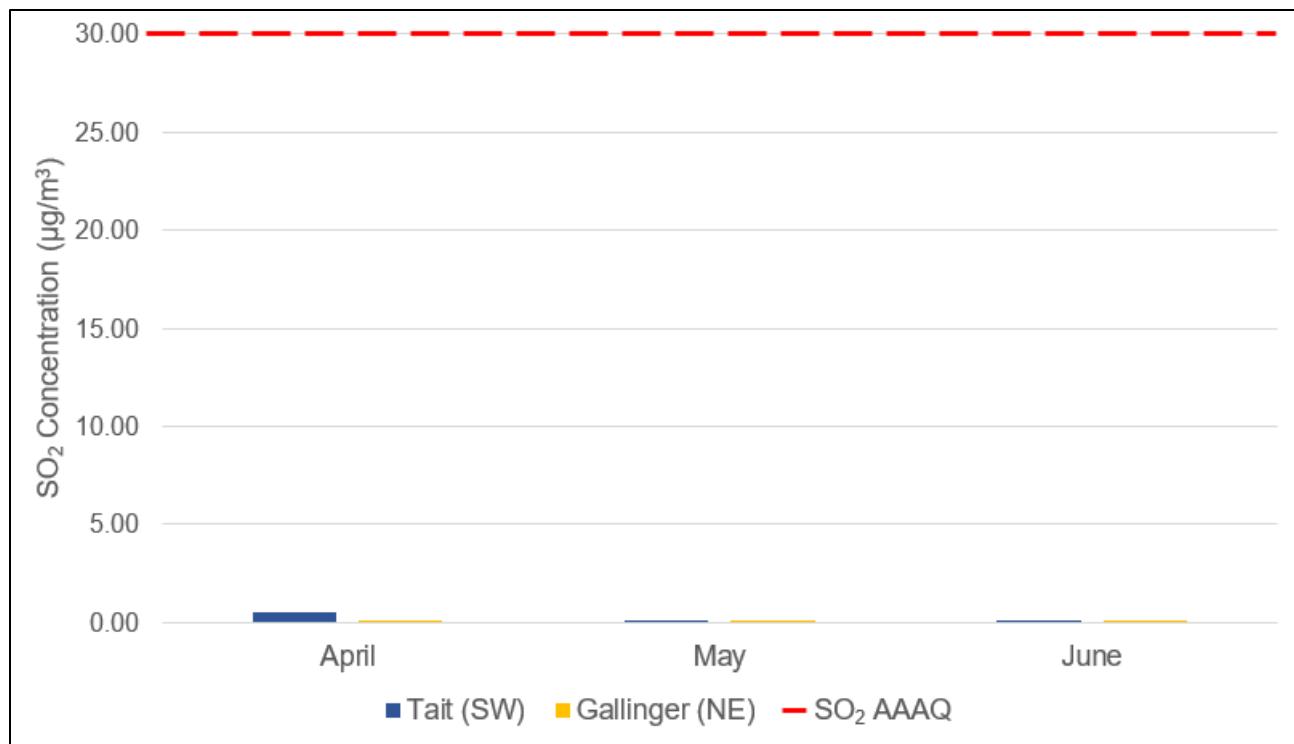


Figure 4-4: SO_2 Concentrations (Q2 2019)

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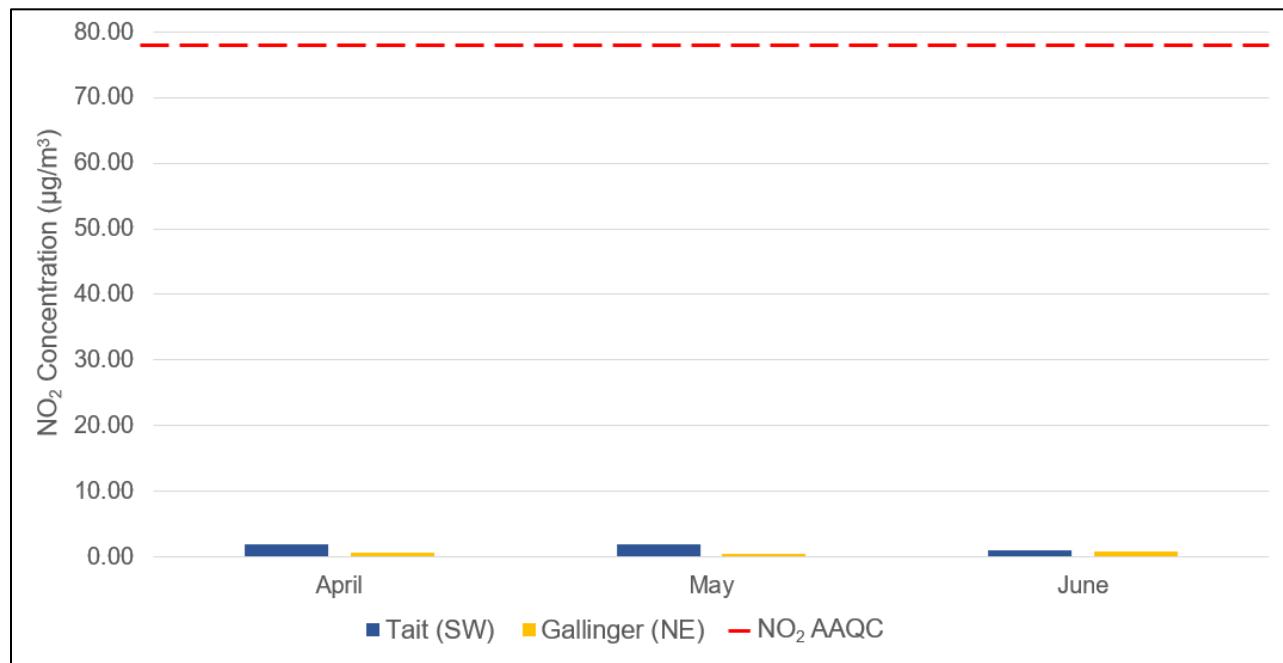


Figure 4-5: NO₂ Concentrations (Q2 2019)

5.0 CONCLUSIONS

A summary of the Q2 2019 ambient air quality monitoring program results is provided below:

- The Tait Road station collected 15 valid TSP samples, resulting in 100% sample validity. The Gallinger Road Station collected 14 valid TSP samples, resulting in 93% sample validity. Metal and metalloid concentrations were measured on each of the valid TSP filters.
- There were no measured exceedances of an MECP AAQC for TSP, metals, or metalloids in Q2 2019. The invalidated sample was due to excessive run times.
- 15 and 11 valid PM_{2.5} samples were collected at the Tait and Gallinger Road stations, resulting in 100% and 73% valid data, respectively. There were no exceedances of the 24-hour PM_{2.5} CAAQS in Q2 2019. Sample invalidation was due to insufficient runtime.
- 3 valid dustfall samples were collected at each station (100% sample validity). There was one exceedance of the 30-day dustfall AAQC in Q2 2019 during the month of June. This was due to contamination of the sample by organic matter including insects and bird droppings. Details can be found in Appendix B.
- 3 valid passive SO₂ and NO₂ samples were collected at each of the two stations (100% sample validity). There were no exceedances of AEP Criterion for SO₂ or the 30-day equivalent AAQC for NO₂ in Q2 2019.

6.0 REFERENCES

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7.0 CLOSING

This *Rainy River Mine Ambient Air Quality Monitoring Program Second Quarter 2019 Report* was prepared by New Gold Inc. The quality of information, conclusions and estimates contained herein are 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.

If you require further information regarding the above or the mine in general, please contact the undersigned at (807) 482-0900 ext. 8328.

Sincerely,

**New Gold Inc.
Rainy River Mine**

Prepared by:



Kelsea Hunsperger, BSc.
Environmental Specialist



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 (Second Quarter 2019)
(results expressed in µg/m³)

Date	PM2.5	TSP	As	Cd	Cr	Co	Cu	Fe	Pb	Mn	Ni	Se	V	Zn
03-Apr-19	4.29	18.12	<u>9.25E-04</u>	<u>6.16E-04</u>	4.99E-03	<u>6.16E-04</u>	5.77E-02	3.53E-01	<u>9.25E-04</u>	1.00E-02	<u>9.25E-04</u>	<u>3.08E-03</u>	<u>1.54E-03</u>	8.69E-03
09-Apr-19	1.7	10.45	<u>9.33E-04</u>	<u>6.22E-04</u>	4.92E-03	<u>6.22E-04</u>	3.45E-02	1.32E-01	<u>9.33E-04</u>	4.23E-03	<u>9.33E-04</u>	<u>9.33E-04</u>	<u>3.11E-03</u>	8.34E-03
15-Apr-19	1.29	8.64	<u>1.02E-03</u>	<u>6.81E-04</u>	6.19E-03	<u>6.81E-04</u>	2.80E-02	1.28E-01	<u>1.02E-03</u>	3.27E-03	<u>1.02E-03</u>	<u>3.40E-03</u>	<u>1.70E-03</u>	2.50E-02
21-Apr-19	2.41	33.50	<u>1.02E-03</u>	<u>6.81E-04</u>	6.26E-03	<u>6.81E-04</u>	3.01E-02	3.43E-01	<u>1.02E-03</u>	1.00E-02	<u>1.02E-03</u>	<u>3.40E-03</u>	<u>1.70E-03</u>	7.83E-03
27-Apr-19	2.50	71.04	<u>8.95E-04</u>	<u>5.97E-04</u>	6.45E-03	<u>5.97E-04</u>	6.51E-02	9.55E-01	<u>8.95E-04</u>	2.93E-02	<u>8.95E-04</u>	<u>2.98E-03</u>	<u>1.49E-03</u>	2.42E-02
03-May-19	4.45	7.91	<u>1.01E-03</u>	<u>6.70E-04</u>	9.25E-03	<u>6.70E-04</u>	2.47E-02	1.43E-01	<u>1.01E-03</u>	3.95E-03	<u>1.01E-03</u>	<u>3.35E-03</u>	<u>3.35E-03</u>	2.57E-02
09-May-19	<u>0.31</u>	30.33	<u>9.38E-04</u>	<u>6.25E-04</u>	9.07E-03	<u>6.25E-04</u>	5.80E-02	4.93E-01	2.19E-03	1.83E-02	<u>9.38E-06</u>	<u>3.13E-03</u>	<u>5/1599.05</u>	2.03E-02
15-May-19	2.96	48.89	<u>9.86E-04</u>	<u>6.57E-04</u>	9.26E-03	<u>6.57E-04</u>	5.56E-02	8.61E-01	8.21E-03	2.73E-02	<u>9.86E-04</u>	<u>3.29E-03</u>	<u>3.29E-03</u>	2.30E-02
21-May-19	5.21	35.43	2.10E-03	<u>6.56E-04</u>	1.14E-02	<u>6.56E-04</u>	3.31E-02	5.41E-01	<u>9.84E-04</u>	1.41E-02	<u>9.84E-04</u>	<u>3.28E-03</u>	<u>3.28E-03</u>	1.00E-02
27-May-19	1.33	25.85	2.02E-03	<u>6.75E-04</u>	9.31E-03	<u>6.75E-04</u>	4.65E-02	1.49E-01	<u>1.01E-03</u>	5.06E-03	<u>1.01E-03</u>	<u>3.37E-03</u>	<u>3.37E-03</u>	1.08E-02
02-Jun-19	3.54	116.55	<u>9.77E-04</u>	<u>6.51E-04</u>	4.43E-03	<u>6.51E-04</u>	9.90E-02	2.17	2.67E-03	5.53E-02	3.19E-03	<u>3.26E-03</u>	<u>3.65E-03</u>	3.85E-02
08-Jun-19	7.33	48.48	<u>1.00E-03</u>	<u>6.69E-04</u>	<u>1.67E-03</u>	<u>6.69E-04</u>	4.93E-02	6.56E-01	<u>1.00E-03</u>	2.10E-02	<u>1.00E-03</u>	<u>3.34E-03</u>	<u>1.67E-03</u>	4.31E-02
14-Jun-19	4.33	28.35	<u>1.02E-03</u>	<u>6.80E-04</u>	5.23E-03	<u>6.80E-04</u>	8.02E-02	6.61E-01	<u>1.02E-03</u>	2.13E-02	<u>1.02E-03</u>	<u>3.40E-03</u>	<u>1.70E-03</u>	1.82E-02
20-Jun-19	3.95	19.38	<u>1.00E-03</u>	<u>6.68E-04</u>	4.21E-03	<u>6.68E-04</u>	4.44E-02	2.57E-01	<u>1.00E-03</u>	6.68E-03	<u>1.00E-03</u>	<u>3.34E-03</u>	<u>1.67E-03</u>	9.89E-03
26-Jun-19	3.25	22.90	<u>1.00E-03</u>	<u>6.70E-04</u>	4.62E-03	<u>6.70E-04</u>	6.50E-02	2.78E-01	<u>1.00E-03</u>	1.08E-02	<u>1.00E-03</u>	<u>3.35E-03</u>	<u>1.67E-03</u>	8.30E-03

Geometric mean	2.66	27.01	1.08E-03	6.54E-04	5.92E-03	6.54E-04	4.77E-02	3.87E-01	1.28E-03	1.17E-02	7.81E-04	3.02E-03	2.23E-03	1.60E-02
Arithmetic mean	3.26	35.05	1.12E-03	6.55E-04	6.48E-03	6.55E-04	5.14E-02	5.42E-01	1.66E-03	1.60E-02	1.07E-03	3.13E-03	2.37E-03	1.88E-02
Max. concentration	7.33	116.55	2.10E-03	6.81E-04	1.14E-02	6.81E-04	9.90E-02	2.17	8.21E-03	5.53E-02	3.19E-03	3.40E-03	3.65E-03	4.31E-02
Min. concentration	0.31	7.91	8.95E-04	5.97E-04	1.67E-03	5.97E-04	2.47E-02	1.28E-01	8.95E-04	3.27E-03	9.38E-06	9.33E-04	1.49E-03	7.83E-03
90th percentile	4.91	62.18	1.62E-03	6.80E-04	9.29E-03	6.80E-04	7.42E-02	9.17E-01	2.48E-03	2.85E-02	1.02E-03	3.40E-03	3.37E-03	3.34E-02
95th percentile	5.84	84.69	2.05E-03	6.81E-04	9.93E-03	6.81E-04	8.58E-02	1.32E+00	4.33E-03	3.71E-02	1.67E-03	3.40E-03	3.47E-03	3.99E-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	13	15	1	15	0	0	12	0	14	15	14	0
Detection limit (µg)	15	2300	3	2	5	2	4	20	3	1	3	10	10	5
Half detection limit (µg)	7.5	1150	1.5	1	2.5	1	2	10	1.5	0.5	1.5	5	5	2.5
% < detection limit	7	0	87	100	7	100	0	0	80	7	93	100	93	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

RAINY RIVER MINE

Ambient Air Quality Monitoring Program
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Northeast Gallinger Road Monitoring Results for TSP and Metals (Second Quarter 2019)
(results expressed in µg/m³)

Date	PM2.5	TSP	As	Cd	Cr	Co	Cu	Fe	Pb	Mn	Ni	Se	V	Zn
03-Apr-19	--	9.97	<u>9.64E-04</u>	<u>6.43E-04</u>	5.34E-03	<u>6.43E-04</u>	1.77E-01	1.23E-01	<u>9.64E-04</u>	4.37E-03	<u>9.64E-04</u>	<u>3.21E-03</u>	<u>1.61E-03</u>	8.68E-03
09-Apr-19	2.25	3.57	<u>9.75E-04</u>	<u>6.50E-04</u>	4.87E-03	<u>6.50E-04</u>	2.03E-01	5.59E-02	<u>9.75E-04</u>	1.30E-03	<u>9.75E-04</u>	<u>3.25E-03</u>	<u>1.62E-03</u>	3.57E-03
15-Apr-19	1.54	6.63	<u>9.85E-04</u>	<u>6.57E-04</u>	5.91E-03	<u>6.57E-04</u>	1.90E-01	9.46E-02	<u>9.85E-04</u>	2.69E-03	<u>9.85E-04</u>	<u>3.28E-03</u>	<u>1.64E-03</u>	1.14E-02
21-Apr-19	1.87	19.54	<u>9.90E-04</u>	<u>6.60E-04</u>	5.21E-03	<u>6.60E-04</u>	2.35E-01	8.05E-02	<u>9.90E-04</u>	3.23E-03	<u>9.90E-04</u>	<u>3.30E-03</u>	<u>1.65E-03</u>	4.09E-03
27-Apr-19	<u>0.31</u>	7.00	<u>9.90E-04</u>	<u>6.60E-04</u>	5.55E-03	<u>6.60E-04</u>	1.84E-01	7.06E-02	<u>9.90E-04</u>	1.85E-03	<u>9.90E-04</u>	<u>3.30E-03</u>	<u>1.65E-03</u>	<u>1.65E-03</u>
03-May-19	2.25	6.53	<u>1.02E-03</u>	<u>6.80E-04</u>	1.01E-02	<u>6.80E-04</u>	1.62E-01	1.22E-01	<u>1.02E-03</u>	4.56E-03	<u>1.02E-03</u>	<u>3.40E-03</u>	1.63E-01	7.28E-03
09-May-19	<u>0.35</u>	10.24	<u>1.00E-03</u>	<u>6.69E-04</u>	9.17E-03	<u>6.69E-04</u>	2.12E-01	1.70E-01	<u>1.00E-03</u>	6.49E-03	<u>1.00E-03</u>	<u>3.35E-03</u>	<u>3.35E-03</u>	1.27E-02
15-May-19	--	25.14	<u>9.98E-04</u>	<u>6.65E-04</u>	9.38E-03	<u>6.65E-04</u>	1.80E-01	3.98E-01	<u>9.98E-04</u>	1.14E-02	<u>9.98E-04</u>	<u>3.33E-03</u>	<u>3.33E-03</u>	1.20E-02
21-May-19	--	70.67	<u>9.72E-04</u>	<u>6.48E-04</u>	1.10E-02	<u>6.48E-04</u>	1.23E-01	1.08	<u>9.72E-04</u>	2.70E-02	2.14E-03	<u>3.24E-03</u>	<u>3.24E-03</u>	9.34E-03
27-May-19	0.83	31.40	<u>9.92E-04</u>	<u>6.61E-04</u>	1.02E-02	<u>6.61E-04</u>	2.16E-01	2.19E-01	<u>9.92E-04</u>	8.53E-03	2.71E-03	<u>3.31E-03</u>	1.06E-02	4.34E-02
02-Jun-19	<u>0.31</u>	34.29	<u>9.70E-04</u>	<u>6.47E-04</u>	<u>1.62E-03</u>	<u>6.47E-04</u>	2.20E-01	4.87E-01	<u>9.70E-04</u>	1.11E-02	<u>9.70E-04</u>	<u>3.23E-03</u>	<u>1.62E-03</u>	8.67E-03
08-Jun-19	8.28	51.33	<u>1.01E-03</u>	<u>6.71E-04</u>	<u>1.68E-03</u>	<u>6.71E-04</u>	1.06E-01	4.58E-01	<u>1.01E-03</u>	1.76E-02	<u>1.01E-03</u>	<u>3.36E-03</u>	<u>1.68E-03</u>	1.59E-02
14-Jun-19	0.94	22.35	<u>1.01E-03</u>	<u>6.73E-04</u>	<u>1.68E-03</u>	<u>6.73E-04</u>	1.83E-01	2.70E-01	<u>1.01E-03</u>	3.39E-02	<u>1.01E-03</u>	<u>3.37E-03</u>	<u>1.68E-03</u>	8.48E-03
20-Jun-19	--	--	--	--	--	--	--	--	--	--	--	--	--	--
26-Jun-19	3.71	110.14	<u>1.00E-03</u>	<u>6.67E-04</u>	5.27E-03	<u>6.67E-04</u>	1.67E-01	1.29	3.27E-03	4.70E-02	2.27E-03	<u>3.34E-03</u>	<u>1.67E-03</u>	4.03E-02

Geometric mean	1.25	18.43	9.91E-04	6.61E-04	5.20E-03	6.61E-04	1.79E-01	2.19E-01	1.08E-03	7.62E-03	1.19E-03	3.30E-03	3.03E-03	9.52E-03
Arithmetic mean	2.06	29.2	9.91E-04	6.61E-04	6.22E-03	6.61E-04	1.83E-01	3.52E-01	1.15E-03	1.29E-02	1.29E-03	3.30E-03	1.42E-02	1.34E-02
Max. concentration	8.28	110.1	1.02E-03	6.80E-04	1.10E-02	6.80E-04	2.35E-01	1.29	3.27E-03	4.70E-02	2.71E-03	3.40E-03	1.63E-01	4.34E-02
Min. concentration	0.31	3.6	9.64E-04	6.43E-04	1.62E-03	6.43E-04	1.06E-01	5.59E-02	9.64E-04	1.30E-03	9.64E-04	3.21E-03	1.61E-03	1.65E-03
90th percentile	3.71	64.87	1.01E-03	6.73E-04	1.02E-02	6.73E-04	2.19E-01	9.04E-01	1.02E-03	3.18E-02	2.23E-03	3.36E-03	8.41E-03	3.30E-02
95th percentile	5.99	84.48	1.01E-03	6.76E-04	1.06E-02	6.76E-04	2.26E-01	1.17E+00	1.92E-03	3.91E-02	2.45E-03	3.38E-03	7.17E-02	4.16E-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	11	14	14	14	14	14	14	14	14	14	14	14	14	14
No. samples < mdl	3	0	14	14	3	14	0	0	13	0	11	14	13	1
Detection limit (µg)	15	2300	3	2	5	2	4	20	3	1	3	10	10	5
Half detection limit (µg)	7.5	1150	1.5	1	2.5	1	2	10	1.5	0.5	1.5	5	5	2.5
% < detection limit	3	0	100	100	21	100	0	0	93	0	79	100	93	7
% valid data	73	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 & 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

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Tait Road Monitoring Results for Dustfall (Second Quarter 2019) (results expressed in g/m²/30days)

Month	No. Exposure Days	Dustfall (insoluble)	Dustfall (soluble)	Dustfall (total)
April	29	1.65	0.33	1.98
May	31	0.87	1.86	2.73
June	32	3.18	1.80	4.98
Arithmetic mean				3.23
Max. concentration				4.98
Min. concentration				1.98
AAQC				7
No. > AAQC value**				0
No. of valid samples				3
% Valid data				100
No. samples < mdl				0
Detection limit*				0.30
Half detection limit				0.17

Gallinger Road Monitoring Results for Dustfall (Second Quarter 2019) (results expressed in g/m²/30days)

Month	No. Exposure Days	Dustfall (insoluble)	Dustfall (soluble)	Dustfall (total)
April	29	0.42	<u>0.17</u>	0.69
May	31	1.20	1.56	2.76
June	32	5.31	7.89	13.23
Arithmetic mean				5.56
Max. concentration				13.23
Min. concentration				0.69
AAQC				7
No. > AAQC value**				1
No. of valid samples				3
% Valid data				100
No. samples < mdl				0
Detection limit*				0.30
Half detection limit				0.17

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

—: Invalid Sample

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

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

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Ambient Air Quality Monitoring Program
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APPENDIX A-3

SO₂ AND NO₂ PASSIVE SAMPLING RESULTS

newgold™ Rainy River

Monitoring Results for Passive SO₂ and NO₂ (Second Quarter 2019) (results expressed in µg/m³)

Southwest Tait Road		
Month	SO ₂	NO ₂
April	0.52	1.88
May	<u>0.13</u>	1.88
June	<u>0.13</u>	1.13
Arithmetic mean	0.26	1.63
Max. concentration	0.52	1.88
Min. concentration	0.13	1.13
AAQC* (24-hr AAQC converted to equivalent 30-day average)	N/A	78 µg/m ³
Alberta Ambient Air Quality Objectives 2013	30 µg/m ³	N/A
No. of valid samples	3	3
No. samples < mdl	2	0
Detection limit	0.26	0.19
Half detection limit	0.13	0.09

Monitoring Results for Passive SO₂ and NO₂ (Second Quarter 2019) (results expressed in µg/m³)

Northeast Gallinger Road		
Month	SO ₂	NO ₂
April	<u>0.13</u>	0.75
May	<u>0.13</u>	0.56
June	<u>0.13</u>	0.94
Arithmetic mean	0.13	0.75
Max. concentration	0.13	0.94
Min. concentration	0.13	0.56
AAQC* (24-hr AAQC converted to equivalent 30-day average)	N/A	78 µg/m ³
Alberta Ambient Air Quality Objectives 2013	30 µg/m ³	N/A
No. of valid samples	3	3
No. samples < mdl	3	0
Detection limit	0.26	0.19
Half detection limit	0.13	0.09

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

RAINY RIVER MINE

Ambient Air Quality Monitoring Program
Second Quarter 2019 Report



APPENDIX B

NOTICES OF EXCEEDANCE FOR Q2 2019



August 8, 2019

Matt Hoffmeister & Jason Tittlemier
Senior Environmental Officers
Ministry of the Environment, Conservation & Parks
Kenora Area Office
Kenora, ON

SUBJECT: AMBIENT AIR QUALITY – JUNE TOTAL DUSTFALL EXCEEDANCE

Dear Mr. Hoffmeister, Mr. Tittlemier;

On August 7th, shortly after receiving laboratory results from samples from the month of June 2019, I determined that the thirty-day averaging period for total dustfall at the Gallinger Road (North) Air Quality Station exceeded the Ontario Ambient Air Quality Criteria (AAQC) 30-day standard.

Dustfall samples are collected each calendar month (+/- 5 days of a 30-day period) as per Rainy River Mine's Ambient Air Quality Monitoring Plan, accepted by MECP on November 9, 2016. For the month of June, the sample resulted in 13.23 g/m²/30days, 189% of the AAQC 30-day standard (7 g/m²/30days).

Upon further analysis of the laboratory results, I determined that 9.99 g/m²/30-day of the total dustfall was volatile (organic) matter. Tables 1, 2 & 3 outline the laboratory results for this sample. As you can see in Figure 1, the dustfall jar for the month of June collected at least two insects, as well as bird droppings. The elevated total dustfall result is likely cause by these organic sources.

Table 1. June Total Dustfall Laboratory Results (Gallinger Road Station)

Parameter	Result (g/m ² /30-day)
Total Dustfall	13.23
Total Fixed (non-organic)	3.24
Total Volatile (organic)	9.99

Table 2. June Soluble Dustfall Laboratory Results (Gallinger Road Station)

Parameter	Result (g/m ² /30-day)
Soluble Dustfall	7.89
Soluble Fixed (non-organic)	1.89
Soluble Volatile (organic)	6.00

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Table 3. June Insoluble Dustfall Laboratory Results (Gallinger Road Station)

Parameter	Result (g/m ² /30-day)
Insoluble Dustfall	5.31
Insoluble Fixed (non-organic)	1.35
Insoluble Volatile (organic)	3.99

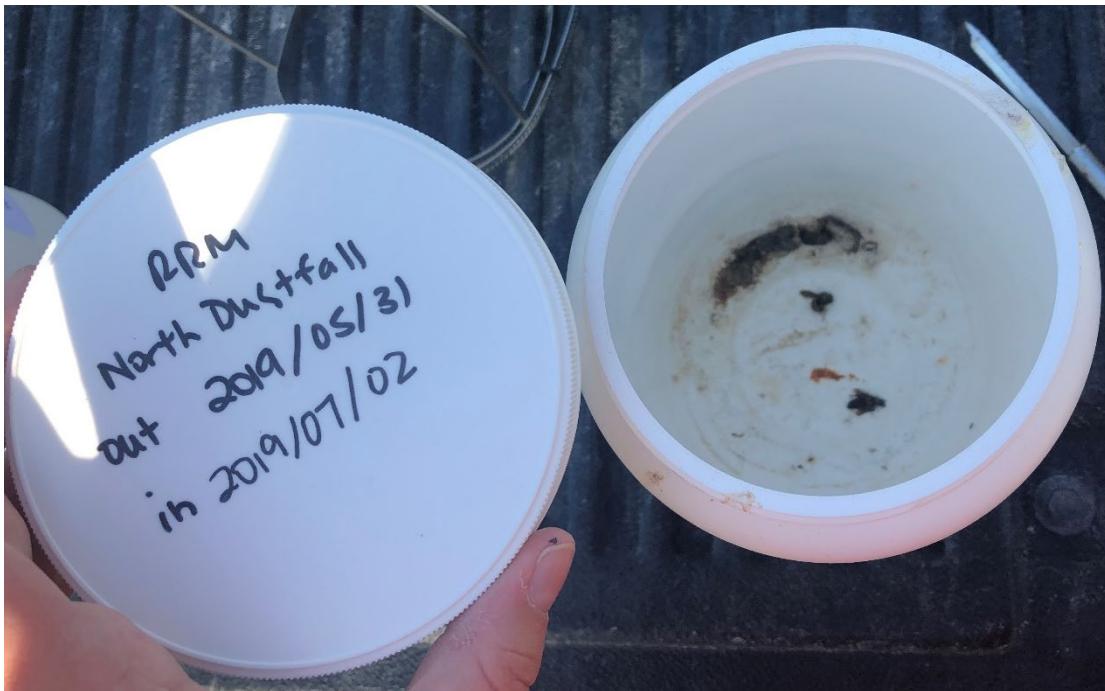


Figure 1. June Dustfall Jar illustrating organic influences.

Attached find the Notification of Exceedance form (NOE) as per our ECA approval number 0412-A2LR4V. Once you have had the chance to review this document and attachment, please contact the undersigned with any questions or concerns.

Respectfully,

Kelsea Hunsperger
Environmental Specialist
kelsea.hunsperger@newgold.com
(807) 482-0900 ext. 8328

General Information

Information requested in this notification form is collected under the authority of the *Environmental Protection Act*, R.S.O. 1990 (EPA) and Ontario Regulation 419/05: Air Pollution – Local Air Quality (the Regulation) made under the EPA and will be used to collect information relating to a measured or modelled air-related exceedance as required by s.25(9), s.28(1) and s.30(3) of the Regulation. The Ministry of the Environment and Climate Change (Ministry) may also request additional information.

1. Questions regarding completion and submission of this notification form should be directed to your local Ministry District Office. A list of these District Offices (including fax numbers) is available on the [Ministry Internet site](#) at <http://www.ontario.ca/environment-and-energy/ministry-environment-and-climate-change-district-locator>. A copy of this form may be acquired through the Ministry public web site <http://www.ontario.ca/environment-and-energy/rules-air-quality-and-pollution> or by contacting any Ministry office.
2. For notification under s.25(9) or s.28(1), the completed notification form should be sent, as soon as practicable, to the local Ministry District Office which has jurisdiction over the area in which the facility is located. A list of these District Offices (including fax numbers) is available on the [Ministry Internet site](#) at <http://www.ontario.ca/environment-and-energy/ministry-environment-and-climate-change-district-locator>.
3. For notification under s.30(3), the completed notification form should be immediately faxed to the local Ministry District Office which has jurisdiction over the area which the facility is located. A list of these District Offices (including fax numbers) is available on the [Ministry Internet site](#) at <http://www.ontario.ca/environment-and-energy/ministry-environment-and-climate-change-district-locator>. If the exceedance is determined outside of the business hours of the District Office then the completed notification form should be faxed to the Spills Action Center (1-800-268-6061).
4. Information on this form may be claimed as confidential but will be subject to the *Freedom of Information and Protection of Privacy Act* (FOIPPA) and the EBR. If you do not claim confidentiality at the time of submitting the information, the MOECC Ministry may make the information available to the public without further notice to you.

Instructions

This form should be used to notify the Ministry of a measured or modelled air-related exceedance. Notification is required under the Regulation and failure to notify the Ministry constitutes an offence under the Regulation and the EPA.

The publication titled “Air Contaminants Benchmarks (ACB) List: Standards, guidelines and screening levels for assessing point of impingement concentrations of air contaminants” contains two types of benchmarks: Benchmark 1 values (standards and guidelines) and Benchmark 2 values (screening levels). This list is available on the [Internet site](#) at <https://www.ontario.ca/page/air-contaminants-benchmarks-list-standards-guidelines-and-screening-levels-assessing-point>. This form is to be used to notify the Ministry of an exceedance of a Benchmark 1 value. If a concentration of a contaminant exceeds a Benchmark 1 value that is based on a guideline value, it is an indication that discharges of the contaminant may cause an adverse effect. If a concentration of a contaminant exceeds a Benchmark 2 value, it may be an indication that discharges of the contaminant may cause an adverse effect – further assessment should be undertaken to determine if an adverse effect may occur. If so, this form should be used to notify the Ministry.

This form may be used for notification of exceedances of more than one contaminant; Table 1 (or equivalent) should be completed for modelled exceedances. Table 2 should be completed for measured exceedances. If this notification is made pursuant to s. 30 then this form must be submitted immediately.

Note: The Ministry publishes a separate list of Ontario’s Ambient Air Quality Criteria (AAQCs) which can be found on our [website](#) <http://www.ontario.ca/document/ontarios-ambient-air-quality-criteria-sorted-contaminant-name>. AAQCs are intended to address general air quality, not contributions of a contaminant to air quality from a facility. Hence, the notification requirements under the Regulation do not apply to AAQCs.

Regulatory Authority

Exceedance of a Benchmark 1 Value (Standard or Guideline)

"28. (1) A person who discharges or causes or permits the discharge of a contaminant shall, as soon as practicable, notify a provincial officer in writing if,

- (a) the person uses an approved dispersion model to predict concentrations of the contaminant that result from the discharges and,
 - i. the use of the model indicates that discharges of the contaminant may result in a contravention of section 19 or 20, or
 - ii. sections 19 and 20 do not apply to discharges of the contaminant and the use of the model indicates that discharges of the contaminant may cause an adverse effect;
 - (b) measurements of air samples indicate that discharges of the contaminant may result in a contravention of section 19 or 20; or
 - (c) sections 19 and 20 do not apply to discharges of the contaminant and measurements of air samples indicate that discharges of the contaminant may cause an adverse effect. ..."
3. The emission rate that, for the relevant averaging period, is derived from a combination of a method that complies with paragraph 1 or 2 and ambient monitoring, according to a plan approved by the Director as likely to provide an accurate reflection of emissions.

"25. (9) A person who is required under subsection (8) to complete the update of a report not later than March 31 in a year shall, as soon as practicable after that date, notify a provincial officer in writing if the person has started to use an approved dispersion model with respect to a contaminant for the purpose of completing the update but has not yet complied with section 12, and,

- (a) the use of the model indicates that discharges of the contaminant may result in a contravention of section 19 or 20; or
- (b) sections 19 and 20 do not apply to discharges of the contaminant and the use of the model indicates that discharges of the contaminant may cause an adverse effect. ..."

Exceedance of an Upper Risk Threshold

"30. (1) A person who discharges or causes or permits the discharge of a contaminant listed in Schedule 6 into the air shall comply with subsections (3) and (4) if there is reason to believe, based on any relevant information, that discharges of the contaminant may result in,

- (a) the concentration of the contaminant exceeding the half hour upper risk threshold set out for that contaminant in Schedule 6 at a point of impingement, if section 19 applies to the person in respect of the contaminant; or
 - (b) the other time period upper risk threshold set out for that contaminant in Schedule 6 at a point of impingement, if section 20 applies to the person in respect of the contaminant.
- (1.1) The two items in Schedule 6 that set out upper risk thresholds for total reduced sulphur (TRS) compounds specify the facilities to which they apply.
- (2) Without limiting the generality of subsection (1), the reference in that subsection to relevant information includes relevant information from predictions of a dispersion model, including,
- (a) an approved dispersion model or other dispersion model; or
 - (b) a dispersion model that is not used in accordance with this Regulation.
- (3) If subsection (1) applies to a discharge, the person who discharged or caused or permitted the discharge of the contaminant shall immediately notify the Director in writing. ..."

Section 1 - Ministry of the Environment and Climate Change District Office Information

Date Form Submitted (yyyy/mm/dd) 2019/08/07	Date Exceedance Determined (yyyy/mm/dd) 2019/08/07
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Supporting information attached? Yes No If yes, number of pages 1

Section 2 - Facility and Site Information

Name of Person Making the Notification

Last Name Hunsperger First Name Kelsea

Business Name (the name under which the entity is operating or trading - also referred to as trade name)

New Gold Inc.

Business Number

Business Activity Description (a description of the business endeavour, this may include products sold, services provided, equipment used, etc.)

Gold Mining

Site Name Rainy River Mine MOECC District Office
Kenora Area Office

Primary North American Industry Classification System (NAICS) Code Section 19 (Schedule 2) Section 20 (Schedule 3)
212220 applies applies

Other NAICS Code

Civic Address

Unit Number	Street Number 24	Street Name Marr Road	PO Box P0W1A0
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Survey Address

Lot and Concession: used to indicate location within a subdivided township and consists of a lot number and a concession number.

Part and Reference: used to indicate location within an unsubdivided township or unsurveyed territory, and consists of a part and a reference plan number indicating the location within that plan. Attach copy of the plan.

Lot Concession Part Reference Plan

Non Address Information (includes any additional information to clarify requestor's physical location)

Municipality/Unorganized Township or Territory Upper Tier/District Chapple/Rainy River Postal Code P0W 1A0

Telephone Number ext. Fax Number Mobile Number Email Address

Geo Reference

Description of location	Map Datum	Zone	Accuracy Estimate	Geo-Referencing Method	UTM Easting	UTM Northing
Rural property	NAD83	15U	+/- 5m	GIS	426537	5411220

Environmental Compliance Approval (ECA) Number(s) and/or Environmental Activity and Sector Registry (EASR) Number(s) – attach a separate list if more space is required

1 ECA 0412-A2LR4V 2 _____ 3 _____
4 _____ 5 _____ 6 _____

Section 3 - Type of Notification – Table 1 or Table 2 should be completed and submitted with this notification

This is a notification under subsection 28(1) – Notice to Provincial Officer as a result of modelling or measurements (select all that apply)

Exceedance of Benchmark 1 Value (Standard) Exceedance of Benchmark 1 Value (Guideline) Exceedance of Benchmark 2 Value (determined discharge may cause adverse effect)

Other (explain)

This is a notification under subsection 25(9) – Notice to Provincial Officer as a result an update of an Emission Summary and Dispersion Modelling Report (ESDM) (select all that apply)

Exceedance of Benchmark 1 Value (Standard) Exceedance of Benchmark 1 Value (Guideline) Exceedance of Benchmark 2 Value (determined discharge may cause adverse effect)

Other (explain)

Date that Refinement (see section 12 of the regulation) is anticipated to be complete (yyyy/mm/dd)

This is a notification under subsection 30(3) – Notice to the Director as a result of an exceedance of Upper Risk Threshold (URT) (Schedule 6)

Yes No

Section 4 - Follow-Up Action

Section 28 Notifications

Will an Abatement Plan be submitted to the Ministry within 30 days of this notice as per s.29?

Yes No If No, please provide the following

Type of Previously Submitted Abatement Plan
[Assessing for Contamination](#)

Date Submitted under s.29 of the Regulation (yyyy/mm/dd)

Subsection 30(3) Notifications for URT Exceedance

Has an ESDM Report been prepared in accordance with s.30(4) and submitted to the Ministry?

Yes No If No, what is the anticipated submission date for the ESDM* (yyyy/mm/dd)?

*Note: ESDM Report must be submitted within three months of the discharge

Section 5 - Model Based Assessment – please complete this section if notifying of a modelled exceedance (complete Table 1)

Was an ESDM Report prepared in accordance with s.26 of the Regulation?

Yes No

If yes, was the ESDM Report prepared to fulfill (select all that apply)

- s.22 of the Regulation - Application for ECA under s. 20.2 of the *Environmental Protection Act*
- s.9 of the EPA – Condition of an ECA (e.g. ECA with Limited Operational Flexibility)
- s.23 of the Regulation - Requirement for Schedule 4 and 5 sector facilities
- s.24 of the Regulation - Notice issued by Director
- s.25 of the Regulation - Requirement for updating ESDM Report
- s.30(4) of the Regulation – Required as result of URT exceedance
- s.33(1) of the Regulation – Required as part of a request for a site-specific standard

s.11 (1) of Ontario Regulation 1/17 – Registrations under Part II.2 of the Act – Activities Requiring Assessment of Air Emissions (Air Emissions EASR Regulation)

Other (please specify) _____

What approved dispersion model was used? Include version number (select all that apply)

Appendix to Reg. 346 AERMOD ASHRAE SCREEN 3

Other (please specify) (if other, provide copy of section 7 notice) _____

Was the approved dispersion model refined as required by s.12 of the Regulation (i.e. operating conditions, emission rates)?

Yes No

What meteorological data was used?

Regional Data Regional data refined, in consultation with the EMRB, to reflect local land use conditions

Local or Site-Specific Data Data from a computational method

Did you receive approval under s. 13 for the Meteorological Data? Yes No

Have you modelled a concentration at a Point of Impingement (POI) other than the maximum POI? (please include figure showing maximum POI location)

Yes No

If Yes, specify additional locations (i.e., land use) at which the exceedence may occur (select all that apply – please include figure showing additional modelled locations):

Health Care Seniors Residence/Long Term Care Facility Child Care Facility Educational Facility

Dwelling

Location Specified by the Director (explain) _____

Other Location (explain) _____

Section 6 - Measurement Based Assessment – please complete this section if notifying of a measured **exceedance** (Complete Table 2 or equivalent)

Type of Monitor / Measurement Type	Date of Exceedance (yyyy/mm/dd)	Duration of Exceedance
Dustfall Jar	2019/06/30	30-day average

Is the monitoring approved by the Ministry?

Yes No If yes, please describe the approval [Ambient Air Quality Monitoring Plan approved November 9, 20](#)

Monitoring Reference Number: (if available)

Specify the location (i.e., land use) at which the exceedence did occur (select all that apply):

Health Care Seniors Residence/Long Term Care Facility Child Care Facility Educational Facility

Dwelling

Location Specified by the Director (explain) _____

Other Location (explain) [Gallinger Road Station](#)

Section 7 - Statement of Company Official

I, the undersigned hereby declare that, to the best of my knowledge:

- The information contained herein and the information submitted is complete and accurate in every way and I am aware of the penalties against providing false information as per s.184 (2) of the *Environmental Protection Act*.
- I have been authorized to act on behalf of the company identified in this form for the purpose of providing this notification of exceedance under the Regulation to the Ministry of the Environment and Climate Change.
- I have used the most recent notification form (as obtained from the Ministry Internet site at <http://www.ontario.ca/environment-and-energy/rules-air-quality-and-pollution> or from my local Ministry District Office and I have included all necessary information required by the Regulation and identified on this form.

Name of Signing Authority
[Kelsea Hunsperger](#)

Title
[Environmental Specialist](#)

Telephone Number 807 482-0900	Fax Number ext.8328	Mobile Number	Email Address kelsea.hunsperger@newgold.com
Signature		Date (yyyy/mm/dd) 2019/08/07	

Address Information

Same as Site Physical Address? Yes No (If no, please provide signing authority mailing address information below)

Civic Address

Unit Number	Street Number 5967	Street Name Highway 11/71	PO Box 5
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Delivery Designator: If signing authority mailing address is a Rural Route, Suburban Service, Mobile Route or General Delivery (i.e., RR#3)

Municipality/Unorganized Township or Territory Emo	County/District	Province/State Ontario	Country Canada	Postal Code P0W 1E0
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Table 1 - Information About Modelled Exceedance

Contaminant ^(a)	CAS ^(b) Number	Air Dispersion Model Used (include version number)	Maximum POI ^(c) Concentration ($\mu\text{g}/\text{m}^3$)	Averaging Period (hours)(minute/hour/day/annual)	Ministry Limit ($\mu\text{g}/\text{m}^3$) or URT ($\mu\text{g}/\text{m}^3$)	Limiting Effect	Schedule 2, Schedule 3, Guideline, Schedule 6 URT or Other (specify) ^(d)	Benchmark 1, Benchmark 2, or No Benchmark ^(e) (specify)	Percentage of Ministry Limit or URT

Provide additional information as needed (e.g. Location of Maximum POI Concentrations (e.g. UTM, street address, land use at Maximum POI if known, etc.)

Notes:

(a) Proper Chemical Name should be given (Abbreviations, acronyms, numeric codes, trade names and mixtures NOT ACCEPTABLE).

(b) CAS Number : Chemical Abstracts Services Number (UNIQUE Identifier for a chemical)

(c) POI Concentration : Point of Impingement Concentration

(d) Schedule 2 = section 19 applies; Schedule 3 = section 20 applies

(e) If a B2 value is exceeded, the regulation requires potential adverse effects to be assessed. If it is determined that an adverse effect may occur for the contaminant in question, this should be included in the table

Table 2 - Information About Measured Exceedance

Contaminant ^(a)	CAS ^(b) Number	Type of Assessment (Measurement Method)	Maximum POI ^(c) Concentration ($\mu\text{g}/\text{m}^3$)	Averaging Period (minute/hour/day/annual)	Ministry Limit ($\mu\text{g}/\text{m}^3$) or URT ($\mu\text{g}/\text{m}^3$)	Limiting Effect	Schedule 2, Schedule 3, Guideline, Schedule 6 URT, or Other (specify)	Benchmark 1, Benchmark 2, or No Benchmark ^(d) (specify)	Percentage of Ministry Limit or URT
Total Dustfall		Dustfall Jar	N/A	30 days	7g/m ² /30da	Soiling	3	B1	189%

* For additional measurement locations / sampling times, please include additional tables

** If you are reporting more than one exceedence, include the time of the exceedence in the contaminant column

Notes:

(a) Proper Chemical Name should be given (Abbreviations, acronyms, numeric codes, trade names and mixtures NOT ACCEPTABLE).

(b) CAS Number : Chemical Abstracts Services Number (UNIQUE Identifier for a chemical)

(c) POI Concentration : Point of Impingement Concentration

(d) Schedule 2 = section 19 applies; Schedule 3 = section 20 applies

(e) If a B2 value is exceeded, the regulation requires potential adverse effects to be assessed. If it is determined that an adverse effect may occur for the contaminant in question, this should be included in the table



APPENDIX C

LABORATORY RESULTS – CERTIFICATES OF ANALYSIS



New Gold Inc. Rainy River Project
ATTN: Kelsea Hunsperger
5967 Highway 11/71
P.O. Box 5
Emo ON POW 1E0

Date Received: 14-MAY-19
Report Date: 06-JUN-19 14:59 (MT)
Version: FINAL

Client Phone: 807-482-0900

Certificate of Analysis

Lab Work Order #: L2272518

Project P.O. #: 4500018623

Job Reference: AIR QUALITY MONITORING

C of C Numbers:

Legal Site Desc:

A handwritten signature in black ink, appearing to read "wirek".

Claire Kocharakkal, B.Sc.
Account Manager

[This report shall not be reproduced except in full without the written authority of the Laboratory.]

ADDRESS: 1435 Norjohn Court, Unit 1, Burlington, ON, L7L 0E6 Canada | Phone: +1 905 331 3111 | Fax: +1 905 331 4567
ALS CANADA LTD Part of the ALS Group An ALS Limited Company

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2272518-1	NORTH-TSP-234							
Sampled By:	Client on 03-APR-19							
Matrix:	Hi Vol Filter							
Miscellaneous Parameters								
Total particulate		15500		2300	ug		22-MAY-19	R4641310
Metals on High Volume Filter by ICPMS								
Arsenic (As)		<3.0		3.0	ug	27-MAY-19	27-MAY-19	R4647487
Cadmium (Cd)		<2.0		2.0	ug	27-MAY-19	27-MAY-19	R4647487
Cobalt (Co)		<2.0		2.0	ug	27-MAY-19	27-MAY-19	R4647487
Chromium (Cr)		8.3		5.0	ug	27-MAY-19	27-MAY-19	R4647487
Copper (Cu)		275		4.0	ug	27-MAY-19	27-MAY-19	R4647487
Iron (Fe)		192		20	ug	27-MAY-19	27-MAY-19	R4647487
Manganese (Mn)		6.8		1.0	ug	27-MAY-19	27-MAY-19	R4647487
Nickel (Ni)		<3.0		3.0	ug	27-MAY-19	27-MAY-19	R4647487
Lead (Pb)		<3.0		3.0	ug	27-MAY-19	27-MAY-19	R4647487
Selenium (Se)		<10		10	ug	27-MAY-19	27-MAY-19	R4647487
Vanadium (V)		<5.0		5.0	ug	27-MAY-19	27-MAY-19	R4647487
Zinc (Zn)		13.5		5.0	ug	27-MAY-19	27-MAY-19	R4647487
L2272518-2	SOUTH-TSP-234							
Sampled By:	Client on 03-APR-19							
Matrix:	Hi Vol Filter							
Miscellaneous Parameters								
Total particulate		39400		2300	ug		22-MAY-19	R4641310
Metals on High Volume Filter by ICPMS								
Arsenic (As)		<3.0		3.0	ug	27-MAY-19	27-MAY-19	R4647487
Cadmium (Cd)		<2.0		2.0	ug	27-MAY-19	27-MAY-19	R4647487
Cobalt (Co)		<2.0		2.0	ug	27-MAY-19	27-MAY-19	R4647487
Chromium (Cr)		8.1		5.0	ug	27-MAY-19	27-MAY-19	R4647487
Copper (Cu)		93.6		4.0	ug	27-MAY-19	27-MAY-19	R4647487
Iron (Fe)		572		20	ug	27-MAY-19	27-MAY-19	R4647487
Manganese (Mn)		16.3		1.0	ug	27-MAY-19	27-MAY-19	R4647487
Nickel (Ni)		<3.0		3.0	ug	27-MAY-19	27-MAY-19	R4647487
Lead (Pb)		<3.0		3.0	ug	27-MAY-19	27-MAY-19	R4647487
Selenium (Se)		<10		10	ug	27-MAY-19	27-MAY-19	R4647487
Vanadium (V)		<5.0		5.0	ug	27-MAY-19	27-MAY-19	R4647487
Zinc (Zn)		14.1		5.0	ug	27-MAY-19	27-MAY-19	R4647487
L2272518-3	NORTH-TSP-235							
Sampled By:	Client on 09-APR-19							
Matrix:	Hi Vol Filter							
Miscellaneous Parameters								
Total particulate		5500		2300	ug		22-MAY-19	R4641310
Metals on High Volume Filter by ICPMS								
Arsenic (As)		<3.0		3.0	ug	27-MAY-19	27-MAY-19	R4647487
Cadmium (Cd)		<2.0		2.0	ug	27-MAY-19	27-MAY-19	R4647487
Cobalt (Co)		<2.0		2.0	ug	27-MAY-19	27-MAY-19	R4647487
Chromium (Cr)		7.5		5.0	ug	27-MAY-19	27-MAY-19	R4647487
Copper (Cu)		313		4.0	ug	27-MAY-19	27-MAY-19	R4647487
Iron (Fe)		86		20	ug	27-MAY-19	27-MAY-19	R4647487
Manganese (Mn)		2.0		1.0	ug	27-MAY-19	27-MAY-19	R4647487
Nickel (Ni)		<3.0		3.0	ug	27-MAY-19	27-MAY-19	R4647487
Lead (Pb)		<3.0		3.0	ug	27-MAY-19	27-MAY-19	R4647487
Selenium (Se)		<10		10	ug	27-MAY-19	27-MAY-19	R4647487
Vanadium (V)		<5.0		5.0	ug	27-MAY-19	27-MAY-19	R4647487
Zinc (Zn)		5.5		5.0	ug	27-MAY-19	27-MAY-19	R4647487

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2272518-4	SOUTH-TSP-235							
Sampled By:	Client on 09-APR-19							
Matrix:	Hi Vol Filter							
Miscellaneous Parameters								
Total particulate		16800		2300	ug		22-MAY-19	R4641310
Metals on High Volume Filter by ICPMS								
Arsenic (As)		<3.0		3.0	ug	27-MAY-19	27-MAY-19	R4647487
Cadmium (Cd)		<2.0		2.0	ug	27-MAY-19	27-MAY-19	R4647487
Cobalt (Co)		<2.0		2.0	ug	27-MAY-19	27-MAY-19	R4647487
Chromium (Cr)		7.9		5.0	ug	27-MAY-19	27-MAY-19	R4647487
Copper (Cu)		55.4		4.0	ug	27-MAY-19	27-MAY-19	R4647487
Iron (Fe)		212		20	ug	27-MAY-19	27-MAY-19	R4647487
Manganese (Mn)		6.8		1.0	ug	27-MAY-19	27-MAY-19	R4647487
Nickel (Ni)		<3.0		3.0	ug	27-MAY-19	27-MAY-19	R4647487
Lead (Pb)		<3.0		3.0	ug	27-MAY-19	27-MAY-19	R4647487
Selenium (Se)		<10		10	ug	27-MAY-19	27-MAY-19	R4647487
Vanadium (V)		<5.0		5.0	ug	27-MAY-19	27-MAY-19	R4647487
Zinc (Zn)		13.4		5.0	ug	27-MAY-19	27-MAY-19	R4647487
L2272518-5	NORTH-TSP-236							
Sampled By:	Client on 15-APR-19							
Matrix:	Hi Vol Filter							
Miscellaneous Parameters								
Total particulate		10100		2300	ug		22-MAY-19	R4641310
Metals on High Volume Filter by ICPMS								
Arsenic (As)		<3.0		3.0	ug	27-MAY-19	27-MAY-19	R4647487
Cadmium (Cd)		<2.0		2.0	ug	27-MAY-19	27-MAY-19	R4647487
Cobalt (Co)		<2.0		2.0	ug	27-MAY-19	27-MAY-19	R4647487
Chromium (Cr)		9.0		5.0	ug	27-MAY-19	27-MAY-19	R4647487
Copper (Cu)		289		4.0	ug	27-MAY-19	27-MAY-19	R4647487
Iron (Fe)		144		20	ug	27-MAY-19	27-MAY-19	R4647487
Manganese (Mn)		4.1		1.0	ug	27-MAY-19	27-MAY-19	R4647487
Nickel (Ni)		<3.0		3.0	ug	27-MAY-19	27-MAY-19	R4647487
Lead (Pb)		<3.0		3.0	ug	27-MAY-19	27-MAY-19	R4647487
Selenium (Se)		<10		10	ug	27-MAY-19	27-MAY-19	R4647487
Vanadium (V)		<5.0		5.0	ug	27-MAY-19	27-MAY-19	R4647487
Zinc (Zn)		17.3		5.0	ug	27-MAY-19	27-MAY-19	R4647487
L2272518-6	SOUTH-TSP-236							
Sampled By:	Client on 15-APR-19							
Matrix:	Hi Vol Filter							
Miscellaneous Parameters								
Total particulate		12700		2300	ug		22-MAY-19	R4641310
Metals on High Volume Filter by ICPMS								
Arsenic (As)		<3.0		3.0	ug	27-MAY-19	27-MAY-19	R4647487
Cadmium (Cd)		<2.0		2.0	ug	27-MAY-19	27-MAY-19	R4647487
Cobalt (Co)		<2.0		2.0	ug	27-MAY-19	27-MAY-19	R4647487
Chromium (Cr)		9.1		5.0	ug	27-MAY-19	27-MAY-19	R4647487
Copper (Cu)		41.1		4.0	ug	27-MAY-19	27-MAY-19	R4647487
Iron (Fe)		188		20	ug	27-MAY-19	27-MAY-19	R4647487
Manganese (Mn)		4.8		1.0	ug	27-MAY-19	27-MAY-19	R4647487
Nickel (Ni)		<3.0		3.0	ug	27-MAY-19	27-MAY-19	R4647487
Lead (Pb)		<3.0		3.0	ug	27-MAY-19	27-MAY-19	R4647487
Selenium (Se)		<10		10	ug	27-MAY-19	27-MAY-19	R4647487
Vanadium (V)		<5.0		5.0	ug	27-MAY-19	27-MAY-19	R4647487
Zinc (Zn)		36.8		5.0	ug	27-MAY-19	27-MAY-19	R4647487

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2272518-7	NORTH-TSP-237							
Sampled By:	Client on 21-APR-19							
Matrix:	Hi Vol Filter							
Miscellaneous Parameters								
Total particulate		29600		2300	ug		22-MAY-19	R4641310
Metals on High Volume Filter by ICPMS								
Arsenic (As)		<3.0		3.0	ug	27-MAY-19	27-MAY-19	R4647487
Cadmium (Cd)		<2.0		2.0	ug	27-MAY-19	27-MAY-19	R4647487
Cobalt (Co)		<2.0		2.0	ug	27-MAY-19	27-MAY-19	R4647487
Chromium (Cr)		7.9		5.0	ug	27-MAY-19	27-MAY-19	R4647487
Copper (Cu)		356		4.0	ug	27-MAY-19	27-MAY-19	R4647487
Iron (Fe)		122		20	ug	27-MAY-19	27-MAY-19	R4647487
Manganese (Mn)		4.9		1.0	ug	27-MAY-19	27-MAY-19	R4647487
Nickel (Ni)		<3.0		3.0	ug	27-MAY-19	27-MAY-19	R4647487
Lead (Pb)		<3.0		3.0	ug	27-MAY-19	27-MAY-19	R4647487
Selenium (Se)		<10		10	ug	27-MAY-19	27-MAY-19	R4647487
Vanadium (V)		<5.0		5.0	ug	27-MAY-19	27-MAY-19	R4647487
Zinc (Zn)		6.2		5.0	ug	27-MAY-19	27-MAY-19	R4647487
L2272518-8	SOUTH-TSP-237							
Sampled By:	Client on 21-APR-19							
Matrix:	Hi Vol Filter							
Miscellaneous Parameters								
Total particulate		49200		2300	ug		22-MAY-19	R4641310
Metals on High Volume Filter by ICPMS								
Arsenic (As)		<3.0		3.0	ug	27-MAY-19	27-MAY-19	R4647487
Cadmium (Cd)		<2.0		2.0	ug	27-MAY-19	27-MAY-19	R4647487
Cobalt (Co)		<2.0		2.0	ug	27-MAY-19	27-MAY-19	R4647487
Chromium (Cr)		9.2		5.0	ug	27-MAY-19	27-MAY-19	R4647487
Copper (Cu)		44.2		4.0	ug	27-MAY-19	27-MAY-19	R4647487
Iron (Fe)		504		20	ug	27-MAY-19	27-MAY-19	R4647487
Manganese (Mn)		14.7		1.0	ug	27-MAY-19	27-MAY-19	R4647487
Nickel (Ni)		<3.0		3.0	ug	27-MAY-19	27-MAY-19	R4647487
Lead (Pb)		<3.0		3.0	ug	27-MAY-19	27-MAY-19	R4647487
Selenium (Se)		<10		10	ug	27-MAY-19	27-MAY-19	R4647487
Vanadium (V)		<5.0		5.0	ug	27-MAY-19	27-MAY-19	R4647487
Zinc (Zn)		11.5		5.0	ug	27-MAY-19	27-MAY-19	R4647487
L2272518-9	NORTH-TSP-238							
Sampled By:	Client on 27-APR-19							
Matrix:	Hi Vol Filter							
Miscellaneous Parameters								
Total particulate		10600		2300	ug		22-MAY-19	R4641310
Metals on High Volume Filter by ICPMS								
Arsenic (As)		<3.0		3.0	ug	27-MAY-19	27-MAY-19	R4647487
Cadmium (Cd)		<2.0		2.0	ug	27-MAY-19	27-MAY-19	R4647487
Cobalt (Co)		<2.0		2.0	ug	27-MAY-19	27-MAY-19	R4647487
Chromium (Cr)		8.4		5.0	ug	27-MAY-19	27-MAY-19	R4647487
Copper (Cu)		279		4.0	ug	27-MAY-19	27-MAY-19	R4647487
Iron (Fe)		107		20	ug	27-MAY-19	27-MAY-19	R4647487
Manganese (Mn)		2.8		1.0	ug	27-MAY-19	27-MAY-19	R4647487
Nickel (Ni)		<3.0		3.0	ug	27-MAY-19	27-MAY-19	R4647487
Lead (Pb)		<3.0		3.0	ug	27-MAY-19	27-MAY-19	R4647487
Selenium (Se)		<10		10	ug	27-MAY-19	27-MAY-19	R4647487
Vanadium (V)		<5.0		5.0	ug	27-MAY-19	27-MAY-19	R4647487
Zinc (Zn)		<5.0		5.0	ug	27-MAY-19	27-MAY-19	R4647487

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2272518-10	SOUTH-TSP-238							
Sampled By:	Client on 27-APR-19							
Matrix:	Hi Vol Filter							
Miscellaneous Parameters								
Total particulate		119000		2300	ug		22-MAY-19	R4641310
Metals on High Volume Filter by ICPMS								
Arsenic (As)		<3.0		3.0	ug	27-MAY-19	27-MAY-19	R4647487
Cadmium (Cd)		<2.0		2.0	ug	27-MAY-19	27-MAY-19	R4647487
Cobalt (Co)		<2.0		2.0	ug	27-MAY-19	27-MAY-19	R4647487
Chromium (Cr)		10.8		5.0	ug	27-MAY-19	27-MAY-19	R4647487
Copper (Cu)		109		4.0	ug	27-MAY-19	27-MAY-19	R4647487
Iron (Fe)		1600		20	ug	27-MAY-19	27-MAY-19	R4647487
Manganese (Mn)		49.1		1.0	ug	27-MAY-19	27-MAY-19	R4647487
Nickel (Ni)		<3.0		3.0	ug	27-MAY-19	27-MAY-19	R4647487
Lead (Pb)		<3.0		3.0	ug	27-MAY-19	27-MAY-19	R4647487
Selenium (Se)		<10		10	ug	27-MAY-19	27-MAY-19	R4647487
Vanadium (V)		<5.0		5.0	ug	27-MAY-19	27-MAY-19	R4647487
Zinc (Zn)		40.6		5.0	ug	27-MAY-19	27-MAY-19	R4647487
L2272518-11	TSP-TRAVEL BLANK							
Sampled By:	Client on 30-APR-19							
Matrix:	Hi Vol Filter							
Miscellaneous Parameters								
Total particulate		<2300		2300	ug		22-MAY-19	R4641310
Metals on High Volume Filter by ICPMS								
Arsenic (As)		<3.0		3.0	ug	27-MAY-19	27-MAY-19	R4647487
Cadmium (Cd)		<2.0		2.0	ug	27-MAY-19	27-MAY-19	R4647487
Cobalt (Co)		<2.0		2.0	ug	27-MAY-19	27-MAY-19	R4647487
Chromium (Cr)		8.4		5.0	ug	27-MAY-19	27-MAY-19	R4647487
Copper (Cu)		5.8		4.0	ug	27-MAY-19	27-MAY-19	R4647487
Iron (Fe)		74		20	ug	27-MAY-19	27-MAY-19	R4647487
Manganese (Mn)		1.4		1.0	ug	27-MAY-19	27-MAY-19	R4647487
Nickel (Ni)		<3.0		3.0	ug	27-MAY-19	27-MAY-19	R4647487
Lead (Pb)		<3.0		3.0	ug	27-MAY-19	27-MAY-19	R4647487
Selenium (Se)		<10		10	ug	27-MAY-19	27-MAY-19	R4647487
Vanadium (V)		<5.0		5.0	ug	27-MAY-19	27-MAY-19	R4647487
Zinc (Zn)		<5.0		5.0	ug	27-MAY-19	27-MAY-19	R4647487
L2272518-12	NORTH-PM2.5-234							
Sampled By:	Client on 03-APR-19							
Matrix:	47mm Filter							
Miscellaneous Parameters								
Total particulate		16		15	ug		23-MAY-19	R4641316
L2272518-13	SOUTH-PM2.5-234							
Sampled By:	Client on 03-APR-19							
Matrix:	47mm Filter							
Miscellaneous Parameters								
Total particulate		103		15	ug		23-MAY-19	R4641316
L2272518-14	NORTH-PM2.5-235							
Sampled By:	Client on 09-APR-19							
Matrix:	47mm Filter							
Miscellaneous Parameters								
Total particulate		54		15	ug		23-MAY-19	R4641316

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2272518-15 SOUTH-PM2.5-235 Sampled By: Client on 09-APR-19 Matrix: 47mm Filter Miscellaneous Parameters Total particulate	41		15	ug		23-MAY-19	R4641316
L2272518-16 NORTH-PM2.5-236 Sampled By: Client on 15-APR-19 Matrix: 47mm Filter Miscellaneous Parameters Total particulate	37		15	ug		23-MAY-19	R4641316
L2272518-17 SOUTH-PM2.5-236 Sampled By: Client on 15-APR-19 Matrix: 47mm Filter Miscellaneous Parameters Total particulate	31		15	ug		23-MAY-19	R4641316
L2272518-18 NORTH-PM2.5-237 Sampled By: Client on 21-APR-19 Matrix: 47mm Filter Miscellaneous Parameters Total particulate	45		15	ug		23-MAY-19	R4641316
L2272518-19 SOUTH-PM2.5-237 Sampled By: Client on 21-APR-19 Matrix: 47mm Filter Miscellaneous Parameters Total particulate	58		15	ug		23-MAY-19	R4641316
L2272518-20 NORTH-PM2.5-238 Sampled By: Client on 27-APR-19 Matrix: 47mm Filter Miscellaneous Parameters Total particulate	<15		15	ug		23-MAY-19	R4641316
L2272518-21 SOUTH-PM2.5-238 Sampled By: Client on 27-APR-19 Matrix: 47mm Filter Miscellaneous Parameters Total particulate	60		15	ug		23-MAY-19	R4641316
L2272518-22 PM2.5-TRAVEL BLANK Sampled By: Client on 30-APR-19 Matrix: 47mm Filter Miscellaneous Parameters Total particulate	38		15	ug		23-MAY-19	R4641316
L2272518-23 NORTH-DUSTFALL Sampled By: Client on 02-MAY-19 Matrix: Dustfall Dustfalls-Total, Soluble, Insoluble +FV Total Dustfall Total Insoluble Dustfall Total Soluble Dustfall Fixed Dustfall Fixed Insoluble Dustfall Fixed Soluble Dustfall Volatile Dustfall	0.23 0.14 <0.10 <0.10 <0.10 <0.10 0.14		0.10	mg/dm ² .day		04-JUN-19	R4659406 R4659406 R4659406 R4659406 R4659406 R4659406 R4659406

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2272518-23 NORTH-DUSTFALL							
Sampled By:	Client on 02-MAY-19						
Matrix:	Dustfall						
Dustfalls-Total, Soluble, Insoluble +FV							
Volatile Insoluble Dustfall	<0.10		0.10	mg/dm ² .day		04-JUN-19	R4659406
Volatile Soluble Dustfall	<0.10		0.10	mg/dm ² .day		04-JUN-19	R4659406
Total Metals in Dustfalls by ICPMS							
Aluminum (Al)-Total	0.00115		0.000029	mg/dm ² .day	04-JUN-19	04-JUN-19	R4655556
Interval			1	days		04-JUN-19	R4656370
Antimony (Sb)-Total	<0.0000049	DLB	0.0000049	mg/dm ² .day	04-JUN-19	04-JUN-19	R4655556
Arsenic (As)-Total	<0.000059	DLM	0.000059	mg/dm ² .day	04-JUN-19	04-JUN-19	R4655556
Barium (Ba)-Total	0.0000210		0.0000004	mg/dm ² .day	04-JUN-19	04-JUN-19	R4655556
Beryllium (Be)-Total	<0.0000049		0.0000049	mg/dm ² .day	04-JUN-19	04-JUN-19	R4655556
Bismuth (Bi)-Total	<0.0000049		0.0000049	mg/dm ² .day	04-JUN-19	04-JUN-19	R4655556
Boron (B)-Total	<0.000098		0.000098	mg/dm ² .day	04-JUN-19	04-JUN-19	R4655556
Cadmium (Cd)-Total	<0.0000049		0.0000004	mg/dm ² .day	04-JUN-19	04-JUN-19	R4655556
Calcium (Ca)-Total	0.0118		0.00020	mg/dm ² .day	04-JUN-19	04-JUN-19	R4655556
Chromium (Cr)-Total	<0.0000049		0.0000049	mg/dm ² .day	04-JUN-19	04-JUN-19	R4655556
Cobalt (Co)-Total	<0.0000098		0.0000009	mg/dm ² .day	04-JUN-19	04-JUN-19	R4655556
Copper (Cu)-Total	0.0000287		0.0000049	mg/dm ² .day	04-JUN-19	04-JUN-19	R4655556
Lead (Pb)-Total	0.00000318		0.0000004	mg/dm ² .day	04-JUN-19	04-JUN-19	R4655556
Iron (Fe)-Total	0.00102		0.00029	mg/dm ² .day	04-JUN-19	04-JUN-19	R4655556
Lithium (Li)-Total	<0.000049		0.000049	mg/dm ² .day	04-JUN-19	04-JUN-19	R4655556
Magnesium (Mg)-Total	0.00314		0.000049	mg/dm ² .day	04-JUN-19	04-JUN-19	R4655556
Manganese (Mn)-Total	0.0000692		0.0000009	mg/dm ² .day	04-JUN-19	04-JUN-19	R4655556
Molybdenum (Mo)-Total	0.0000080		0.0000004	mg/dm ² .day	04-JUN-19	04-JUN-19	R4655556
Nickel (Ni)-Total	0.0000195		0.0000049	mg/dm ² .day	04-JUN-19	04-JUN-19	R4655556
Phosphorus (P)-Total	0.00074		0.00049	mg/dm ² .day	04-JUN-19	04-JUN-19	R4655556
Potassium (K)-Total	0.00271		0.00049	mg/dm ² .day	04-JUN-19	04-JUN-19	R4655556
Selenium (Se)-Total	<0.0000098		0.0000098	mg/dm ² .day	04-JUN-19	04-JUN-19	R4655556
Silicon (Si)-Total	0.00202		0.00049	mg/dm ² .day	04-JUN-19	04-JUN-19	R4655556
Silver (Ag)-Total	0.000000164		0.0000000	mg/dm ² .day	04-JUN-19	04-JUN-19	R4655556
Sodium (Na)-Total	0.00103		0.00049	mg/dm ² .day	04-JUN-19	04-JUN-19	R4655556
Strontium (Sr)-Total	0.0000214		0.0000009	mg/dm ² .day	04-JUN-19	04-JUN-19	R4655556
Thallium (Tl)-Total	<0.0000098		0.0000009	mg/dm ² .day	04-JUN-19	04-JUN-19	R4655556
Tin (Sn)-Total	<0.0000098		0.0000009	mg/dm ² .day	04-JUN-19	04-JUN-19	R4655556
Titanium (Ti)-Total	<0.000098		0.000098	mg/dm ² .day	04-JUN-19	04-JUN-19	R4655556
Uranium (U)-Total	<0.000000098		0.0000000	mg/dm ² .day	04-JUN-19	04-JUN-19	R4655556
Vanadium (V)-Total	<0.0000098		0.0000098	mg/dm ² .day	04-JUN-19	04-JUN-19	R4655556
Zinc (Zn)-Total	<0.00018	DLB	0.00018	mg/dm ² .day	04-JUN-19	04-JUN-19	R4655556
L2272518-24 SOUTH-DUSTFALL							
Sampled By:	Client on 02-MAY-19						
Matrix:	Dustfall						
Dustfalls-Total, Soluble, Insoluble +FV							
Total Dustfall	0.66		0.10	mg/dm ² .day		04-JUN-19	R4659406
Total Insoluble Dustfall	0.55		0.10	mg/dm ² .day		04-JUN-19	R4659406

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2272518-24 SOUTH-DUSTFALL							
Sampled By:	Client on 02-MAY-19						
Matrix:	Dustfall						
Dustfalls-Total, Soluble, Insoluble +FV							
Total Soluble Dustfall	0.11		0.10	mg/dm ² .day		04-JUN-19	R4659406
Fixed Dustfall	0.48		0.10	mg/dm ² .day		04-JUN-19	R4659406
Fixed Insoluble Dustfall	0.47		0.10	mg/dm ² .day		04-JUN-19	R4659406
Fixed Soluble Dustfall	<0.10		0.10	mg/dm ² .day		04-JUN-19	R4659406
Volatile Dustfall	0.18		0.10	mg/dm ² .day		04-JUN-19	R4659406
Volatile Insoluble Dustfall	<0.10		0.10	mg/dm ² .day		04-JUN-19	R4659406
Volatile Soluble Dustfall	0.10		0.10	mg/dm ² .day		04-JUN-19	R4659406
Total Metals in Dustfalls by ICPMS							
Aluminum (Al)-Total	0.00129		0.000029	mg/dm ² .day	04-JUN-19	04-JUN-19	R4655556
Interval			1	days		04-JUN-19	R4656370
Antimony (Sb)-Total	<0.0000020	DLB	0.0000020	mg/dm ² .day	04-JUN-19	04-JUN-19	R4655556
Arsenic (As)-Total	<0.000069	DLM	0.000069	mg/dm ² .day	04-JUN-19	04-JUN-19	R4655556
Barium (Ba)-Total	0.0000242		0.00000049	mg/dm ² .day	04-JUN-19	04-JUN-19	R4655556
Beryllium (Be)-Total	<0.0000049		0.0000049	mg/dm ² .day	04-JUN-19	04-JUN-19	R4655556
Bismuth (Bi)-Total	<0.0000049		0.0000049	mg/dm ² .day	04-JUN-19	04-JUN-19	R4655556
Boron (B)-Total	<0.000098		0.000098	mg/dm ² .day	04-JUN-19	04-JUN-19	R4655556
Cadmium (Cd)-Total	<0.0000049		0.00000049	mg/dm ² .day	04-JUN-19	04-JUN-19	R4655556
Calcium (Ca)-Total	0.0174		0.00020	mg/dm ² .day	04-JUN-19	04-JUN-19	R4655556
Chromium (Cr)-Total	<0.0000049		0.0000049	mg/dm ² .day	04-JUN-19	04-JUN-19	R4655556
Cobalt (Co)-Total	<0.00000098		0.00000098	mg/dm ² .day	04-JUN-19	04-JUN-19	R4655556
Copper (Cu)-Total	0.0000111		0.0000049	mg/dm ² .day	04-JUN-19	04-JUN-19	R4655556
Lead (Pb)-Total	0.00000147		0.00000049	mg/dm ² .day	04-JUN-19	04-JUN-19	R4655556
Iron (Fe)-Total	0.00113		0.00029	mg/dm ² .day	04-JUN-19	04-JUN-19	R4655556
Lithium (Li)-Total	<0.000049		0.000049	mg/dm ² .day	04-JUN-19	04-JUN-19	R4655556
Magnesium (Mg)-Total	0.00447		0.000049	mg/dm ² .day	04-JUN-19	04-JUN-19	R4655556
Manganese (Mn)-Total	0.0000427		0.00000098	mg/dm ² .day	04-JUN-19	04-JUN-19	R4655556
Molybdenum (Mo)-Total	0.00000066		0.00000049	mg/dm ² .day	04-JUN-19	04-JUN-19	R4655556
Nickel (Ni)-Total	0.0000096		0.0000049	mg/dm ² .day	04-JUN-19	04-JUN-19	R4655556
Phosphorus (P)-Total	<0.00049		0.00049	mg/dm ² .day	04-JUN-19	04-JUN-19	R4655556
Potassium (K)-Total	0.00266		0.00049	mg/dm ² .day	04-JUN-19	04-JUN-19	R4655556
Selenium (Se)-Total	<0.0000098		0.0000098	mg/dm ² .day	04-JUN-19	04-JUN-19	R4655556
Silicon (Si)-Total	0.00200		0.00049	mg/dm ² .day	04-JUN-19	04-JUN-19	R4655556
Silver (Ag)-Total	0.000000632		0.000000098	mg/dm ² .day	04-JUN-19	04-JUN-19	R4655556
Sodium (Na)-Total	0.00114		0.00049	mg/dm ² .day	04-JUN-19	04-JUN-19	R4655556
Strontium (Sr)-Total	0.0000317		0.00000098	mg/dm ² .day	04-JUN-19	04-JUN-19	R4655556
Thallium (Tl)-Total	<0.00000098		0.00000098	mg/dm ² .day	04-JUN-19	04-JUN-19	R4655556
Tin (Sn)-Total	<0.00000098		0.00000098	mg/dm ² .day	04-JUN-19	04-JUN-19	R4655556
Titanium (Ti)-Total	<0.000098		0.000098	mg/dm ² .day	04-JUN-19	04-JUN-19	R4655556
Uranium (U)-Total	<0.000000098		0.000000098	mg/dm ² .day	04-JUN-19	04-JUN-19	R4655556
Vanadium (V)-Total	<0.0000098		0.0000098	mg/dm ² .day	04-JUN-19	04-JUN-19	R4655556
Zinc (Zn)-Total	<0.00012	DLB	0.00012	mg/dm ² .day	04-JUN-19	04-JUN-19	R4655556

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

Reference Information

Sample Parameter Qualifier Key:

Qualifier	Description
A	Method Blank exceeds ALS DQO. Refer to narrative comments for further information.
DLB	Detection Limit Raised. Analyte detected at comparable level in Method Blank.
DLM	Detection Limit Adjusted due to sample matrix effects (e.g. chemical interference, colour, turbidity).
G	QC result did not meet ALS DQO. Refer to narrative comments for further information.
MB-LOR	Method Blank exceeds ALS DQO. Limits of Reporting have been adjusted for samples with positive hits below 5x blank level.
MES	Data Quality Objective was marginally exceeded (by < 10% absolute) for < 10% of analytes in a Multi-Element Scan / Multi-Parameter Scan (considered acceptable as per OMSE & CCME).
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
AIR VOLUME-HIVOL-BU	Filter	Air volume (m3)	USEPA IO3.1
DUSTFALLS-ALL-DM2-VA	Dustfall	Dustfalls-Total, Soluble, Insoluble +FV	BC LAB MANUAL - PARTICULATE
This analysis is carried out using procedures modified from British Columbia Environmental Manual "Particulate." Particulates or "Dustfalls" are determined gravimetrically. Total Insoluble and Soluble Dustfalls are determined by filtering a sample through a 0.45 um membrane filter and drying the filter and filtrate at 104 C, followed by ignition at 550 C. The remaining residue after 550 C represents the fixed portion and the weight lost on ignition represents the volatile portion. The sum of all fixed and volatile portions on both Insoluble and Soluble portions represents Total Dustfalls.			
MET+IC/SOLID-CALC-BU	Filter	Metals + Anions + Cations / Solids Ratio	Calculation
MET-DUST(DM2)-MS-VA	Dustfall	Total Metals in Dustfalls by ICPMS	EPA 6020A
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). Instrumental analysis is by inductively coupled plasma - mass spectrometry (EPA Method 6020A).			
MET-IO3.5-MS-BU	Filter	Metals on High Volume Filter by ICPMS	IO3.5
PART-EC6.08-GRAV-BU	Filter	Particulate ENV Canada 6.08 microbalance	ENV CAN 6.08
The particulate matter collected onto tare-weighed 47mm Teflon Disc filter media is desiccated then brought to a constant weight on an analytical balance. Results are presented in ug (per filter). An air volume can be included to allow for reporting in ug/m3.			
PART-HIVOL-GRAV-BU	Filter	Particulate on High Volume Filter	USEPA IO3.1

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
BU	ALS ENVIRONMENTAL - BURLINGTON, ONTARIO, CANADA
VA	ALS ENVIRONMENTAL - VANCOUVER, BRITISH COLUMBIA, CANADA

Chain of Custody Numbers:
GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.

mg/kg - milligrams per kilogram based on dry weight of sample

mg/kg wwt - milligrams per kilogram based on wet weight of sample

mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight

mg/L - unit of concentration based on volume, parts per million.

< - Less than.

D.L. - The reporting limit.

N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.

Quality Control Report

Workorder: L2272518

Report Date: 06-JUN-19

Page 1 of 6

Client: New Gold Inc. Rainy River Project
 5967 Highway 11/71 P.O. Box 5
 Emo ON P0W 1E0

Contact: Kelsea Hunsperger

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-IO3.5-MS-BU	Filter							
Batch	R4647487							
WG3060554-2	LCS							
Arsenic (As)			85.6		%		80-120	27-MAY-19
Cadmium (Cd)			86.6		%		80-120	27-MAY-19
Cobalt (Co)			89.3		%		80-120	27-MAY-19
Chromium (Cr)			105.0		%		80-120	27-MAY-19
Copper (Cu)			103.0		%		80-120	27-MAY-19
Iron (Fe)			92.8		%		80-120	27-MAY-19
Manganese (Mn)			94.9		%		80-120	27-MAY-19
Nickel (Ni)			90.0		%		80-120	27-MAY-19
Lead (Pb)			84.8		%		80-120	27-MAY-19
Selenium (Se)			85.9		%		80-120	27-MAY-19
Vanadium (V)			88.2		%		80-120	27-MAY-19
Zinc (Zn)			94.5		%		80-120	27-MAY-19
COMMENTS: U recovery in the LCS cannot be quantified due to a spiking error on behalf of the analyst. In effect, this analyte was not spiked into the sample. The Matrix Spike sample shows good recoveries. This is not expected to have any impact on data quality. PE 29-May-19								
WG3060554-1	MB							
Arsenic (As)			<3.0		ug		3	27-MAY-19
Cadmium (Cd)			<2.0		ug		2	27-MAY-19
Cobalt (Co)			<2.0		ug		2	27-MAY-19
Chromium (Cr)			5.4	A	ug		5	27-MAY-19
Copper (Cu)			9.5	A	ug		4	27-MAY-19
Iron (Fe)			<20		ug		20	27-MAY-19
Manganese (Mn)			1.3	A	ug		1	27-MAY-19
Nickel (Ni)			<3.0		ug		3	27-MAY-19
Lead (Pb)			<3.0		ug		3	27-MAY-19
Selenium (Se)			<10		ug		10	27-MAY-19
Vanadium (V)			<5.0		ug		10	27-MAY-19
Zinc (Zn)			<5.0		ug		5	27-MAY-19
COMMENTS: Cr, Cu, and Mn observed above the LOR. In the case of Cu this level is significantly above the LOR. Data for these targets are likely to be biased high as a result of this background contribution. PE 29-May-19								
PART-EC6.08-GRAV-BU	Filter							
Batch	R4641316							
WG3056741-2	DUP	L2272518-12						
Total particulate			16	<15	RPD-NA	ug	N/A	25
WG3056741-1	MB							
Total particulate				<15		ug		15
PART-HIVOL-GRAV-BU	Filter							

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PART-HIVOL-GRAV-BU Filter								
Batch R4641310								
WG3056736-3 DUP		L2272518-1						
Total particulate		15500	15700		ug	1.3	25	22-MAY-19
WG3056736-1 MB								
Total particulate			<100		ug		100	22-MAY-19
DUSTFALLS-ALL-DM2-VA Dustfall								
Batch R4659406								
WG3066965-1 MB								
Total Dustfall			<0.10		mg/dm ² .day		0.1	04-JUN-19
Total Insoluble Dustfall			<0.10		mg/dm ² .day		0.1	04-JUN-19
Total Soluble Dustfall			<0.10		mg/dm ² .day		0.1	04-JUN-19
Fixed Dustfall			<0.10		mg/dm ² .day		0.1	04-JUN-19
Fixed Insoluble Dustfall			<0.10		mg/dm ² .day		0.1	04-JUN-19
Fixed Soluble Dustfall			<0.10		mg/dm ² .day		0.1	04-JUN-19
Volatile Dustfall			<0.10		mg/dm ² .day		0.1	04-JUN-19
Volatile Insoluble Dustfall			<0.10		mg/dm ² .day		0.1	04-JUN-19
Volatile Soluble Dustfall			<0.10		mg/dm ² .day		0.1	04-JUN-19
MET-DUST(DM2)-MS-VA Dustfall								
Batch R4655556								
WG3066469-3 DUP		L2272518-23						
Aluminum (Al)-Total	0.00115	0.00138			mg/dm ² .day	19	20	04-JUN-19
Antimony (Sb)-Total	<0.0000049	<0.0000049	RPD-NA		mg/dm ² .day	N/A	20	04-JUN-19
Arsenic (As)-Total	<0.000059	<0.000059	RPD-NA		mg/dm ² .day	N/A	20	04-JUN-19
Barium (Ba)-Total	0.0000210	0.0000226			mg/dm ² .day	7.4	20	04-JUN-19
Beryllium (Be)-Total	<0.0000049	<0.0000049	RPD-NA		mg/dm ² .day	N/A	20	04-JUN-19
Bismuth (Bi)-Total	<0.0000049	<0.0000049	RPD-NA		mg/dm ² .day	N/A	20	04-JUN-19
Boron (B)-Total	<0.000098	<0.000098	RPD-NA		mg/dm ² .day	N/A	20	04-JUN-19
Cadmium (Cd)-Total	<0.00000049	<0.0000004	RPD-NA		mg/dm ² .day	N/A	20	04-JUN-19
Calcium (Ca)-Total	0.0118	0.0114			mg/dm ² .day	3.1	20	04-JUN-19
Chromium (Cr)-Total	<0.0000049	<0.0000049	RPD-NA		mg/dm ² .day	N/A	20	04-JUN-19
Cobalt (Co)-Total	<0.00000098	<0.00000098	RPD-NA		mg/dm ² .day	N/A	20	04-JUN-19
Copper (Cu)-Total	0.0000287	0.0000229	J		mg/dm ² .day	0.000005	0.0000098	04-JUN-19
Lead (Pb)-Total	0.00000318	0.00000350			mg/dm ² .day	9.7	20	04-JUN-19
Iron (Fe)-Total	0.00102	0.00121			mg/dm ² .day	17	20	04-JUN-19
Lithium (Li)-Total	<0.000049	<0.000049	RPD-NA		mg/dm ² .day	N/A	20	04-JUN-19
Magnesium (Mg)-Total	0.00314	0.00310			mg/dm ² .day	1.2	20	04-JUN-19

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-DUST(DM2)-MS-VA Dustfall								
Batch	R4655556							
WG3066469-3 DUP		L2272518-23						
Manganese (Mn)-Total		0.0000692	0.0000844		mg/dm ² .day	20	20	04-JUN-19
Molybdenum (Mo)-Total		0.00000080	0.00000144	J	mg/dm ² .day	0.000000	0.00000098	04-JUN-19
Nickel (Ni)-Total		0.0000195	0.0000251	J	mg/dm ² .day	0.000005	0.0000098	04-JUN-19
Phosphorus (P)-Total		0.00074	0.00056	J	mg/dm ² .day	0.00018	0.00098	04-JUN-19
Potassium (K)-Total		0.00271	0.00274		mg/dm ² .day	1.3	20	04-JUN-19
Selenium (Se)-Total		<0.0000098	<0.0000098	RPD-NA	mg/dm ² .day	N/A	20	04-JUN-19
Silicon (Si)-Total		0.00202	0.00262	J	mg/dm ² .day	0.00060	0.00098	04-JUN-19
Silver (Ag)-Total		0.000000164	0.00000012	J	mg/dm ² .day	0.000000	0.000000190	04-JUN-19
Sodium (Na)-Total		0.00103	0.00094		mg/dm ² .day	9.5	20	04-JUN-19
Strontium (Sr)-Total		0.0000214	0.0000205		mg/dm ² .day	4.3	20	04-JUN-19
Thallium (Tl)-Total		<0.00000098	<0.0000009	RPD-NA	mg/dm ² .day	N/A	20	04-JUN-19
Tin (Sn)-Total		<0.00000098	<0.0000009	RPD-NA	mg/dm ² .day	N/A	20	04-JUN-19
Titanium (Ti)-Total		<0.000098	<0.000098	RPD-NA	mg/dm ² .day	N/A	20	04-JUN-19
Uranium (U)-Total		<0.00000009	<0.0000000C	RPD-NA	mg/dm ² .day	N/A	20	04-JUN-19
Vanadium (V)-Total		<0.0000098	<0.0000098	RPD-NA	mg/dm ² .day	N/A	20	04-JUN-19
Zinc (Zn)-Total		<0.00018	<0.00018	RPD-NA	mg/dm ² .day	N/A	20	04-JUN-19
WG3066469-2 LCS								
Aluminum (Al)-Total		117.9		%		80-120	04-JUN-19	
Antimony (Sb)-Total		106.2		%		80-120	04-JUN-19	
Arsenic (As)-Total		102.7		%		80-120	04-JUN-19	
Barium (Ba)-Total		113.6		%		80-120	04-JUN-19	
Beryllium (Be)-Total		107.7		%		80-120	04-JUN-19	
Bismuth (Bi)-Total		100.1		%		80-120	04-JUN-19	
Boron (B)-Total		92.7		%		80-120	04-JUN-19	
Cadmium (Cd)-Total		113.6		%		80-120	04-JUN-19	
Calcium (Ca)-Total		106.7		%		80-120	04-JUN-19	
Chromium (Cr)-Total		111.2		%		80-120	04-JUN-19	
Cobalt (Co)-Total		113.5		%		80-120	04-JUN-19	
Copper (Cu)-Total		113.9		%		80-120	04-JUN-19	
Lead (Pb)-Total		103.7		%		80-120	04-JUN-19	
Iron (Fe)-Total		100.8		%		80-120	04-JUN-19	
Lithium (Li)-Total		103.7		%		80-120	04-JUN-19	
Magnesium (Mg)-Total		115.1		%		80-120	04-JUN-19	
Manganese (Mn)-Total		119.2		%		80-120	04-JUN-19	

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-DUST(DM2)-MS-VA Dustfall								
Batch	R4655556							
WG3066469-2 LCS								
Molybdenum (Mo)-Total			103.1		%		80-120	04-JUN-19
Nickel (Ni)-Total			113.8		%		80-120	04-JUN-19
Phosphorus (P)-Total			112.9		%		80-120	04-JUN-19
Potassium (K)-Total			114.5		%		80-120	04-JUN-19
Selenium (Se)-Total			99.6		%		80-120	04-JUN-19
Silicon (Si)-Total			101.3		%		80-120	04-JUN-19
Silver (Ag)-Total			106.2		%		80-120	04-JUN-19
Sodium (Na)-Total			116.1		%		80-120	04-JUN-19
Strontium (Sr)-Total			113.0		%		80-120	04-JUN-19
Thallium (Tl)-Total			99.3		%		80-120	04-JUN-19
Tin (Sn)-Total			97.2		%		80-120	04-JUN-19
Titanium (Ti)-Total			97.8		%		80-120	04-JUN-19
Uranium (U)-Total			105.2		%		80-120	04-JUN-19
Vanadium (V)-Total			115.1		%		80-120	04-JUN-19
Zinc (Zn)-Total			121.4	MES	%		80-120	04-JUN-19
WG3066469-1 MB								
Aluminum (Al)-Total			<0.000079		mg/dm2.day		0.000079	04-JUN-19
Antimony (Sb)-Total			0.0000070	MB-LOR	mg/dm2.day		0.0000026	04-JUN-19
Arsenic (As)-Total			<0.000065		mg/dm2.day		0.000065	04-JUN-19
Barium (Ba)-Total			<0.0000013		mg/dm2.day		0.0000013	04-JUN-19
Beryllium (Be)-Total			<0.000013		mg/dm2.day		0.000013	04-JUN-19
Bismuth (Bi)-Total			<0.000013		mg/dm2.day		0.000013	04-JUN-19
Boron (B)-Total			<0.00026		mg/dm2.day		0.00026	04-JUN-19
Cadmium (Cd)-Total			<0.0000013		mg/dm2.day		0.0000013	04-JUN-19
Calcium (Ca)-Total			<0.00052		mg/dm2.day		0.00052	04-JUN-19
Chromium (Cr)-Total			<0.000013		mg/dm2.day		0.000013	04-JUN-19
Cobalt (Co)-Total			<0.0000026		mg/dm2.day		0.0000026	04-JUN-19
Copper (Cu)-Total			<0.000013		mg/dm2.day		0.000013	04-JUN-19
Lead (Pb)-Total			<0.0000013		mg/dm2.day		0.0000013	04-JUN-19
Iron (Fe)-Total			<0.00079		mg/dm2.day		0.00079	04-JUN-19
Lithium (Li)-Total			<0.00013		mg/dm2.day		0.00013	04-JUN-19
Magnesium (Mg)-Total			<0.00013		mg/dm2.day		0.00013	04-JUN-19
Manganese (Mn)-Total			<0.0000026		mg/dm2.day		0.0000026	04-JUN-19
Molybdenum (Mo)-Total			<0.0000013		mg/dm2.day		0.0000013	04-JUN-19

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-DUST(DM2)-MS-VA	Dustfall							
Batch	R4655556							
WG3066469-1 MB								
Nickel (Ni)-Total			<0.000013		mg/dm ² .day		0.000013	04-JUN-19
Phosphorus (P)-Total			<0.0013		mg/dm ² .day		0.0013	04-JUN-19
Potassium (K)-Total			<0.0013		mg/dm ² .day		0.0013	04-JUN-19
Selenium (Se)-Total			<0.000026		mg/dm ² .day		0.000026	04-JUN-19
Silicon (Si)-Total			<0.0013		mg/dm ² .day		0.0013	04-JUN-19
Silver (Ag)-Total			<0.0000002		mg/dm ² .day		0.00000026	04-JUN-19
Sodium (Na)-Total			<0.0013		mg/dm ² .day		0.0013	04-JUN-19
Strontium (Sr)-Total			<0.0000026		mg/dm ² .day		0.0000026	04-JUN-19
Thallium (Tl)-Total			<0.0000026		mg/dm ² .day		0.0000026	04-JUN-19
Tin (Sn)-Total			<0.0000026		mg/dm ² .day		0.0000026	04-JUN-19
Titanium (Ti)-Total			<0.00026		mg/dm ² .day		0.00026	04-JUN-19
Uranium (U)-Total			<0.0000002		mg/dm ² .day		0.00000026	04-JUN-19
Vanadium (V)-Total			<0.000026		mg/dm ² .day		0.000026	04-JUN-19
Zinc (Zn)-Total			0.000312	MB-LOR	mg/dm ² .day		0.000079	04-JUN-19

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Legend:

Limit	ALS Control Limit (Data Quality Objectives)
DUP	Duplicate
RPD	Relative Percent Difference
N/A	Not Available
LCS	Laboratory Control Sample
SRM	Standard Reference Material
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ADE	Average Desorption Efficiency
MB	Method Blank
IRM	Internal Reference Material
CRM	Certified Reference Material
CCV	Continuing Calibration Verification
CVS	Calibration Verification Standard
LCSD	Laboratory Control Sample Duplicate

Sample Parameter Qualifier Definitions:

Qualifier	Description
A	Method Blank exceeds ALS DQO. Refer to narrative comments for further information.
J	Duplicate results and limits are expressed in terms of absolute difference.
MB-LOR	Method Blank exceeds ALS DQO. Limits of Reporting have been adjusted for samples with positive hits below 5x blank level.
MES	Data Quality Objective was marginally exceeded (by < 10% absolute) for < 10% of analytes in a Multi-Element Scan / Multi-Parameter Scan (considered acceptable as per OMOE & CCME).
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Hold Time Exceedances:

All test results reported with this submission were conducted within ALS recommended hold times.

ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where available). For more information, please contact ALS.

The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide confidence in the accuracy of associated test results.

Please note that this report may contain QC results from anonymous Sample Duplicates and Matrix Spikes that do not originate from this Work Order.



New Gold Inc. Rainy River Project
ATTN: Kelsea Hunsperger
5967 Highway 11/71
P.O. Box 5
Emo ON POW 1E0

Date Received: 12-JUN-19
Report Date: 05-JUL-19 15:01 (MT)
Version: FINAL

Client Phone: 807-482-0900

Certificate of Analysis

Lab Work Order #: L2289894

Project P.O. #: 4500018623

Job Reference: AIR QUALITY MONITORING

C of C Numbers:

Legal Site Desc:

A handwritten signature in black ink, appearing to read "wirek".

Claire Kocharakkal, B.Sc.
Account Manager

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2289894-1	NORTH-TSP-239							
Sampled By:	Client on 03-MAY-19							
Matrix:	Hi Vol Filter							
Miscellaneous Parameters								
Total particulate		9600		2300	ug		19-JUN-19	R4673408
Metals on High Volume Filter by ICPMS								
Arsenic (As)		<3.0		3.0	ug	21-JUN-19	24-JUN-19	R4690199
Cadmium (Cd)		<2.0		2.0	ug	21-JUN-19	24-JUN-19	R4690199
Cobalt (Co)		<2.0		2.0	ug	21-JUN-19	24-JUN-19	R4690199
Chromium (Cr)		14.9		5.0	ug	21-JUN-19	24-JUN-19	R4690199
Copper (Cu)		238		4.0	ug	21-JUN-19	24-JUN-19	R4690199
Iron (Fe)		179		20	ug	21-JUN-19	24-JUN-19	R4690199
Manganese (Mn)		6.7		1.0	ug	21-JUN-19	24-JUN-19	R4690199
Nickel (Ni)		<3.0		3.0	ug	21-JUN-19	24-JUN-19	R4690199
Lead (Pb)		<3.0		3.0	ug	21-JUN-19	24-JUN-19	R4690199
Selenium (Se)		<10		10	ug	21-JUN-19	24-JUN-19	R4690199
Vanadium (V)		240		10	ug	21-JUN-19	24-JUN-19	R4690199
Zinc (Zn)		20.7		5.0	ug	21-JUN-19	24-JUN-19	R4690199
L2289894-2	SOUTH-TSP-239							
Sampled By:	Client on 03-MAY-19							
Matrix:	Hi Vol Filter							
Miscellaneous Parameters								
Total particulate		11800		2300	ug		19-JUN-19	R4673408
Metals on High Volume Filter by ICPMS								
Arsenic (As)		<3.0		3.0	ug	21-JUN-19	24-JUN-19	R4690199
Cadmium (Cd)		<2.0		2.0	ug	21-JUN-19	24-JUN-19	R4690199
Cobalt (Co)		<2.0		2.0	ug	21-JUN-19	24-JUN-19	R4690199
Chromium (Cr)		13.8		5.0	ug	21-JUN-19	24-JUN-19	R4690199
Copper (Cu)		36.9		4.0	ug	21-JUN-19	24-JUN-19	R4690199
Iron (Fe)		214		20	ug	21-JUN-19	24-JUN-19	R4690199
Manganese (Mn)		5.9		1.0	ug	21-JUN-19	24-JUN-19	R4690199
Nickel (Ni)		<3.0		3.0	ug	21-JUN-19	24-JUN-19	R4690199
Lead (Pb)		<3.0		3.0	ug	21-JUN-19	24-JUN-19	R4690199
Selenium (Se)		<10		10	ug	21-JUN-19	24-JUN-19	R4690199
Vanadium (V)		<10		10	ug	21-JUN-19	24-JUN-19	R4690199
Zinc (Zn)		38.4		5.0	ug	21-JUN-19	24-JUN-19	R4690199
L2289894-3	NORTH-TSP-240							
Sampled By:	Client on 09-MAY-19							
Matrix:	Hi Vol Filter							
Miscellaneous Parameters								
Total particulate		15300		2300	ug		19-JUN-19	R4673408
Metals on High Volume Filter by ICPMS								
Arsenic (As)		<3.0		3.0	ug	21-JUN-19	24-JUN-19	R4690199
Cadmium (Cd)		<2.0		2.0	ug	21-JUN-19	24-JUN-19	R4690199
Cobalt (Co)		<2.0		2.0	ug	21-JUN-19	24-JUN-19	R4690199
Chromium (Cr)		13.7		5.0	ug	21-JUN-19	24-JUN-19	R4690199
Copper (Cu)		317		8.0	ug	21-JUN-19	24-JUN-19	R4690199
Iron (Fe)		254		20	ug	21-JUN-19	24-JUN-19	R4690199
Manganese (Mn)		9.7		1.0	ug	21-JUN-19	24-JUN-19	R4690199
Nickel (Ni)		<3.0		3.0	ug	21-JUN-19	24-JUN-19	R4690199
Lead (Pb)		<3.0		3.0	ug	21-JUN-19	24-JUN-19	R4690199
Selenium (Se)		<10		10	ug	21-JUN-19	24-JUN-19	R4690199
Vanadium (V)		<10		10	ug	21-JUN-19	24-JUN-19	R4690199
Zinc (Zn)		19.0		5.0	ug	21-JUN-19	24-JUN-19	R4690199

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2289894-4	SOUTH-TSP-240							
Sampled By:	Client on 09-MAY-19							
Matrix:	Hi Vol Filter							
Miscellaneous Parameters								
Total particulate		48500		2300	ug		19-JUN-19	R4673408
Metals on High Volume Filter by ICPMS								
Arsenic (As)		<3.0		3.0	ug	21-JUN-19	24-JUN-19	R4690199
Cadmium (Cd)		<2.0		2.0	ug	21-JUN-19	24-JUN-19	R4690199
Cobalt (Co)		<2.0		2.0	ug	21-JUN-19	24-JUN-19	R4690199
Chromium (Cr)		14.5		5.0	ug	21-JUN-19	24-JUN-19	R4690199
Copper (Cu)		92.7		4.0	ug	21-JUN-19	24-JUN-19	R4690199
Iron (Fe)		788		20	ug	21-JUN-19	24-JUN-19	R4690199
Manganese (Mn)		29.3		1.0	ug	21-JUN-19	24-JUN-19	R4690199
Nickel (Ni)		<3.0		3.0	ug	21-JUN-19	24-JUN-19	R4690199
Lead (Pb)		3.5		3.0	ug	21-JUN-19	24-JUN-19	R4690199
Selenium (Se)		<10		10	ug	21-JUN-19	24-JUN-19	R4690199
Vanadium (V)		<10		10	ug	21-JUN-19	24-JUN-19	R4690199
Zinc (Zn)		32.4		5.0	ug	21-JUN-19	24-JUN-19	R4690199
L2289894-5	NORTH-TSP-241							
Sampled By:	Client on 15-MAY-19							
Matrix:	Hi Vol Filter							
Miscellaneous Parameters								
Total particulate		37800		2300	ug		19-JUN-19	R4673408
Metals on High Volume Filter by ICPMS								
Arsenic (As)		<3.0		3.0	ug	21-JUN-19	24-JUN-19	R4690199
Cadmium (Cd)		<2.0		2.0	ug	21-JUN-19	24-JUN-19	R4690199
Cobalt (Co)		<2.0		2.0	ug	21-JUN-19	24-JUN-19	R4690199
Chromium (Cr)		14.1		5.0	ug	21-JUN-19	24-JUN-19	R4690199
Copper (Cu)		271		8.0	ug	21-JUN-19	24-JUN-19	R4690199
Iron (Fe)		599		20	ug	21-JUN-19	24-JUN-19	R4690199
Manganese (Mn)		17.2		1.0	ug	21-JUN-19	24-JUN-19	R4690199
Nickel (Ni)		<3.0		3.0	ug	21-JUN-19	24-JUN-19	R4690199
Lead (Pb)		<3.0		3.0	ug	21-JUN-19	24-JUN-19	R4690199
Selenium (Se)		<10		10	ug	21-JUN-19	24-JUN-19	R4690199
Vanadium (V)		<10		10	ug	21-JUN-19	24-JUN-19	R4690199
Zinc (Zn)		18.0		5.0	ug	21-JUN-19	24-JUN-19	R4690199
L2289894-6	SOUTH-TSP-241							
Sampled By:	Client on 15-MAY-19							
Matrix:	Hi Vol Filter							
Miscellaneous Parameters								
Total particulate		74400		2300	ug		19-JUN-19	R4673408
Metals on High Volume Filter by ICPMS								
Arsenic (As)		<3.0		3.0	ug	21-JUN-19	24-JUN-19	R4690199
Cadmium (Cd)		<2.0		2.0	ug	21-JUN-19	24-JUN-19	R4690199
Cobalt (Co)		<2.0		2.0	ug	21-JUN-19	24-JUN-19	R4690199
Chromium (Cr)		14.1		5.0	ug	21-JUN-19	24-JUN-19	R4690199
Copper (Cu)		84.6		4.0	ug	21-JUN-19	24-JUN-19	R4690199
Iron (Fe)		1310		20	ug	21-JUN-19	24-JUN-19	R4690199
Manganese (Mn)		41.6		1.0	ug	21-JUN-19	24-JUN-19	R4690199
Nickel (Ni)		<3.0		3.0	ug	21-JUN-19	24-JUN-19	R4690199
Lead (Pb)		12.5		3.0	ug	21-JUN-19	24-JUN-19	R4690199
Selenium (Se)		<10		10	ug	21-JUN-19	24-JUN-19	R4690199
Vanadium (V)		<10		10	ug	21-JUN-19	24-JUN-19	R4690199
Zinc (Zn)		35.0		5.0	ug	21-JUN-19	24-JUN-19	R4690199

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2289894-7	NORTH-TSP-242							
Sampled By:	Client on 21-MAY-19							
Matrix:	Hi Vol Filter							
Miscellaneous Parameters								
Total particulate		109000		2300	ug		19-JUN-19	R4673408
Metals on High Volume Filter by ICPMS								
Arsenic (As)		<3.0		3.0	ug	21-JUN-19	24-JUN-19	R4690199
Cadmium (Cd)		<2.0		2.0	ug	21-JUN-19	24-JUN-19	R4690199
Cobalt (Co)		<2.0		2.0	ug	21-JUN-19	24-JUN-19	R4690199
Chromium (Cr)		17.0		5.0	ug	21-JUN-19	24-JUN-19	R4690199
Copper (Cu)		190		8.0	ug	21-JUN-19	24-JUN-19	R4690199
Iron (Fe)		1670		20	ug	21-JUN-19	24-JUN-19	R4690199
Manganese (Mn)		41.7		1.0	ug	21-JUN-19	24-JUN-19	R4690199
Nickel (Ni)		3.3		3.0	ug	21-JUN-19	24-JUN-19	R4690199
Lead (Pb)		<3.0		3.0	ug	21-JUN-19	24-JUN-19	R4690199
Selenium (Se)		<10		10	ug	21-JUN-19	24-JUN-19	R4690199
Vanadium (V)		<10		10	ug	21-JUN-19	24-JUN-19	R4690199
Zinc (Zn)		14.4		5.0	ug	21-JUN-19	24-JUN-19	R4690199
L2289894-8	SOUTH-TSP-242							
Sampled By:	Client on 21-MAY-19							
Matrix:	Hi Vol Filter							
Miscellaneous Parameters								
Total particulate		54000		2300	ug		19-JUN-19	R4673408
Metals on High Volume Filter by ICPMS								
Arsenic (As)		3.2		3.0	ug	21-JUN-19	24-JUN-19	R4690199
Cadmium (Cd)		<2.0		2.0	ug	21-JUN-19	24-JUN-19	R4690199
Cobalt (Co)		<2.0		2.0	ug	21-JUN-19	24-JUN-19	R4690199
Chromium (Cr)		17.3		5.0	ug	21-JUN-19	24-JUN-19	R4690199
Copper (Cu)		50.4		4.0	ug	21-JUN-19	24-JUN-19	R4690199
Iron (Fe)		824		20	ug	21-JUN-19	24-JUN-19	R4690199
Manganese (Mn)		21.5		1.0	ug	21-JUN-19	24-JUN-19	R4690199
Nickel (Ni)		<3.0		3.0	ug	21-JUN-19	24-JUN-19	R4690199
Lead (Pb)		<3.0		3.0	ug	21-JUN-19	24-JUN-19	R4690199
Selenium (Se)		<10		10	ug	21-JUN-19	24-JUN-19	R4690199
Vanadium (V)		<10		10	ug	21-JUN-19	24-JUN-19	R4690199
Zinc (Zn)		15.3		5.0	ug	21-JUN-19	24-JUN-19	R4690199
L2289894-9	NORTH-TSP-243							
Sampled By:	Client on 27-MAY-19							
Matrix:	Hi Vol Filter							
Miscellaneous Parameters								
Total particulate		47500		2300	ug		19-JUN-19	R4673408
Metals on High Volume Filter by ICPMS								
Arsenic (As)		<3.0		3.0	ug	21-JUN-19	24-JUN-19	R4690199
Cadmium (Cd)		<2.0		2.0	ug	21-JUN-19	24-JUN-19	R4690199
Cobalt (Co)		<2.0		2.0	ug	21-JUN-19	24-JUN-19	R4690199
Chromium (Cr)		15.5		5.0	ug	21-JUN-19	24-JUN-19	R4690199
Copper (Cu)		327		8.0	ug	21-JUN-19	24-JUN-19	R4690199
Iron (Fe)		332		20	ug	21-JUN-19	24-JUN-19	R4690199
Manganese (Mn)		12.9		1.0	ug	21-JUN-19	24-JUN-19	R4690199
Nickel (Ni)		4.1		3.0	ug	21-JUN-19	24-JUN-19	R4690199
Lead (Pb)		<3.0		3.0	ug	21-JUN-19	24-JUN-19	R4690199
Selenium (Se)		<10		10	ug	21-JUN-19	24-JUN-19	R4690199
Vanadium (V)		16		10	ug	21-JUN-19	24-JUN-19	R4690199
Zinc (Zn)		65.7		5.0	ug	21-JUN-19	24-JUN-19	R4690199

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2289894-10	SOUTH-TSP-243							
Sampled By:	Client on 27-MAY-19							
Matrix:	Hi Vol Filter							
Miscellaneous Parameters								
Total particulate		38300		2300	ug		19-JUN-19	R4673408
Metals on High Volume Filter by ICPMS								
Arsenic (As)		3.0		3.0	ug	21-JUN-19	24-JUN-19	R4690199
Cadmium (Cd)		<2.0		2.0	ug	21-JUN-19	24-JUN-19	R4690199
Cobalt (Co)		<2.0		2.0	ug	21-JUN-19	24-JUN-19	R4690199
Chromium (Cr)		13.8		5.0	ug	21-JUN-19	24-JUN-19	R4690199
Copper (Cu)		68.9		4.0	ug	21-JUN-19	24-JUN-19	R4690199
Iron (Fe)		221		20	ug	21-JUN-19	24-JUN-19	R4690199
Manganese (Mn)		7.5		1.0	ug	21-JUN-19	24-JUN-19	R4690199
Nickel (Ni)		<3.0		3.0	ug	21-JUN-19	24-JUN-19	R4690199
Lead (Pb)		<3.0		3.0	ug	21-JUN-19	24-JUN-19	R4690199
Selenium (Se)		<10		10	ug	21-JUN-19	24-JUN-19	R4690199
Vanadium (V)		<10		10	ug	21-JUN-19	24-JUN-19	R4690199
Zinc (Zn)		16.0		5.0	ug	21-JUN-19	24-JUN-19	R4690199
L2289894-11	TSP-TRAVEL BLANK							
Sampled By:	Client on 31-MAY-19							
Matrix:	Hi Vol Filter							
Miscellaneous Parameters								
Total particulate		<2300		2300	ug		19-JUN-19	R4673408
Metals on High Volume Filter by ICPMS								
Arsenic (As)		<3.0		3.0	ug	21-JUN-19	24-JUN-19	R4690199
Cadmium (Cd)		<2.0		2.0	ug	21-JUN-19	24-JUN-19	R4690199
Cobalt (Co)		<2.0		2.0	ug	21-JUN-19	24-JUN-19	R4690199
Chromium (Cr)		12.9		5.0	ug	21-JUN-19	24-JUN-19	R4690199
Copper (Cu)		13.5		4.0	ug	21-JUN-19	24-JUN-19	R4690199
Iron (Fe)		95		20	ug	21-JUN-19	24-JUN-19	R4690199
Manganese (Mn)		2.5		1.0	ug	21-JUN-19	24-JUN-19	R4690199
Nickel (Ni)		<3.0		3.0	ug	21-JUN-19	24-JUN-19	R4690199
Lead (Pb)		<3.0		3.0	ug	21-JUN-19	24-JUN-19	R4690199
Selenium (Se)		<10		10	ug	21-JUN-19	24-JUN-19	R4690199
Vanadium (V)		13		10	ug	21-JUN-19	24-JUN-19	R4690199
Zinc (Zn)		7.4		5.0	ug	21-JUN-19	24-JUN-19	R4690199
L2289894-12	NORTH-PM2.5-239							
Sampled By:	Client on 03-MAY-19							
Matrix:	47mm Filter							
Miscellaneous Parameters								
Total particulate		54		15	ug		20-JUN-19	R4676807
L2289894-13	SOUTH-PM2.5-239							
Sampled By:	Client on 03-MAY-19							
Matrix:	47mm Filter							
Miscellaneous Parameters								
Total particulate		107		15	ug		20-JUN-19	R4676807
L2289894-14	NORTH-PM2.5-240							
Sampled By:	Client on 09-MAY-19							
Matrix:	47mm Filter							
Miscellaneous Parameters								
Total particulate		<15		15	ug		20-JUN-19	R4676807

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2289894-15 SOUTH-PM2.5-240 Sampled By: Client on 09-MAY-19 Matrix: 47mm Filter Miscellaneous Parameters Total particulate	<15		15	ug		20-JUN-19	R4676807
L2289894-16 NORTH-PM2.5-241 Sampled By: Client on 15-MAY-19 Matrix: 47mm Filter Miscellaneous Parameters Total particulate	<15		15	ug		20-JUN-19	R4676807
L2289894-17 SOUTH-PM2.5-241 Sampled By: Client on 15-MAY-19 Matrix: 47mm Filter Miscellaneous Parameters Total particulate	71		15	ug		20-JUN-19	R4676807
L2289894-18 NORTH-PM2.5-242 Sampled By: Client on 21-MAY-19 Matrix: 47mm Filter Miscellaneous Parameters Total particulate	16		15	ug		20-JUN-19	R4676807
L2289894-19 SOUTH-PM2.5-242 Sampled By: Client on 21-MAY-19 Matrix: 47mm Filter Miscellaneous Parameters Total particulate	125		15	ug		20-JUN-19	R4676807
L2289894-20 NORTH-PM2.5-243 Sampled By: Client on 27-MAY-19 Matrix: 47mm Filter Miscellaneous Parameters Total particulate	20		15	ug		20-JUN-19	R4676807
L2289894-21 SOUTH-PM2.5-243 Sampled By: Client on 27-MAY-19 Matrix: 47mm Filter Miscellaneous Parameters Total particulate	32		15	ug		20-JUN-19	R4676807
L2289894-22 PM2.5-TRAVEL BLANK Sampled By: Client on 31-MAY-19 Matrix: 47mm Filter Miscellaneous Parameters Total particulate	23		15	ug		20-JUN-19	R4676807
L2289894-23 NORTH-DUSTFALL Sampled By: Client on 31-MAY-19 Matrix: Dustfall Dustfalls-Total, Soluble, Insoluble +FV Total Dustfall Total Insoluble Dustfall Total Soluble Dustfall Fixed Dustfall Fixed Insoluble Dustfall Fixed Soluble Dustfall Volatile Dustfall	0.92 0.52 0.40 0.41 0.20 0.22 0.51		0.10	mg/dm ² .day		03-JUL-19	R4694533 R4694533 R4694533 R4694533 R4694533 R4694533 R4694533

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2289894-23 NORTH-DUSTFALL							
Sampled By:	Client on 31-MAY-19						
Matrix:	Dustfall						
Dustfalls-Total, Soluble, Insoluble +FV							
Volatile Insoluble Dustfall	0.32		0.10	mg/dm ² .day		03-JUL-19	R4694533
Volatile Soluble Dustfall	0.18		0.10	mg/dm ² .day		03-JUL-19	R4694533
Total Metals in Dustfalls by ICPMS							
Aluminum (Al)-Total	0.00352		0.00011	mg/dm ² .day	03-JUL-19	04-JUL-19	R4693950
Interval			1	days		03-JUL-19	R4693057
Antimony (Sb)-Total	<0.0000036		0.0000036	mg/dm ² .day	03-JUL-19	04-JUL-19	R4693950
Arsenic (As)-Total	<0.000054	DLM	0.000054	mg/dm ² .day	03-JUL-19	04-JUL-19	R4693950
Barium (Ba)-Total	0.000110		0.0000018	mg/dm ² .day	03-JUL-19	04-JUL-19	R4693950
Beryllium (Be)-Total	<0.000018		0.000018	mg/dm ² .day	03-JUL-19	04-JUL-19	R4693950
Bismuth (Bi)-Total	<0.000018		0.000018	mg/dm ² .day	03-JUL-19	04-JUL-19	R4693950
Boron (B)-Total	<0.00036		0.00036	mg/dm ² .day	03-JUL-19	04-JUL-19	R4693950
Cadmium (Cd)-Total	<0.0000018		0.0000018	mg/dm ² .day	03-JUL-19	04-JUL-19	R4693950
Calcium (Ca)-Total	0.0673		0.00071	mg/dm ² .day	03-JUL-19	04-JUL-19	R4693950
Chromium (Cr)-Total	<0.000018		0.000018	mg/dm ² .day	03-JUL-19	04-JUL-19	R4693950
Cobalt (Co)-Total	<0.0000036		0.0000036	mg/dm ² .day	03-JUL-19	04-JUL-19	R4693950
Copper (Cu)-Total	<0.00020	DLB	0.00020	mg/dm ² .day	03-JUL-19	04-JUL-19	R4693950
Lead (Pb)-Total	0.0000076		0.0000018	mg/dm ² .day	03-JUL-19	04-JUL-19	R4693950
Iron (Fe)-Total	0.0046		0.0011	mg/dm ² .day	03-JUL-19	04-JUL-19	R4693950
Lithium (Li)-Total	<0.00018		0.00018	mg/dm ² .day	03-JUL-19	04-JUL-19	R4693950
Magnesium (Mg)-Total	0.00699		0.00018	mg/dm ² .day	03-JUL-19	04-JUL-19	R4693950
Manganese (Mn)-Total	0.000262		0.0000036	mg/dm ² .day	03-JUL-19	04-JUL-19	R4693950
Molybdenum (Mo)-Total	0.0000053		0.0000018	mg/dm ² .day	03-JUL-19	04-JUL-19	R4693950
Nickel (Ni)-Total	0.000021		0.000018	mg/dm ² .day	03-JUL-19	04-JUL-19	R4693950
Phosphorus (P)-Total	0.0118		0.0018	mg/dm ² .day	03-JUL-19	04-JUL-19	R4693950
Potassium (K)-Total	0.0126		0.0018	mg/dm ² .day	03-JUL-19	04-JUL-19	R4693950
Selenium (Se)-Total	<0.000036		0.000036	mg/dm ² .day	03-JUL-19	04-JUL-19	R4693950
Silicon (Si)-Total	0.0090		0.0018	mg/dm ² .day	03-JUL-19	04-JUL-19	R4693950
Silver (Ag)-Total	0.00000040		0.0000003	mg/dm ² .day	03-JUL-19	04-JUL-19	R4693950
Sodium (Na)-Total	0.0046		0.0018	mg/dm ² .day	03-JUL-19	04-JUL-19	R4693950
Strontium (Sr)-Total	0.0000890		0.0000036	mg/dm ² .day	03-JUL-19	04-JUL-19	R4693950
Thallium (Tl)-Total	<0.0000036		0.0000036	mg/dm ² .day	03-JUL-19	04-JUL-19	R4693950
Tin (Sn)-Total	<0.0000036		0.0000036	mg/dm ² .day	03-JUL-19	04-JUL-19	R4693950
Titanium (Ti)-Total	<0.00036		0.00036	mg/dm ² .day	03-JUL-19	04-JUL-19	R4693950
Uranium (U)-Total	<0.0000036		0.0000003	mg/dm ² .day	03-JUL-19	04-JUL-19	R4693950
Vanadium (V)-Total	<0.000036	DLB	0.000036	mg/dm ² .day	03-JUL-19	04-JUL-19	R4693950
Zinc (Zn)-Total	<0.00054		0.00054	mg/dm ² .day	03-JUL-19	04-JUL-19	R4693950
L2289894-24 SOUTH-DUSTFALL							
Sampled By:	Client on 31-MAY-19						
Matrix:	Dustfall						
Dustfalls-Total, Soluble, Insoluble +FV							
Total Dustfall	0.91		0.10	mg/dm ² .day		03-JUL-19	R4694533
Total Insoluble Dustfall	0.62		0.10	mg/dm ² .day		03-JUL-19	R4694533
Total Soluble Dustfall	0.29		0.10	mg/dm ² .day		03-JUL-19	R4694533
Fixed Dustfall	0.52		0.10	mg/dm ² .day		03-JUL-19	R4694533
Fixed Insoluble Dustfall	0.42		0.10	mg/dm ² .day		03-JUL-19	R4694533
Fixed Soluble Dustfall	<0.10		0.10	mg/dm ² .day		03-JUL-19	R4694533
Volatile Dustfall	0.40		0.10	mg/dm ² .day		03-JUL-19	R4694533
Volatile Insoluble Dustfall	0.20		0.10	mg/dm ² .day		03-JUL-19	R4694533
Volatile Soluble Dustfall	0.20		0.10	mg/dm ² .day		03-JUL-19	R4694533

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2289894-24 SOUTH-DUSTFALL							
Sampled By:	Client on 31-MAY-19						
Matrix:	Dustfall						
Total Metals in Dustfalls by ICPMS							
Aluminum (Al)-Total	0.00327		0.00011	mg/dm ² .day	03-JUL-19	03-JUL-19	R4692840
Interval		1	days			03-JUL-19	R4693057
Antimony (Sb)-Total	<0.0000036		0.0000036	mg/dm ² .day	03-JUL-19	03-JUL-19	R4692840
Arsenic (As)-Total	<0.000050		0.000050	mg/dm ² .day	03-JUL-19	03-JUL-19	R4692840
Barium (Ba)-Total	0.0000455		0.0000018	mg/dm ² .day	03-JUL-19	03-JUL-19	R4692840
Beryllium (Be)-Total	<0.000018		0.000018	mg/dm ² .day	03-JUL-19	03-JUL-19	R4692840
Bismuth (Bi)-Total	<0.000018		0.000018	mg/dm ² .day	03-JUL-19	03-JUL-19	R4692840
Boron (B)-Total	<0.00036		0.00036	mg/dm ² .day	03-JUL-19	03-JUL-19	R4692840
Cadmium (Cd)-Total	<0.0000018		0.0000018	mg/dm ² .day	03-JUL-19	03-JUL-19	R4692840
Calcium (Ca)-Total	0.0259		0.00071	mg/dm ² .day	03-JUL-19	03-JUL-19	R4692840
Chromium (Cr)-Total	<0.000018		0.000018	mg/dm ² .day	03-JUL-19	03-JUL-19	R4692840
Cobalt (Co)-Total	<0.0000036		0.0000036	mg/dm ² .day	03-JUL-19	03-JUL-19	R4692840
Copper (Cu)-Total	<0.000036		0.000036	mg/dm ² .day	03-JUL-19	03-JUL-19	R4692840
Lead (Pb)-Total	0.0000160		0.0000018	mg/dm ² .day	03-JUL-19	03-JUL-19	R4692840
Iron (Fe)-Total	0.0033		0.0011	mg/dm ² .day	03-JUL-19	03-JUL-19	R4692840
Lithium (Li)-Total	<0.00018		0.00018	mg/dm ² .day	03-JUL-19	03-JUL-19	R4692840
Magnesium (Mg)-Total	0.00870		0.00018	mg/dm ² .day	03-JUL-19	03-JUL-19	R4692840
Manganese (Mn)-Total	0.000219		0.0000036	mg/dm ² .day	03-JUL-19	03-JUL-19	R4692840
Molybdenum (Mo)-Total	<0.0000018		0.0000018	mg/dm ² .day	03-JUL-19	03-JUL-19	R4692840
Nickel (Ni)-Total	0.000021		0.000018	mg/dm ² .day	03-JUL-19	03-JUL-19	R4692840
Phosphorus (P)-Total	0.0062		0.0018	mg/dm ² .day	03-JUL-19	03-JUL-19	R4692840
Potassium (K)-Total	0.0081		0.0018	mg/dm ² .day	03-JUL-19	03-JUL-19	R4692840
Selenium (Se)-Total	<0.000036		0.000036	mg/dm ² .day	03-JUL-19	03-JUL-19	R4692840
Silicon (Si)-Total	0.0057		0.0018	mg/dm ² .day	03-JUL-19	03-JUL-19	R4692840
Silver (Ag)-Total	<0.0000036		0.00000036	mg/dm ² .day	03-JUL-19	03-JUL-19	R4692840
Sodium (Na)-Total	<0.0018		0.0018	mg/dm ² .day	03-JUL-19	03-JUL-19	R4692840
Strontium (Sr)-Total	0.0000485		0.0000036	mg/dm ² .day	03-JUL-19	03-JUL-19	R4692840
Thallium (Tl)-Total	<0.0000036		0.0000036	mg/dm ² .day	03-JUL-19	03-JUL-19	R4692840
Tin (Sn)-Total	<0.0000036		0.0000036	mg/dm ² .day	03-JUL-19	03-JUL-19	R4692840
Titanium (Ti)-Total	<0.00036		0.00036	mg/dm ² .day	03-JUL-19	03-JUL-19	R4692840
Uranium (U)-Total	<0.0000036		0.00000036	mg/dm ² .day	03-JUL-19	03-JUL-19	R4692840
Vanadium (V)-Total	<0.000036		0.000036	mg/dm ² .day	03-JUL-19	03-JUL-19	R4692840
Zinc (Zn)-Total	<0.00021	DLB	0.00021	mg/dm ² .day	03-JUL-19	03-JUL-19	R4692840

Reference Information

Sample Parameter Qualifier Key:

Qualifier	Description
A	Method Blank exceeds ALS DQO. Refer to narrative comments for further information.
B	Method Blank exceeds ALS DQO. Associated sample results which are < Limit of Reporting or > 5 times blank level are considered reliable.
DLB	Detection Limit Raised. Analyte detected at comparable level in Method Blank.
DLM	Detection Limit Adjusted due to sample matrix effects (e.g. chemical interference, colour, turbidity).
G	QC result did not meet ALS DQO. Refer to narrative comments for further information.
MB-LOR	Method Blank exceeds ALS DQO. Limits of Reporting have been adjusted for samples with positive hits below 5x blank level.
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
AIR VOLUME-HIVOL-BU	Filter	Air volume (m3)	USEPA IO3.1
DUSTFALLS-ALL-DM2-VA	Dustfall	Dustfalls-Total, Soluble, Insoluble +FV	BC LAB MANUAL - PARTICULATE
This analysis is carried out using procedures modified from British Columbia Environmental Manual "Particulate." Particulates or "Dustfalls" are determined gravimetrically. Total Insoluble and Soluble Dustfalls are determined by filtering a sample through a 0.45 um membrane filter and drying the filter and filtrate at 104 C, followed by ignition at 550 C. The remaining residue after 550 C represents the fixed portion and the weight lost on ignition represents the volatile portion. The sum of all fixed and volatile portions on both Insoluble and Soluble portions represents Total Dustfalls.			
MET-DUST(DM2)-MS-VA	Dustfall	Total Metals in Dustfalls by ICPMS	EPA 6020A
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). Instrumental analysis is by inductively coupled plasma - mass spectrometry (EPA Method 6020A).			
MET-IO3.5-MS-BU	Filter	Metals on High Volume Filter by ICPMS	IO3.5
After weighing (if required), hivol filters are sub-sampled and leached with nitric acid to extract available metal analytes. After dilution, the extracts are submitted to the ICPMS instrument for analysis.			
PART-EC6.08-GRAV-BU	Filter	Particulate ENV Canada 6.08 microbalance	ENV CAN 6.08
The particulate matter collected onto tare-weighed 47mm Teflon Disc filter media is desiccated then brought to a constant weight on an analytical balance. Results are presented in ug (per filter). An air volume can be included to allow for reporting in ug/m3.			
PART-HIVOL-GRAV-BU	Filter	Particulate on High Volume Filter	USEPA IO3.1

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
BU	ALS ENVIRONMENTAL - BURLINGTON, ONTARIO, CANADA
VA	ALS ENVIRONMENTAL - VANCOUVER, BRITISH COLUMBIA, CANADA

Chain of Custody Numbers:

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
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GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.

mg/kg - milligrams per kilogram based on dry weight of sample

mg/kg wwt - milligrams per kilogram based on wet weight of sample

mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight

mg/L - unit of concentration based on volume, parts per million.

< - Less than.

D.L. - The reporting limit.

N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.

Quality Control Report

Workorder: L2289894

Report Date: 05-JUL-19

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Client: New Gold Inc. Rainy River Project
 5967 Highway 11/71 P.O. Box 5
 Emo ON P0W 1E0

Contact: Kelsea Hunsperger

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-IO3.5-MS-BU	Filter							
Batch	R4690199							
WG3090464-3 DUP		L2289894-1						
Arsenic (As)		<3.0	<3.0	RPD-NA	ug	N/A	20	24-JUN-19
Cadmium (Cd)		<2.0	<2.0	RPD-NA	ug	N/A	20	24-JUN-19
Cobalt (Co)		<2.0	<2.0	RPD-NA	ug	N/A	20	24-JUN-19
Chromium (Cr)		14.9	12.9		ug	15	20	24-JUN-19
Copper (Cu)		238	205		ug	15	20	24-JUN-19
Iron (Fe)		179	152		ug	16	25	24-JUN-19
Manganese (Mn)		6.7	6.2		ug	7.7	20	24-JUN-19
Nickel (Ni)		<3.0	<3.0	RPD-NA	ug	N/A	20	24-JUN-19
Lead (Pb)		<3.0	<3.0	RPD-NA	ug	N/A	20	24-JUN-19
Selenium (Se)		<10	<10	RPD-NA	ug	N/A	20	24-JUN-19
Vanadium (V)		240	115	G	ug	71	20	24-JUN-19
Zinc (Zn)		20.7	18.7		ug	10	20	24-JUN-19
COMMENTS: V RPD is outside ALS DQOs. This is likely due to inhomogeneity in the dispersion of this target across the sampled filter surface. Data for this analyte may show higher than normal variability. PE 5-Jul-19								
WG3090464-2 LCS								
Arsenic (As)		96.9			%	80-120	24-JUN-19	
Cadmium (Cd)		97.4			%	80-120	24-JUN-19	
Cobalt (Co)		100.0			%	80-120	24-JUN-19	
Chromium (Cr)		127.0	G		%	80-120	24-JUN-19	
Copper (Cu)		116.0			%	80-120	24-JUN-19	
Iron (Fe)		103.8			%	80-120	24-JUN-19	
Manganese (Mn)		102.0			%	80-120	24-JUN-19	
Nickel (Ni)		97.9			%	80-120	24-JUN-19	
Lead (Pb)		93.7			%	80-120	24-JUN-19	
Selenium (Se)		102.0			%	80-120	24-JUN-19	
Vanadium (V)		114.3			%	80-120	24-JUN-19	
Zinc (Zn)		105.0			%	80-120	24-JUN-19	
COMMENTS: Cr recovery is outside ALS DQOs. This may be due to the background contribution identified in the MB sample. Data for this target is likely to be biased slightly high. PE 5-Jul-19								
WG3090464-1 MB								
Arsenic (As)		4.4	A		ug	3	24-JUN-19	
Cadmium (Cd)		<2.0			ug	2	24-JUN-19	
Cobalt (Co)		<2.0			ug	2	24-JUN-19	
Chromium (Cr)		10.8	A		ug	5	24-JUN-19	
Copper (Cu)		4.4	A		ug	4	24-JUN-19	
Iron (Fe)		<20			ug	20	24-JUN-19	

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
DUSTFALLS-ALL-DM2-VA Dustfall								
Batch R4694533								
WG3094982-1 MB								
Total Dustfall			<0.10		mg/dm ² .day		0.1	03-JUL-19
Total Insoluble Dustfall			<0.10		mg/dm ² .day		0.1	03-JUL-19
Total Soluble Dustfall			<0.10		mg/dm ² .day		0.1	03-JUL-19
Fixed Dustfall			<0.10		mg/dm ² .day		0.1	03-JUL-19
Fixed Insoluble Dustfall			<0.10		mg/dm ² .day		0.1	03-JUL-19
Fixed Soluble Dustfall			<0.10		mg/dm ² .day		0.1	03-JUL-19
Volatile Dustfall			<0.10		mg/dm ² .day		0.1	03-JUL-19
Volatile Insoluble Dustfall			<0.10		mg/dm ² .day		0.1	03-JUL-19
Volatile Soluble Dustfall			<0.10		mg/dm ² .day		0.1	03-JUL-19
MET-DUST(DM2)-MS-VA Dustfall								
Batch R4692840								
WG3093653-2 LCS								
Aluminum (Al)-Total			102.7		%		80-120	03-JUL-19
Antimony (Sb)-Total			112.9		%		80-120	03-JUL-19
Arsenic (As)-Total			100.5		%		80-120	03-JUL-19
Barium (Ba)-Total			99.1		%		80-120	03-JUL-19
Beryllium (Be)-Total			103.0		%		80-120	03-JUL-19
Bismuth (Bi)-Total			110.5		%		80-120	03-JUL-19
Boron (B)-Total			99.1		%		80-120	03-JUL-19
Cadmium (Cd)-Total			99.7		%		80-120	03-JUL-19
Calcium (Ca)-Total			102.7		%		80-120	03-JUL-19
Chromium (Cr)-Total			101.3		%		80-120	03-JUL-19
Cobalt (Co)-Total			99.2		%		80-120	03-JUL-19
Copper (Cu)-Total			100.0		%		80-120	03-JUL-19
Lead (Pb)-Total			107.7		%		80-120	03-JUL-19
Iron (Fe)-Total			100.8		%		80-120	03-JUL-19
Lithium (Li)-Total			103.6		%		80-120	03-JUL-19
Magnesium (Mg)-Total			100.7		%		80-120	03-JUL-19
Manganese (Mn)-Total			103.2		%		80-120	03-JUL-19
Molybdenum (Mo)-Total			109.8		%		80-120	03-JUL-19
Nickel (Ni)-Total			97.6		%		80-120	03-JUL-19
Phosphorus (P)-Total			115.7		%		80-120	03-JUL-19
Potassium (K)-Total			96.8		%		80-120	03-JUL-19
Selenium (Se)-Total			104.1		%		80-120	03-JUL-19

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-DUST(DM2)-MS-VA Dustfall								
Batch	R4692840							
WG3093653-2 LCS								
Silicon (Si)-Total			105.2		%		80-120	03-JUL-19
Silver (Ag)-Total			104.8		%		80-120	03-JUL-19
Sodium (Na)-Total			102.5		%		80-120	03-JUL-19
Strontium (Sr)-Total			103.1		%		80-120	03-JUL-19
Thallium (Tl)-Total			108.4		%		80-120	03-JUL-19
Tin (Sn)-Total			101.5		%		80-120	03-JUL-19
Titanium (Ti)-Total			97.4		%		80-120	03-JUL-19
Uranium (U)-Total			110.6		%		80-120	03-JUL-19
Vanadium (V)-Total			100.0		%		80-120	03-JUL-19
Zinc (Zn)-Total			105.7		%		80-120	03-JUL-19
WG3093653-1 MB								
Aluminum (Al)-Total			0.000083	B	mg/dm2.day		0.000069	03-JUL-19
Antimony (Sb)-Total			0.0000024	B	mg/dm2.day		0.0000023	03-JUL-19
Arsenic (As)-Total			<0.000053		mg/dm2.day		0.000053	03-JUL-19
Barium (Ba)-Total			<0.0000012		mg/dm2.day		0.0000012	03-JUL-19
Beryllium (Be)-Total			<0.000012		mg/dm2.day		0.000012	03-JUL-19
Bismuth (Bi)-Total			<0.000012		mg/dm2.day		0.000012	03-JUL-19
Boron (B)-Total			<0.00023		mg/dm2.day		0.00023	03-JUL-19
Cadmium (Cd)-Total			<0.0000012		mg/dm2.day		0.0000012	03-JUL-19
Calcium (Ca)-Total			<0.00046		mg/dm2.day		0.00046	03-JUL-19
Chromium (Cr)-Total			<0.000012		mg/dm2.day		0.000012	03-JUL-19
Cobalt (Co)-Total			<0.0000023		mg/dm2.day		0.0000023	03-JUL-19
Copper (Cu)-Total			0.000207	MB-LOR	mg/dm2.day		0.000012	03-JUL-19
Lead (Pb)-Total			<0.0000012		mg/dm2.day		0.0000012	03-JUL-19
Iron (Fe)-Total			<0.00069		mg/dm2.day		0.00069	03-JUL-19
Lithium (Li)-Total			<0.00012		mg/dm2.day		0.00012	03-JUL-19
Magnesium (Mg)-Total			<0.00012		mg/dm2.day		0.00012	03-JUL-19
Manganese (Mn)-Total			0.0000030	B	mg/dm2.day		0.0000023	03-JUL-19
Molybdenum (Mo)-Total			<0.0000012		mg/dm2.day		0.0000012	03-JUL-19
Nickel (Ni)-Total			<0.000012		mg/dm2.day		0.000012	03-JUL-19
Phosphorus (P)-Total			<0.0012		mg/dm2.day		0.0012	03-JUL-19
Potassium (K)-Total			<0.0012		mg/dm2.day		0.0012	03-JUL-19
Selenium (Se)-Total			<0.000023		mg/dm2.day		0.000023	03-JUL-19
Silicon (Si)-Total			<0.0012		mg/dm2.day		0.0012	03-JUL-19

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-DUST(DM2)-MS-VA Dustfall								
Batch R4692840								
WG3093653-1 MB								
Silver (Ag)-Total			<0.0000002		mg/dm ² .day		0.00000023	03-JUL-19
Sodium (Na)-Total			<0.0012		mg/dm ² .day		0.0012	03-JUL-19
Strontium (Sr)-Total			<0.0000023		mg/dm ² .day		0.0000023	03-JUL-19
Thallium (Tl)-Total			<0.0000023		mg/dm ² .day		0.0000023	03-JUL-19
Tin (Sn)-Total			0.0000080	MB-LOR	mg/dm ² .day		0.0000023	03-JUL-19
Titanium (Ti)-Total			<0.00023		mg/dm ² .day		0.00023	03-JUL-19
Uranium (U)-Total			0.00000029	MB-LOR	mg/dm ² .day		0.00000023	03-JUL-19
Vanadium (V)-Total			<0.000023		mg/dm ² .day		0.000023	03-JUL-19
Zinc (Zn)-Total			0.000077	MB-LOR	mg/dm ² .day		0.000069	03-JUL-19
Batch R4693950								
WG3093653-3 DUP L2289894-23								
Aluminum (Al)-Total	0.00352	0.00378			mg/dm ² .day	7.0	20	04-JUL-19
Antimony (Sb)-Total	<0.0000036	<0.0000036	RPD-NA		mg/dm ² .day	N/A	20	04-JUL-19
Arsenic (As)-Total	<0.000054	<0.000054	RPD-NA		mg/dm ² .day	N/A	20	04-JUL-19
Barium (Ba)-Total	0.000110	0.000119			mg/dm ² .day	7.5	20	04-JUL-19
Beryllium (Be)-Total	<0.000018	<0.000018	RPD-NA		mg/dm ² .day	N/A	20	04-JUL-19
Bismuth (Bi)-Total	<0.000018	<0.000018	RPD-NA		mg/dm ² .day	N/A	20	04-JUL-19
Boron (B)-Total	<0.00036	<0.00036	RPD-NA		mg/dm ² .day	N/A	20	04-JUL-19
Cadmium (Cd)-Total	<0.0000018	<0.0000018	RPD-NA		mg/dm ² .day	N/A	20	04-JUL-19
Calcium (Ca)-Total	0.0673	0.0695			mg/dm ² .day	3.1	20	04-JUL-19
Chromium (Cr)-Total	<0.000018	<0.000018	RPD-NA		mg/dm ² .day	N/A	20	04-JUL-19
Cobalt (Co)-Total	<0.0000036	<0.0000036	RPD-NA		mg/dm ² .day	N/A	20	04-JUL-19
Copper (Cu)-Total	<0.00020	<0.00020	RPD-NA		mg/dm ² .day	N/A	20	04-JUL-19
Lead (Pb)-Total	0.0000076	0.0000084			mg/dm ² .day	9.7	20	04-JUL-19
Iron (Fe)-Total	0.0046	0.0047			mg/dm ² .day	0.3	20	04-JUL-19
Lithium (Li)-Total	<0.00018	<0.00018	RPD-NA		mg/dm ² .day	N/A	20	04-JUL-19
Magnesium (Mg)-Total	0.00699	0.00757			mg/dm ² .day	8.0	20	04-JUL-19
Manganese (Mn)-Total	0.000262	0.000277			mg/dm ² .day	5.4	20	04-JUL-19
Molybdenum (Mo)-Total	0.0000053	0.0000056			mg/dm ² .day	5.3	20	04-JUL-19
Nickel (Ni)-Total	0.000021	0.000023			mg/dm ² .day	6.2	20	04-JUL-19
Phosphorus (P)-Total	0.0118	0.0129			mg/dm ² .day	8.5	20	04-JUL-19
Potassium (K)-Total	0.0126	0.0135			mg/dm ² .day	7.0	20	04-JUL-19
Selenium (Se)-Total	<0.000036	<0.000036	RPD-NA		mg/dm ² .day	N/A	20	04-JUL-19
Silicon (Si)-Total	0.0090	0.0085			mg/dm ² .day	6.5	20	04-JUL-19

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-DUST(DM2)-MS-VA	Dustfall							
Batch	R4693950							
WG3093653-3	DUP	L2289894-23						
Silver (Ag)-Total		0.00000040	0.00000041		mg/dm ² .day	2.7	20	04-JUL-19
Sodium (Na)-Total		0.0046	0.0050		mg/dm ² .day	7.6	20	04-JUL-19
Strontium (Sr)-Total		0.0000890	0.0000943		mg/dm ² .day	5.8	20	04-JUL-19
Thallium (Tl)-Total		<0.0000036	<0.0000036	RPD-NA	mg/dm ² .day	N/A	20	04-JUL-19
Tin (Sn)-Total		<0.0000036	<0.0000036	RPD-NA	mg/dm ² .day	N/A	20	04-JUL-19
Titanium (Ti)-Total		<0.00036	<0.00036	RPD-NA	mg/dm ² .day	N/A	20	04-JUL-19
Uranium (U)-Total		<0.00000036	<0.0000003	RPD-NA	mg/dm ² .day	N/A	20	04-JUL-19
Vanadium (V)-Total		<0.000036	<0.000036	RPD-NA	mg/dm ² .day	N/A	20	04-JUL-19
Zinc (Zn)-Total		<0.00054	<0.00054	RPD-NA	mg/dm ² .day	N/A	20	04-JUL-19

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Legend:

Limit	ALS Control Limit (Data Quality Objectives)
DUP	Duplicate
RPD	Relative Percent Difference
N/A	Not Available
LCS	Laboratory Control Sample
SRM	Standard Reference Material
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ADE	Average Desorption Efficiency
MB	Method Blank
IRM	Internal Reference Material
CRM	Certified Reference Material
CCV	Continuing Calibration Verification
CVS	Calibration Verification Standard
LCSD	Laboratory Control Sample Duplicate

Sample Parameter Qualifier Definitions:

Qualifier	Description
A	Method Blank exceeds ALS DQO. Refer to narrative comments for further information.
B	Method Blank exceeds ALS DQO. Associated sample results which are < Limit of Reporting or > 5 times blank level are considered reliable.
G	QC result did not meet ALS DQO. Refer to narrative comments for further information.
MB-LOR	Method Blank exceeds ALS DQO. Limits of Reporting have been adjusted for samples with positive hits below 5x blank level.
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Hold Time Exceedances:

All test results reported with this submission were conducted within ALS recommended hold times.

ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where available). For more information, please contact ALS.

The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide confidence in the accuracy of associated test results.

Please note that this report may contain QC results from anonymous Sample Duplicates and Matrix Spikes that do not originate from this Work Order.



New Gold Inc. Rainy River Project
ATTN: Kelsea Hunsperger
5967 Highway 11/71
P.O. Box 5
Emo ON POW 1E0

Date Received: 10-JUL-19
Report Date: 02-AUG-19 11:12 (MT)
Version: FINAL

Client Phone: 807-482-0900

Certificate of Analysis

Lab Work Order #: L2307048

Project P.O. #: 4500018623

Job Reference: AIR QUALITY MONITORING

C of C Numbers:

Legal Site Desc:

A handwritten signature in black ink, appearing to read "wirek".

Claire Kocharakkal, B.Sc.
Account Manager

[This report shall not be reproduced except in full without the written authority of the Laboratory.]

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2307048-1	NORTH-TSP-244							
Sampled By:	Client on 02-JUN-19							
Matrix:	Hi Vol Filter							
Miscellaneous Parameters								
Total particulate		53000		2300	ug		23-JUL-19	R4720419
Metals on High Volume Filter by ICPMS								
Arsenic (As)		<3.0		3.0	ug	23-JUL-19	23-JUL-19	R4723008
Cadmium (Cd)		<2.0		2.0	ug	23-JUL-19	23-JUL-19	R4723008
Cobalt (Co)		<2.0		2.0	ug	23-JUL-19	23-JUL-19	R4723008
Chromium (Cr)		<5.0		5.0	ug	23-JUL-19	23-JUL-19	R4723008
Copper (Cu)		340		4.0	ug	23-JUL-19	23-JUL-19	R4723008
Iron (Fe)		753		20	ug	23-JUL-19	23-JUL-19	R4723008
Manganese (Mn)		17.1		1.0	ug	23-JUL-19	23-JUL-19	R4723008
Nickel (Ni)		<3.0		3.0	ug	23-JUL-19	23-JUL-19	R4723008
Lead (Pb)		<3.0		3.0	ug	23-JUL-19	23-JUL-19	R4723008
Selenium (Se)		<10		10	ug	23-JUL-19	23-JUL-19	R4723008
Vanadium (V)		<5.0		5.0	ug	23-JUL-19	23-JUL-19	R4723008
Zinc (Zn)		13.4		5.0	ug	23-JUL-19	23-JUL-19	R4723008
L2307048-2	SOUTH-TSP-244							
Sampled By:	Client on 02-JUN-19							
Matrix:	Hi Vol Filter							
Miscellaneous Parameters								
Total particulate		179000		2300	ug		23-JUL-19	R4720419
Metals on High Volume Filter by ICPMS								
Arsenic (As)		<3.0		3.0	ug	23-JUL-19	23-JUL-19	R4723008
Cadmium (Cd)		<2.0		2.0	ug	23-JUL-19	23-JUL-19	R4723008
Cobalt (Co)		<2.0		2.0	ug	23-JUL-19	23-JUL-19	R4723008
Chromium (Cr)		6.8		5.0	ug	23-JUL-19	23-JUL-19	R4723008
Copper (Cu)		152		4.0	ug	23-JUL-19	23-JUL-19	R4723008
Iron (Fe)		3340		20	ug	23-JUL-19	23-JUL-19	R4723008
Manganese (Mn)		84.9		1.0	ug	23-JUL-19	23-JUL-19	R4723008
Nickel (Ni)		4.9		3.0	ug	23-JUL-19	23-JUL-19	R4723008
Lead (Pb)		4.1		3.0	ug	23-JUL-19	23-JUL-19	R4723008
Selenium (Se)		<10		10	ug	23-JUL-19	23-JUL-19	R4723008
Vanadium (V)		5.6		5.0	ug	23-JUL-19	23-JUL-19	R4723008
Zinc (Zn)		59.2		5.0	ug	23-JUL-19	23-JUL-19	R4723008
L2307048-3	NORTH-TSP-245							
Sampled By:	Client on 08-JUN-19							
Matrix:	Hi Vol Filter							
Miscellaneous Parameters								
Total particulate		76500		2300	ug		23-JUL-19	R4720419
Metals on High Volume Filter by ICPMS								
Arsenic (As)		<3.0		3.0	ug	23-JUL-19	23-JUL-19	R4723008
Cadmium (Cd)		<2.0		2.0	ug	23-JUL-19	23-JUL-19	R4723008
Cobalt (Co)		<2.0		2.0	ug	23-JUL-19	23-JUL-19	R4723008
Chromium (Cr)		<5.0		5.0	ug	23-JUL-19	23-JUL-19	R4723008
Copper (Cu)		158		4.0	ug	23-JUL-19	23-JUL-19	R4723008
Iron (Fe)		682		20	ug	23-JUL-19	23-JUL-19	R4723008
Manganese (Mn)		26.3		1.0	ug	23-JUL-19	23-JUL-19	R4723008
Nickel (Ni)		<3.0		3.0	ug	23-JUL-19	23-JUL-19	R4723008
Lead (Pb)		<3.0		3.0	ug	23-JUL-19	23-JUL-19	R4723008
Selenium (Se)		<10		10	ug	23-JUL-19	23-JUL-19	R4723008
Vanadium (V)		<5.0		5.0	ug	23-JUL-19	23-JUL-19	R4723008
Zinc (Zn)		23.7		5.0	ug	23-JUL-19	23-JUL-19	R4723008

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2307048-4	SOUTH-TSP-245							
Sampled By:	Client on 08-JUN-19							
Matrix:	Hi Vol Filter							
Miscellaneous Parameters								
Total particulate		72500		2300	ug		23-JUL-19	R4720419
Metals on High Volume Filter by ICPMS								
Arsenic (As)		<3.0		3.0	ug	23-JUL-19	23-JUL-19	R4723008
Cadmium (Cd)		<2.0		2.0	ug	23-JUL-19	23-JUL-19	R4723008
Cobalt (Co)		<2.0		2.0	ug	23-JUL-19	23-JUL-19	R4723008
Chromium (Cr)		<5.0		5.0	ug	23-JUL-19	23-JUL-19	R4723008
Copper (Cu)		73.8		4.0	ug	23-JUL-19	23-JUL-19	R4723008
Iron (Fe)		965		20	ug	23-JUL-19	23-JUL-19	R4723008
Manganese (Mn)		31.4		1.0	ug	23-JUL-19	23-JUL-19	R4723008
Nickel (Ni)		<3.0		3.0	ug	23-JUL-19	23-JUL-19	R4723008
Lead (Pb)		<3.0		3.0	ug	23-JUL-19	23-JUL-19	R4723008
Selenium (Se)		<10		10	ug	23-JUL-19	23-JUL-19	R4723008
Vanadium (V)		<5.0		5.0	ug	23-JUL-19	23-JUL-19	R4723008
Zinc (Zn)		64.5		5.0	ug	23-JUL-19	23-JUL-19	R4723008
L2307048-5	NORTH-TSP-246							
Sampled By:	Client on 14-JUN-19							
Matrix:	Hi Vol Filter							
Miscellaneous Parameters								
Total particulate		33200		2300	ug		23-JUL-19	R4720419
Metals on High Volume Filter by ICPMS								
Arsenic (As)		<3.0		3.0	ug	23-JUL-19	23-JUL-19	R4723008
Cadmium (Cd)		<2.0		2.0	ug	23-JUL-19	23-JUL-19	R4723008
Cobalt (Co)		<2.0		2.0	ug	23-JUL-19	23-JUL-19	R4723008
Chromium (Cr)		<5.0		5.0	ug	23-JUL-19	23-JUL-19	R4723008
Copper (Cu)		272		4.0	ug	23-JUL-19	23-JUL-19	R4723008
Iron (Fe)		401		20	ug	23-JUL-19	23-JUL-19	R4723008
Manganese (Mn)		50.3		1.0	ug	23-JUL-19	23-JUL-19	R4723008
Nickel (Ni)		<3.0		3.0	ug	23-JUL-19	23-JUL-19	R4723008
Lead (Pb)		<3.0		3.0	ug	23-JUL-19	23-JUL-19	R4723008
Selenium (Se)		<10		10	ug	23-JUL-19	23-JUL-19	R4723008
Vanadium (V)		<5.0		5.0	ug	23-JUL-19	23-JUL-19	R4723008
Zinc (Zn)		12.6		5.0	ug	23-JUL-19	23-JUL-19	R4723008
L2307048-6	SOUTH-TSP-246							
Sampled By:	Client on 14-JUN-19							
Matrix:	Hi Vol Filter							
Miscellaneous Parameters								
Total particulate		41700		2300	ug		23-JUL-19	R4720419
Metals on High Volume Filter by ICPMS								
Arsenic (As)		<3.0		3.0	ug	23-JUL-19	23-JUL-19	R4723008
Cadmium (Cd)		<2.0		2.0	ug	23-JUL-19	23-JUL-19	R4723008
Cobalt (Co)		<2.0		2.0	ug	23-JUL-19	23-JUL-19	R4723008
Chromium (Cr)		7.7		5.0	ug	23-JUL-19	23-JUL-19	R4723008
Copper (Cu)		118		4.0	ug	23-JUL-19	23-JUL-19	R4723008
Iron (Fe)		972		20	ug	23-JUL-19	23-JUL-19	R4723008
Manganese (Mn)		31.4		1.0	ug	23-JUL-19	23-JUL-19	R4723008
Nickel (Ni)		<3.0		3.0	ug	23-JUL-19	23-JUL-19	R4723008
Lead (Pb)		<3.0		3.0	ug	23-JUL-19	23-JUL-19	R4723008
Selenium (Se)		<10		10	ug	23-JUL-19	23-JUL-19	R4723008
Vanadium (V)		<5.0		5.0	ug	23-JUL-19	23-JUL-19	R4723008
Zinc (Zn)		26.8		5.0	ug	23-JUL-19	23-JUL-19	R4723008

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2307048-7	NORTH-TSP-247							
Sampled By:	Client on 20-JUN-19							
Matrix:	Hi Vol Filter							
Miscellaneous Parameters								
Total particulate		20400		2300	ug		23-JUL-19	R4720419
Metals on High Volume Filter by ICPMS								
Arsenic (As)		<3.0		3.0	ug	23-JUL-19	23-JUL-19	R4723008
Cadmium (Cd)		<2.0		2.0	ug	23-JUL-19	23-JUL-19	R4723008
Cobalt (Co)		<2.0		2.0	ug	23-JUL-19	23-JUL-19	R4723008
Chromium (Cr)		6.1		5.0	ug	23-JUL-19	23-JUL-19	R4723008
Copper (Cu)		289		4.0	ug	23-JUL-19	23-JUL-19	R4723008
Iron (Fe)		199		20	ug	23-JUL-19	23-JUL-19	R4723008
Manganese (Mn)		4.9		1.0	ug	23-JUL-19	23-JUL-19	R4723008
Nickel (Ni)		<3.0		3.0	ug	23-JUL-19	23-JUL-19	R4723008
Lead (Pb)		<3.0		3.0	ug	23-JUL-19	23-JUL-19	R4723008
Selenium (Se)		<10		10	ug	23-JUL-19	23-JUL-19	R4723008
Vanadium (V)		<5.0		5.0	ug	23-JUL-19	23-JUL-19	R4723008
Zinc (Zn)		12.3		5.0	ug	23-JUL-19	23-JUL-19	R4723008
L2307048-8	SOUTH-TSP-247							
Sampled By:	Client on 20-JUN-19							
Matrix:	Hi Vol Filter							
Miscellaneous Parameters								
Total particulate		29000		2300	ug		23-JUL-19	R4720419
Metals on High Volume Filter by ICPMS								
Arsenic (As)		<3.0		3.0	ug	23-JUL-19	23-JUL-19	R4723008
Cadmium (Cd)		<2.0		2.0	ug	23-JUL-19	23-JUL-19	R4723008
Cobalt (Co)		<2.0		2.0	ug	23-JUL-19	23-JUL-19	R4723008
Chromium (Cr)		6.3		5.0	ug	23-JUL-19	23-JUL-19	R4723008
Copper (Cu)		66.5		4.0	ug	23-JUL-19	23-JUL-19	R4723008
Iron (Fe)		384		20	ug	23-JUL-19	23-JUL-19	R4723008
Manganese (Mn)		10.0		1.0	ug	23-JUL-19	23-JUL-19	R4723008
Nickel (Ni)		<3.0		3.0	ug	23-JUL-19	23-JUL-19	R4723008
Lead (Pb)		<3.0		3.0	ug	23-JUL-19	23-JUL-19	R4723008
Selenium (Se)		<10		10	ug	23-JUL-19	23-JUL-19	R4723008
Vanadium (V)		<5.0		5.0	ug	23-JUL-19	23-JUL-19	R4723008
Zinc (Zn)		14.8		5.0	ug	23-JUL-19	23-JUL-19	R4723008
L2307048-9	NORTH-TSP-248							
Sampled By:	Client on 26-JUN-19							
Matrix:	Hi Vol Filter							
Miscellaneous Parameters								
Total particulate		165000		2300	ug		23-JUL-19	R4720419
Metals on High Volume Filter by ICPMS								
Arsenic (As)		<3.0		3.0	ug	23-JUL-19	23-JUL-19	R4723008
Cadmium (Cd)		<2.0		2.0	ug	23-JUL-19	23-JUL-19	R4723008
Cobalt (Co)		<2.0		2.0	ug	23-JUL-19	23-JUL-19	R4723008
Chromium (Cr)		7.9		5.0	ug	23-JUL-19	23-JUL-19	R4723008
Copper (Cu)		250		4.0	ug	23-JUL-19	23-JUL-19	R4723008
Iron (Fe)		1940		20	ug	23-JUL-19	23-JUL-19	R4723008
Manganese (Mn)		70.4		1.0	ug	23-JUL-19	23-JUL-19	R4723008
Nickel (Ni)		3.4		3.0	ug	23-JUL-19	23-JUL-19	R4723008
Lead (Pb)		4.5		3.0	ug	23-JUL-19	23-JUL-19	R4723008
Selenium (Se)		<10		10	ug	23-JUL-19	23-JUL-19	R4723008
Vanadium (V)		<5.0		5.0	ug	23-JUL-19	23-JUL-19	R4723008
Zinc (Zn)		60.4		5.0	ug	23-JUL-19	23-JUL-19	R4723008

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2307048-10	SOUTH-TSP-248							
Sampled By:	Client on 26-JUN-19							
Matrix:	Hi Vol Filter							
Miscellaneous Parameters								
Total particulate		34200		2300	ug		23-JUL-19	R4720419
Metals on High Volume Filter by ICPMS								
Arsenic (As)		<3.0		3.0	ug	23-JUL-19	23-JUL-19	R4723008
Cadmium (Cd)		<2.0		2.0	ug	23-JUL-19	23-JUL-19	R4723008
Cobalt (Co)		<2.0		2.0	ug	23-JUL-19	23-JUL-19	R4723008
Chromium (Cr)		6.9		5.0	ug	23-JUL-19	23-JUL-19	R4723008
Copper (Cu)		97.1		4.0	ug	23-JUL-19	23-JUL-19	R4723008
Iron (Fe)		415		20	ug	23-JUL-19	23-JUL-19	R4723008
Manganese (Mn)		16.1		1.0	ug	23-JUL-19	23-JUL-19	R4723008
Nickel (Ni)		<3.0		3.0	ug	23-JUL-19	23-JUL-19	R4723008
Lead (Pb)		<3.0		3.0	ug	23-JUL-19	23-JUL-19	R4723008
Selenium (Se)		<10		10	ug	23-JUL-19	23-JUL-19	R4723008
Vanadium (V)		<5.0		5.0	ug	23-JUL-19	23-JUL-19	R4723008
Zinc (Zn)		12.4		5.0	ug	23-JUL-19	23-JUL-19	R4723008
L2307048-11	TSP-TRAVEL BLANK							
Sampled By:	Client on 03-JUL-19							
Matrix:	Hi Vol Filter							
Miscellaneous Parameters								
Total particulate		11100		2300	ug		23-JUL-19	R4720419
Metals on High Volume Filter by ICPMS								
Arsenic (As)		<3.0		3.0	ug	23-JUL-19	23-JUL-19	R4723008
Cadmium (Cd)		<2.0		2.0	ug	23-JUL-19	23-JUL-19	R4723008
Cobalt (Co)		<2.0		2.0	ug	23-JUL-19	23-JUL-19	R4723008
Chromium (Cr)		6.3		5.0	ug	23-JUL-19	23-JUL-19	R4723008
Copper (Cu)		12.2		4.0	ug	23-JUL-19	23-JUL-19	R4723008
Iron (Fe)		44		20	ug	23-JUL-19	23-JUL-19	R4723008
Manganese (Mn)		1.4		1.0	ug	23-JUL-19	23-JUL-19	R4723008
Nickel (Ni)		<3.0		3.0	ug	23-JUL-19	23-JUL-19	R4723008
Lead (Pb)		<3.0		3.0	ug	23-JUL-19	23-JUL-19	R4723008
Selenium (Se)		<10		10	ug	23-JUL-19	23-JUL-19	R4723008
Vanadium (V)		<5.0		5.0	ug	23-JUL-19	23-JUL-19	R4723008
Zinc (Zn)		6.0		5.0	ug	23-JUL-19	23-JUL-19	R4723008
L2307048-12	NORTH-PM2.5-244							
Sampled By:	Client on 02-JUN-19							
Matrix:	47mm Filter							
Miscellaneous Parameters								
Total particulate		<15		15	ug		18-JUL-19	R4715468
L2307048-13	SOUTH-PM2.5-244							
Sampled By:	Client on 02-JUN-19							
Matrix:	47mm Filter							
Miscellaneous Parameters								
Total particulate		85		15	ug		18-JUL-19	R4715468
L2307048-14	NORTH-PM2.5-245							
Sampled By:	Client on 08-JUN-19							
Matrix:	47mm Filter							
Miscellaneous Parameters								
Total particulate		185		15	ug		18-JUL-19	R4715468

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2307048-15 SOUTH-PM2.5-245 Sampled By: Client on 08-JUN-19 Matrix: 47mm Filter Miscellaneous Parameters Total particulate	178		15	ug		18-JUL-19	R4715468
L2307048-16 NORTH-PM2.5-246 Sampled By: Client on 14-JUN-19 Matrix: 47mm Filter Miscellaneous Parameters Total particulate	22		15	ug		18-JUL-19	R4715468
L2307048-17 SOUTH-PM2.5-246 Sampled By: Client on 14-JUN-19 Matrix: 47mm Filter Miscellaneous Parameters Total particulate	104		15	ug		18-JUL-19	R4715468
L2307048-18 NORTH-PM2.5-247 Sampled By: Client on 20-JUN-19 Matrix: 47mm Filter Miscellaneous Parameters Total particulate	<15		15	ug		18-JUL-19	R4715468
L2307048-19 SOUTH-PM2.5-247 Sampled By: Client on 20-JUN-19 Matrix: 47mm Filter Miscellaneous Parameters Total particulate	95		15	ug		18-JUL-19	R4715468
L2307048-20 NORTH-PM2.5-248 Sampled By: Client on 26-JUN-19 Matrix: 47mm Filter Miscellaneous Parameters Total particulate	84		15	ug		18-JUL-19	R4715468
L2307048-21 SOUTH-PM2.5-248 Sampled By: Client on 26-JUN-19 Matrix: 47mm Filter Miscellaneous Parameters Total particulate	78		15	ug		18-JUL-19	R4715468
L2307048-22 PM2.5-TRAVEL BLANK Sampled By: Client on 03-JUL-19 Matrix: 47mm Filter Miscellaneous Parameters Total particulate	<15		15	ug		18-JUL-19	R4715468
L2307048-23 NORTH-DUSTFALL Sampled By: Client on 02-JUL-19 Matrix: Dustfall Dustfalls-Total, Soluble, Insoluble +FV Total Dustfall Total Insoluble Dustfall Total Soluble Dustfall Fixed Dustfall Fixed Insoluble Dustfall Fixed Soluble Dustfall Volatile Dustfall	4.41 1.77 2.63 1.08 0.45 0.63 3.33		0.10	mg/dm ² .day		30-JUL-19	R4734589 R4734589 R4734589 R4734589 R4734589 R4734589 R4734589

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2307048-23 NORTH-DUSTFALL							
Sampled By: Client on 02-JUL-19							
Matrix: Dustfall							
Dustfalls-Total, Soluble, Insoluble +FV							
Volatile Insoluble Dustfall	1.33		0.10	mg/dm ² .day		30-JUL-19	R4734589
Volatile Soluble Dustfall	2.00		0.10	mg/dm ² .day		30-JUL-19	R4734589
Total Metals in Dustfalls by ICPMS							
Aluminum (Al)-Total	0.00438		0.000031	mg/dm ² .day	31-JUL-19	01-AUG-19	R4735913
Interval			1	days		31-JUL-19	R4731393
Antimony (Sb)-Total	0.0000021		0.0000010	mg/dm ² .day	31-JUL-19	01-AUG-19	R4735913
Arsenic (As)-Total	<0.000038	DLM	0.000038	mg/dm ² .day	31-JUL-19	01-AUG-19	R4735913
Barium (Ba)-Total	0.000110		0.0000005	mg/dm ² .day	31-JUL-19	01-AUG-19	R4735913
Beryllium (Be)-Total	<0.0000052		0.0000052	mg/dm ² .day	31-JUL-19	01-AUG-19	R4735913
Bismuth (Bi)-Total	<0.0000052		0.0000052	mg/dm ² .day	31-JUL-19	01-AUG-19	R4735913
Boron (B)-Total	0.00013		0.00010	mg/dm ² .day	31-JUL-19	01-AUG-19	R4735913
Cadmium (Cd)-Total	0.00000187		0.0000005	mg/dm ² .day	31-JUL-19	01-AUG-19	R4735913
Calcium (Ca)-Total	0.0422		0.00021	mg/dm ² .day	31-JUL-19	01-AUG-19	R4735913
Chromium (Cr)-Total	0.0000083		0.0000052	mg/dm ² .day	31-JUL-19	01-AUG-19	R4735913
Cobalt (Co)-Total	0.0000035		0.0000010	mg/dm ² .day	31-JUL-19	01-AUG-19	R4735913
Copper (Cu)-Total	0.000137		0.0000052	mg/dm ² .day	31-JUL-19	01-AUG-19	R4735913
Lead (Pb)-Total	0.00000856		0.0000005	mg/dm ² .day	31-JUL-19	01-AUG-19	R4735913
Iron (Fe)-Total	0.00531		0.00031	mg/dm ² .day	31-JUL-19	01-AUG-19	R4735913
Lithium (Li)-Total	<0.000052		0.000052	mg/dm ² .day	31-JUL-19	01-AUG-19	R4735913
Magnesium (Mg)-Total	0.0218		0.000052	mg/dm ² .day	31-JUL-19	01-AUG-19	R4735913
Manganese (Mn)-Total	0.000726		0.0000010	mg/dm ² .day	31-JUL-19	01-AUG-19	R4735913
Molybdenum (Mo)-Total	0.0000278		0.0000005	mg/dm ² .day	31-JUL-19	01-AUG-19	R4735913
Nickel (Ni)-Total	0.0000376		0.0000052	mg/dm ² .day	31-JUL-19	01-AUG-19	R4735913
Phosphorus (P)-Total	0.0920		0.00052	mg/dm ² .day	31-JUL-19	01-AUG-19	R4735913
Potassium (K)-Total	0.195		0.00052	mg/dm ² .day	31-JUL-19	01-AUG-19	R4735913
Selenium (Se)-Total	<0.000010		0.000010	mg/dm ² .day	31-JUL-19	01-AUG-19	R4735913
Silicon (Si)-Total	0.0109		0.00052	mg/dm ² .day	31-JUL-19	01-AUG-19	R4735913
Silver (Ag)-Total	0.00000061		0.0000001	mg/dm ² .day	31-JUL-19	01-AUG-19	R4735913
Sodium (Na)-Total	0.00286		0.00052	mg/dm ² .day	31-JUL-19	01-AUG-19	R4735913
Strontium (Sr)-Total	0.0000661		0.0000010	mg/dm ² .day	31-JUL-19	01-AUG-19	R4735913
Thallium (Tl)-Total	<0.0000010		0.00000010	mg/dm ² .day	31-JUL-19	01-AUG-19	R4735913
Tin (Sn)-Total	<0.0000010		0.00000010	mg/dm ² .day	31-JUL-19	01-AUG-19	R4735913
Titanium (Ti)-Total	0.00010		0.00010	mg/dm ² .day	31-JUL-19	01-AUG-19	R4735913
Uranium (U)-Total	0.00000030		0.00000001	mg/dm ² .day	31-JUL-19	01-AUG-19	R4735913
Vanadium (V)-Total	<0.000010		0.0000010	mg/dm ² .day	31-JUL-19	01-AUG-19	R4735913
Zinc (Zn)-Total	0.00106		0.000031	mg/dm ² .day	31-JUL-19	01-AUG-19	R4735913
L2307048-24 SOUTH-DUSTFALL							
Sampled By: Client on 02-JUL-19							
Matrix: Dustfall							
Dustfalls-Total, Soluble, Insoluble +FV							
Total Dustfall	1.66		0.10	mg/dm ² .day		30-JUL-19	R4734589
Total Insoluble Dustfall	1.06		0.10	mg/dm ² .day		30-JUL-19	R4734589
Total Soluble Dustfall	0.60		0.10	mg/dm ² .day		30-JUL-19	R4734589
Fixed Dustfall	0.78		0.10	mg/dm ² .day		30-JUL-19	R4734589
Fixed Insoluble Dustfall	0.53		0.10	mg/dm ² .day		30-JUL-19	R4734589
Fixed Soluble Dustfall	0.25		0.10	mg/dm ² .day		30-JUL-19	R4734589

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2307048-24 SOUTH-DUSTFALL							
Sampled By:	Client on 02-JUL-19						
Matrix:	Dustfall						
Dustfalls-Total, Soluble, Insoluble +FV							
Volatile Dustfall	0.88		0.10	mg/dm ² .day		30-JUL-19	R4734589
Volatile Insoluble Dustfall	0.52		0.10	mg/dm ² .day		30-JUL-19	R4734589
Volatile Soluble Dustfall	0.36		0.10	mg/dm ² .day		30-JUL-19	R4734589
Total Metals in Dustfalls by ICPMS							
Aluminum (Al)-Total	0.00598		0.000029	mg/dm ² .day	31-JUL-19	01-AUG-19	R4735913
Interval			1	days		31-JUL-19	R4731393
Antimony (Sb)-Total	0.00000119		0.000009	mg/dm ² .day	31-JUL-19	01-AUG-19	R4735913
Arsenic (As)-Total	<0.000052	DLM	0.000052	mg/dm ² .day	31-JUL-19	01-AUG-19	R4735913
Barium (Ba)-Total	0.0000691		0.000004	mg/dm ² .day	31-JUL-19	01-AUG-19	R4735913
Beryllium (Be)-Total	<0.0000048		0.0000048	mg/dm ² .day	31-JUL-19	01-AUG-19	R4735913
Bismuth (Bi)-Total	<0.0000048		0.0000048	mg/dm ² .day	31-JUL-19	01-AUG-19	R4735913
Boron (B)-Total	<0.000096		0.000096	mg/dm ² .day	31-JUL-19	01-AUG-19	R4735913
Cadmium (Cd)-Total	0.00000112		0.000004	mg/dm ² .day	31-JUL-19	01-AUG-19	R4735913
Calcium (Ca)-Total	0.0250		0.00019	mg/dm ² .day	31-JUL-19	01-AUG-19	R4735913
Chromium (Cr)-Total	0.0000128		0.000048	mg/dm ² .day	31-JUL-19	01-AUG-19	R4735913
Cobalt (Co)-Total	0.00000507		0.000009	mg/dm ² .day	31-JUL-19	01-AUG-19	R4735913
Copper (Cu)-Total	0.0000768		0.000048	mg/dm ² .day	31-JUL-19	01-AUG-19	R4735913
Lead (Pb)-Total	0.00000788		0.000004	mg/dm ² .day	31-JUL-19	01-AUG-19	R4735913
Iron (Fe)-Total	0.00692		0.00029	mg/dm ² .day	31-JUL-19	01-AUG-19	R4735913
Lithium (Li)-Total	<0.000048		0.000048	mg/dm ² .day	31-JUL-19	01-AUG-19	R4735913
Magnesium (Mg)-Total	0.0136		0.000048	mg/dm ² .day	31-JUL-19	01-AUG-19	R4735913
Manganese (Mn)-Total	0.000361		0.000009	mg/dm ² .day	31-JUL-19	01-AUG-19	R4735913
Molybdenum (Mo)-Total	0.0000182		0.000004	mg/dm ² .day	31-JUL-19	01-AUG-19	R4735913
Nickel (Ni)-Total	0.0000248		0.000048	mg/dm ² .day	31-JUL-19	01-AUG-19	R4735913
Phosphorus (P)-Total	0.0228		0.00048	mg/dm ² .day	31-JUL-19	01-AUG-19	R4735913
Potassium (K)-Total	0.0831		0.00048	mg/dm ² .day	31-JUL-19	01-AUG-19	R4735913
Selenium (Se)-Total	<0.0000096		0.0000096	mg/dm ² .day	31-JUL-19	01-AUG-19	R4735913
Silicon (Si)-Total	0.0126		0.00048	mg/dm ² .day	31-JUL-19	01-AUG-19	R4735913
Silver (Ag)-Total	0.000000202		0.000000	mg/dm ² .day	31-JUL-19	01-AUG-19	R4735913
Sodium (Na)-Total	0.00339		0.00048	mg/dm ² .day	31-JUL-19	01-AUG-19	R4735913
Strontium (Sr)-Total	0.0000571		0.000009	mg/dm ² .day	31-JUL-19	01-AUG-19	R4735913
Thallium (Tl)-Total	<0.0000096		0.000009	mg/dm ² .day	31-JUL-19	01-AUG-19	R4735913
Tin (Sn)-Total	<0.0000096		0.000009	mg/dm ² .day	31-JUL-19	01-AUG-19	R4735913
Titanium (Ti)-Total	0.000178		0.000096	mg/dm ² .day	31-JUL-19	01-AUG-19	R4735913
Uranium (U)-Total	0.000000253		0.000000	mg/dm ² .day	31-JUL-19	01-AUG-19	R4735913
Vanadium (V)-Total	0.0000135		0.0000096	mg/dm ² .day	31-JUL-19	01-AUG-19	R4735913
Zinc (Zn)-Total	<0.00049	DLB	0.00049	mg/dm ² .day	31-JUL-19	01-AUG-19	R4735913
Dustfalls-Total, Soluble, Insoluble +FV							
Total Dustfall	<0.10		0.10	mg/dm ² .day		30-JUL-19	R4734589
L2307048-25 DUSTFALL-TRAVEL BLANK							
Sampled By:	Client on 03-JUL-19						
Matrix:	Dustfall						
Dustfalls-Total, Soluble, Insoluble +FV							
Total Dustfall	<0.10						

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2307048-25 DUSTFALL-TRAVEL BLANK							
Sampled By: Client on 03-JUL-19							
Matrix: Dustfall							
Dustfalls-Total, Soluble, Insoluble +FV							
Total Insoluble Dustfall	<0.10		0.10	mg/dm ² .day		30-JUL-19	R4734589
Total Soluble Dustfall	<0.10		0.10	mg/dm ² .day		30-JUL-19	R4734589
Fixed Dustfall	<0.10		0.10	mg/dm ² .day		30-JUL-19	R4734589
Fixed Insoluble Dustfall	<0.10		0.10	mg/dm ² .day		30-JUL-19	R4734589
Fixed Soluble Dustfall	<0.10		0.10	mg/dm ² .day		30-JUL-19	R4734589
Volatile Dustfall	<0.10		0.10	mg/dm ² .day		30-JUL-19	R4734589
Volatile Insoluble Dustfall	<0.10		0.10	mg/dm ² .day		30-JUL-19	R4734589
Volatile Soluble Dustfall	<0.10		0.10	mg/dm ² .day		30-JUL-19	R4734589
Total Metals in Dustfalls by ICPMS							
Aluminum (Al)-Total	0.000111		0.000066	mg/dm ² .day	30-JUL-19	30-JUL-19	R4731240
Interval			1	days		30-JUL-19	R4730495
Antimony (Sb)-Total	<0.0000022		0.0000022	mg/dm ² .day	30-JUL-19	30-JUL-19	R4731240
Arsenic (As)-Total	<0.0000022		0.0000022	mg/dm ² .day	30-JUL-19	30-JUL-19	R4731240
Barium (Ba)-Total	<0.0000055	DLB	0.0000055	mg/dm ² .day	30-JUL-19	30-JUL-19	R4731240
Beryllium (Be)-Total	<0.000011		0.000011	mg/dm ² .day	30-JUL-19	30-JUL-19	R4731240
Bismuth (Bi)-Total	<0.000011		0.000011	mg/dm ² .day	30-JUL-19	30-JUL-19	R4731240
Boron (B)-Total	<0.00022		0.00022	mg/dm ² .day	30-JUL-19	30-JUL-19	R4731240
Cadmium (Cd)-Total	<0.0000011		0.0000011	mg/dm ² .day	30-JUL-19	30-JUL-19	R4731240
Calcium (Ca)-Total	0.00085		0.00044	mg/dm ² .day	30-JUL-19	30-JUL-19	R4731240
Chromium (Cr)-Total	<0.000011		0.000011	mg/dm ² .day	30-JUL-19	30-JUL-19	R4731240
Cobalt (Co)-Total	<0.0000022		0.0000022	mg/dm ² .day	30-JUL-19	30-JUL-19	R4731240
Copper (Cu)-Total	<0.00044	DLB	0.00044	mg/dm ² .day	30-JUL-19	30-JUL-19	R4731240
Lead (Pb)-Total	<0.0000066		0.0000066	mg/dm ² .day	30-JUL-19	30-JUL-19	R4731240
Iron (Fe)-Total	<0.00066		0.00066	mg/dm ² .day	30-JUL-19	30-JUL-19	R4731240
Lithium (Li)-Total	<0.00011		0.00011	mg/dm ² .day	30-JUL-19	30-JUL-19	R4731240
Magnesium (Mg)-Total	<0.00011		0.00011	mg/dm ² .day	30-JUL-19	30-JUL-19	R4731240
Manganese (Mn)-Total	<0.000013	DLB	0.000013	mg/dm ² .day	30-JUL-19	30-JUL-19	R4731240
Molybdenum (Mo)-Total	<0.0000011		0.0000011	mg/dm ² .day	30-JUL-19	30-JUL-19	R4731240
Nickel (Ni)-Total	<0.000011		0.000011	mg/dm ² .day	30-JUL-19	30-JUL-19	R4731240
Phosphorus (P)-Total	<0.0011		0.0011	mg/dm ² .day	30-JUL-19	30-JUL-19	R4731240
Potassium (K)-Total	<0.0011		0.0011	mg/dm ² .day	30-JUL-19	30-JUL-19	R4731240
Selenium (Se)-Total	<0.000022		0.000022	mg/dm ² .day	30-JUL-19	30-JUL-19	R4731240
Silicon (Si)-Total	<0.0011		0.0011	mg/dm ² .day	30-JUL-19	30-JUL-19	R4731240
Silver (Ag)-Total	<0.00000022		0.0000002	mg/dm ² .day	30-JUL-19	30-JUL-19	R4731240
Sodium (Na)-Total	<0.0011		0.0011	mg/dm ² .day	30-JUL-19	30-JUL-19	R4731240
Strontium (Sr)-Total	0.0000062		0.0000022	mg/dm ² .day	30-JUL-19	30-JUL-19	R4731240
Thallium (Tl)-Total	<0.0000022		0.0000022	mg/dm ² .day	30-JUL-19	30-JUL-19	R4731240
Tin (Sn)-Total	<0.0000022		0.0000022	mg/dm ² .day	30-JUL-19	30-JUL-19	R4731240
Titanium (Ti)-Total	<0.00022		0.00022	mg/dm ² .day	30-JUL-19	30-JUL-19	R4731240
Uranium (U)-Total	<0.00000022		0.0000002	mg/dm ² .day	30-JUL-19	30-JUL-19	R4731240
Vanadium (V)-Total	<0.000022	DLB	0.000022	mg/dm ² .day	30-JUL-19	30-JUL-19	R4731240
Zinc (Zn)-Total	<0.00033		0.00033	mg/dm ² .day	30-JUL-19	30-JUL-19	R4731240
Note: Ca Al Sr in MB is under DL. Ca Al Sr entered as they are, in this Travel Blank.							

Reference Information

Sample Parameter Qualifier Key:

Qualifier	Description
DLB	Detection Limit Raised. Analyte detected at comparable level in Method Blank.
DLM	Detection Limit Adjusted due to sample matrix effects (e.g. chemical interference, colour, turbidity).
DUP-H	Duplicate results outside ALS DQO, due to sample heterogeneity.
G	QC result did not meet ALS DQO. Refer to narrative comments for further information.
MB-LOR	Method Blank exceeds ALS DQO. Limits of Reporting have been adjusted for samples with positive hits below 5x blank level.
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
AIR VOLUME-HIVOL-BU	Filter	Air volume (m3)	USEPA IO3.1
DUSTFALLS-ALL-DM2-VA	Dustfall	Dustfalls-Total, Soluble, Insoluble +FV	BC LAB MANUAL - PARTICULATE
This analysis is carried out using procedures modified from British Columbia Environmental Manual "Particulate." Particulates or "Dustfalls" are determined gravimetrically. Total Insoluble and Soluble Dustfalls are determined by filtering a sample through a 0.45 um membrane filter and drying the filter and filtrate at 104 C, followed by ignition at 550 C. The remaining residue after 550 C represents the fixed portion and the weight lost on ignition represents the volatile portion. The sum of all fixed and volatile portions on both Insoluble and Soluble portions represents Total Dustfalls.			
MET+IC/SOLID-CALC-BU	Filter	Metals + Anions + Cations / Solids Ratio	Calculation
MET-DUST(DM2)-MS-VA	Dustfall	Total Metals in Dustfalls by ICPMS	EPA 6020A
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). Instrumental analysis is by inductively coupled plasma - mass spectrometry (EPA Method 6020A).			
MET-IO3.5-MS-BU	Filter	Metals on High Volume Filter by ICPMS	IO3.5
After weighing (if required), hivol filters are sub-sampled and leached with nitric acid to extract available metal analytes. After dilution, the extracts are submitted to the ICPMS instrument for analysis.			
PART-EC6.08-GRAV-BU	Filter	Particulate ENV Canada 6.08 microbalance	ENV CAN 6.08
The particulate matter collected onto tare-weighed 47mm Teflon Disc filter media is desiccated then brought to a constant weight on an analytical balance. Results are presented in ug (per filter). An air volume can be included to allow for reporting in ug/m3.			
PART-HIVOL-GRAV-BU	Filter	Particulate on High Volume Filter	USEPA IO3.1

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
BU	ALS ENVIRONMENTAL - BURLINGTON, ONTARIO, CANADA
VA	ALS ENVIRONMENTAL - VANCOUVER, BRITISH COLUMBIA, CANADA

Chain of Custody Numbers:
GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.

mg/kg - milligrams per kilogram based on dry weight of sample

mg/kg wwt - milligrams per kilogram based on wet weight of sample

mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight

mg/L - unit of concentration based on volume, parts per million.

< - Less than.

D.L. - The reporting limit.

N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.

Quality Control Report

Workorder: L2307048

Report Date: 02-AUG-19

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Client: New Gold Inc. Rainy River Project
 5967 Highway 11/71 P.O. Box 5
 Emo ON P0W 1E0

Contact: Kelsea Hunsperger

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-IO3.5-MS-BU	Filter							
Batch	R4723008							
WG3113884-2	LCS							
Arsenic (As)			87.8		%		80-120	23-JUL-19
Cadmium (Cd)			89.9		%		80-120	23-JUL-19
Cobalt (Co)			86.6		%		80-120	23-JUL-19
Chromium (Cr)			89.0		%		80-120	23-JUL-19
Copper (Cu)			116.3		%		80-120	23-JUL-19
Iron (Fe)			89.1		%		80-120	23-JUL-19
Manganese (Mn)			89.2		%		80-120	23-JUL-19
Nickel (Ni)			89.3		%		80-120	23-JUL-19
Lead (Pb)			90.1		%		80-120	23-JUL-19
Selenium (Se)			95.1		%		80-120	23-JUL-19
Vanadium (V)			87.8		%		80-120	23-JUL-19
Zinc (Zn)			94.9		%		80-120	23-JUL-19
WG3113884-1	MB							
Arsenic (As)			<3.0		ug		3	23-JUL-19
Cadmium (Cd)			<2.0		ug		2	23-JUL-19
Cobalt (Co)			<2.0		ug		2	23-JUL-19
Chromium (Cr)			<5.0		ug		5	23-JUL-19
Copper (Cu)			<4.0		ug		4	23-JUL-19
Iron (Fe)			<20		ug		20	23-JUL-19
Manganese (Mn)			<1.0		ug		1	23-JUL-19
Nickel (Ni)			<3.0		ug		3	23-JUL-19
Lead (Pb)			<3.0		ug		3	23-JUL-19
Selenium (Se)			<10		ug		10	23-JUL-19
Vanadium (V)			<5.0		ug		10	23-JUL-19
Zinc (Zn)			<5.0		ug		5	23-JUL-19
PART-EC6.08-GRAV-BU	Filter							
Batch	R4715468							
WG3109694-2	DUP	L2307048-12						
Total particulate			<15					
WG3109694-1	MB							
Total particulate			<15					
PART-HIVOL-GRAV-BU	Filter							

Quality Control Report

Workorder: L2307048

Report Date: 02-AUG-19

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PART-HIVOL-GRAV-BU Filter								
Batch R4720419								
WG3112454-3 DUP								
Total particulate	L2307048-1	53000	53100		ug	0.2	25	23-JUL-19
WG3112454-1 MB								
Total particulate			<100		ug		100	23-JUL-19
DUSTFALLS-ALL-DM2-VA Dustfall								
Batch R4734589								
WG3119725-1 MB								
Total Dustfall			<0.10		mg/dm ² .day		0.1	30-JUL-19
Total Insoluble Dustfall			<0.10		mg/dm ² .day		0.1	30-JUL-19
Total Soluble Dustfall			<0.10		mg/dm ² .day		0.1	30-JUL-19
Fixed Dustfall			<0.10		mg/dm ² .day		0.1	30-JUL-19
Fixed Insoluble Dustfall			<0.10		mg/dm ² .day		0.1	30-JUL-19
Fixed Soluble Dustfall			<0.10		mg/dm ² .day		0.1	30-JUL-19
Volatile Dustfall			<0.10		mg/dm ² .day		0.1	30-JUL-19
Volatile Insoluble Dustfall			<0.10		mg/dm ² .day		0.1	30-JUL-19
Volatile Soluble Dustfall			<0.10		mg/dm ² .day		0.1	30-JUL-19
MET-DUST(DM2)-MS-VA Dustfall								
Batch R4731240								
WG3118315-2 LCS								
Aluminum (Al)-Total		99.9		%		80-120	30-JUL-19	
Antimony (Sb)-Total		95.6		%		80-120	30-JUL-19	
Arsenic (As)-Total		100.1		%		80-120	30-JUL-19	
Barium (Ba)-Total		102.7		%		80-120	30-JUL-19	
Beryllium (Be)-Total		95.7		%		80-120	30-JUL-19	
Bismuth (Bi)-Total		91.4		%		80-120	30-JUL-19	
Boron (B)-Total		100.8		%		80-120	30-JUL-19	
Cadmium (Cd)-Total		100.1		%		80-120	30-JUL-19	
Calcium (Ca)-Total		102.2		%		80-120	30-JUL-19	
Chromium (Cr)-Total		95.1		%		80-120	30-JUL-19	
Cobalt (Co)-Total		97.4		%		80-120	30-JUL-19	
Copper (Cu)-Total		102.9		%		80-120	30-JUL-19	
Lead (Pb)-Total		94.2		%		80-120	30-JUL-19	
Iron (Fe)-Total		96.8		%		80-120	30-JUL-19	
Lithium (Li)-Total		94.8		%		80-120	30-JUL-19	
Magnesium (Mg)-Total		96.2		%		80-120	30-JUL-19	
Manganese (Mn)-Total		98.8		%		80-120	30-JUL-19	

Quality Control Report

Workorder: L2307048

Report Date: 02-AUG-19

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-DUST(DM2)-MS-VA Dustfall								
Batch R4731240								
WG3118315-2 LCS								
Molybdenum (Mo)-Total			97.5		%		80-120	30-JUL-19
Nickel (Ni)-Total			100.8		%		80-120	30-JUL-19
Phosphorus (P)-Total			101.9		%		80-120	30-JUL-19
Potassium (K)-Total			100.9		%		80-120	30-JUL-19
Selenium (Se)-Total			98.7		%		80-120	30-JUL-19
Silicon (Si)-Total			98.7		%		80-120	30-JUL-19
Silver (Ag)-Total			91.5		%		80-120	30-JUL-19
Sodium (Na)-Total			99.0		%		80-120	30-JUL-19
Strontium (Sr)-Total			90.6		%		80-120	30-JUL-19
Thallium (Tl)-Total			85.8		%		80-120	30-JUL-19
Tin (Sn)-Total			94.0		%		80-120	30-JUL-19
Titanium (Ti)-Total			93.0		%		80-120	30-JUL-19
Uranium (U)-Total			94.1		%		80-120	30-JUL-19
Vanadium (V)-Total			99.6		%		80-120	30-JUL-19
Zinc (Zn)-Total			93.2		%		80-120	30-JUL-19
WG3118315-1 MB								
Aluminum (Al)-Total			<0.000079		mg/dm2.day		0.000079	30-JUL-19
Antimony (Sb)-Total			<0.0000026		mg/dm2.day		0.0000026	30-JUL-19
Arsenic (As)-Total			<0.0000026		mg/dm2.day		0.0000026	30-JUL-19
Barium (Ba)-Total		0.0000017	MB-LOR		mg/dm2.day		0.0000013	30-JUL-19
Beryllium (Be)-Total			<0.000013		mg/dm2.day		0.000013	30-JUL-19
Bismuth (Bi)-Total			<0.000013		mg/dm2.day		0.000013	30-JUL-19
Boron (B)-Total			<0.00026		mg/dm2.day		0.00026	30-JUL-19
Cadmium (Cd)-Total			<0.0000013		mg/dm2.day		0.0000013	30-JUL-19
Calcium (Ca)-Total			<0.00052		mg/dm2.day		0.00052	30-JUL-19
Chromium (Cr)-Total			<0.000013		mg/dm2.day		0.000013	30-JUL-19
Cobalt (Co)-Total			<0.0000026		mg/dm2.day		0.0000026	30-JUL-19
Copper (Cu)-Total		0.000258	MB-LOR		mg/dm2.day		0.000013	30-JUL-19
Lead (Pb)-Total		0.0000017	MB-LOR		mg/dm2.day		0.0000013	30-JUL-19
Iron (Fe)-Total			<0.00079		mg/dm2.day		0.00079	30-JUL-19
Lithium (Li)-Total			<0.00013		mg/dm2.day		0.00013	30-JUL-19
Magnesium (Mg)-Total			<0.00013		mg/dm2.day		0.00013	30-JUL-19
Manganese (Mn)-Total		0.0000031	MB-LOR		mg/dm2.day		0.0000026	30-JUL-19
Molybdenum (Mo)-Total			<0.0000013		mg/dm2.day		0.0000013	30-JUL-19

Quality Control Report

Workorder: L2307048

Report Date: 02-AUG-19

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-DUST(DM2)-MS-VA Dustfall								
Batch R4731240								
WG3118315-1 MB								
Nickel (Ni)-Total			<0.000013		mg/dm ² .day	0.000013	30-JUL-19	
Phosphorus (P)-Total			<0.0013		mg/dm ² .day	0.0013	30-JUL-19	
Potassium (K)-Total			<0.0013		mg/dm ² .day	0.0013	30-JUL-19	
Selenium (Se)-Total			<0.000026		mg/dm ² .day	0.000026	30-JUL-19	
Silicon (Si)-Total			<0.0013		mg/dm ² .day	0.0013	30-JUL-19	
Silver (Ag)-Total			<0.0000002		mg/dm ² .day	0.00000026	30-JUL-19	
Sodium (Na)-Total			<0.0013		mg/dm ² .day	0.0013	30-JUL-19	
Strontium (Sr)-Total			<0.0000026		mg/dm ² .day	0.0000026	30-JUL-19	
Thallium (Tl)-Total			<0.0000026		mg/dm ² .day	0.0000026	30-JUL-19	
Tin (Sn)-Total			<0.0000026		mg/dm ² .day	0.0000026	30-JUL-19	
Titanium (Ti)-Total			<0.00026		mg/dm ² .day	0.00026	30-JUL-19	
Uranium (U)-Total			<0.0000002		mg/dm ² .day	0.00000026	30-JUL-19	
Vanadium (V)-Total			<0.000026		mg/dm ² .day	0.000026	30-JUL-19	
Zinc (Zn)-Total			0.000309	MB-LOR	mg/dm ² .day	0.000079	30-JUL-19	
Batch R4735913								
WG3119551-3 DUP		L2307048-23						
Aluminum (Al)-Total	0.00438	0.00463			mg/dm ² .day	5.4	20	01-AUG-19
Antimony (Sb)-Total	0.0000021	0.0000021			mg/dm ² .day	2.5	20	01-AUG-19
Arsenic (As)-Total	<0.000038	0.0000380			mg/dm ² .day	1.4	20	01-AUG-19
Barium (Ba)-Total	0.000110	0.000116			mg/dm ² .day	5.2	20	01-AUG-19
Beryllium (Be)-Total	<0.0000052	<0.0000052	RPD-NA		mg/dm ² .day	N/A	20	01-AUG-19
Bismuth (Bi)-Total	<0.0000052	<0.0000052	RPD-NA		mg/dm ² .day	N/A	20	01-AUG-19
Boron (B)-Total	0.00013	0.00013			mg/dm ² .day	0.8	20	01-AUG-19
Cadmium (Cd)-Total	0.00000187	0.00000175			mg/dm ² .day	7.0	20	01-AUG-19
Calcium (Ca)-Total	0.0422	0.0421			mg/dm ² .day	0.2	20	01-AUG-19
Chromium (Cr)-Total	0.0000083	0.0000093			mg/dm ² .day	12	20	01-AUG-19
Cobalt (Co)-Total	0.0000035	0.0000035			mg/dm ² .day	0.1	20	01-AUG-19
Copper (Cu)-Total	0.000137	0.000138			mg/dm ² .day	0.3	20	01-AUG-19
Lead (Pb)-Total	0.00000856	0.00000842			mg/dm ² .day	1.7	20	01-AUG-19
Iron (Fe)-Total	0.00531	0.00520			mg/dm ² .day	2.1	20	01-AUG-19
Lithium (Li)-Total	<0.000052	<0.000052	RPD-NA		mg/dm ² .day	N/A	20	01-AUG-19
Magnesium (Mg)-Total	0.0218	0.0223			mg/dm ² .day	2.2	20	01-AUG-19
Manganese (Mn)-Total	0.000726	0.000742			mg/dm ² .day	2.2	20	01-AUG-19
Molybdenum (Mo)-Total	0.0000278	0.0000264			mg/dm ² .day	4.9	20	01-AUG-19

Quality Control Report

Workorder: L2307048

Report Date: 02-AUG-19

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-DUST(DM2)-MS-VA	Dustfall							
Batch	R4735913							
WG3119551-3 DUP		L2307048-23						
Nickel (Ni)-Total		0.0000376	0.0000457		mg/dm ² .day	19	20	01-AUG-19
Phosphorus (P)-Total		0.0920	0.0964		mg/dm ² .day	4.7	20	01-AUG-19
Potassium (K)-Total		0.195	0.204		mg/dm ² .day	4.6	20	01-AUG-19
Selenium (Se)-Total		<0.000010	<0.000010	RPD-NA	mg/dm ² .day	N/A	20	01-AUG-19
Silicon (Si)-Total		0.0109	0.0111		mg/dm ² .day	1.4	20	01-AUG-19
Silver (Ag)-Total		0.00000061	0.00000086	DUP-H	mg/dm ² .day	0.000000	0.0000002	01-AUG-19
Sodium (Na)-Total		0.00286	0.00303		mg/dm ² .day	5.7	20	01-AUG-19
Strontium (Sr)-Total		0.0000661	0.0000664		mg/dm ² .day	0.5	20	01-AUG-19
Thallium (Tl)-Total		<0.0000010	<0.0000010	RPD-NA	mg/dm ² .day	N/A	20	01-AUG-19
Tin (Sn)-Total		<0.0000010	<0.0000010	RPD-NA	mg/dm ² .day	N/A	20	01-AUG-19
Titanium (Ti)-Total		0.00010	0.00011		mg/dm ² .day	4.9	20	01-AUG-19
Uranium (U)-Total		0.00000030	0.00000033		mg/dm ² .day	9.8	20	01-AUG-19
Vanadium (V)-Total		<0.000010	<0.000010	RPD-NA	mg/dm ² .day	N/A	20	01-AUG-19
Zinc (Zn)-Total		0.00106	0.00102		mg/dm ² .day	4.1	20	01-AUG-19
WG3119551-2 LCS								
Aluminum (Al)-Total		103.1		%		80-120	01-AUG-19	
Antimony (Sb)-Total		114.8		%		80-120	01-AUG-19	
Arsenic (As)-Total		104.9		%		80-120	01-AUG-19	
Barium (Ba)-Total		100.5		%		80-120	01-AUG-19	
Beryllium (Be)-Total		100.2		%		80-120	01-AUG-19	
Bismuth (Bi)-Total		99.8		%		80-120	01-AUG-19	
Boron (B)-Total		101.0		%		80-120	01-AUG-19	
Cadmium (Cd)-Total		102.0		%		80-120	01-AUG-19	
Calcium (Ca)-Total		106.5		%		80-120	01-AUG-19	
Chromium (Cr)-Total		104.6		%		80-120	01-AUG-19	
Cobalt (Co)-Total		103.9		%		80-120	01-AUG-19	
Copper (Cu)-Total		103.4		%		80-120	01-AUG-19	
Lead (Pb)-Total		98.3		%		80-120	01-AUG-19	
Iron (Fe)-Total		99.5		%		80-120	01-AUG-19	
Lithium (Li)-Total		103.2		%		80-120	01-AUG-19	
Magnesium (Mg)-Total		103.8		%		80-120	01-AUG-19	
Manganese (Mn)-Total		100.4		%		80-120	01-AUG-19	
Molybdenum (Mo)-Total		104.2		%		80-120	01-AUG-19	
Nickel (Ni)-Total		104.9		%		80-120	01-AUG-19	

Quality Control Report

Workorder: L2307048

Report Date: 02-AUG-19

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-DUST(DM2)-MS-VA Dustfall								
Batch	R4735913							
WG3119551-2 LCS								
Phosphorus (P)-Total			117.7		%		80-120	01-AUG-19
Potassium (K)-Total			105.1		%		80-120	01-AUG-19
Selenium (Se)-Total			103.2		%		80-120	01-AUG-19
Silicon (Si)-Total			106.3		%		80-120	01-AUG-19
Silver (Ag)-Total			95.9		%		80-120	01-AUG-19
Sodium (Na)-Total			106.2		%		80-120	01-AUG-19
Strontium (Sr)-Total			103.2		%		80-120	01-AUG-19
Thallium (Tl)-Total			97.2		%		80-120	01-AUG-19
Tin (Sn)-Total			103.2		%		80-120	01-AUG-19
Titanium (Ti)-Total			105.4		%		80-120	01-AUG-19
Uranium (U)-Total			103.2		%		80-120	01-AUG-19
Vanadium (V)-Total			103.4		%		80-120	01-AUG-19
Zinc (Zn)-Total			102.5		%		80-120	01-AUG-19
WG3119551-1 MB								
Aluminum (Al)-Total			<0.000069		mg/dm2.day		0.000069	01-AUG-19
Antimony (Sb)-Total			<0.0000023		mg/dm2.day		0.0000023	01-AUG-19
Arsenic (As)-Total			0.0000544	MB-LOR	mg/dm2.day		0.0000023	01-AUG-19
Barium (Ba)-Total			<0.0000012		mg/dm2.day		0.0000012	01-AUG-19
Beryllium (Be)-Total			<0.000012		mg/dm2.day		0.000012	01-AUG-19
Bismuth (Bi)-Total			<0.000012		mg/dm2.day		0.000012	01-AUG-19
Boron (B)-Total			<0.00023		mg/dm2.day		0.00023	01-AUG-19
Cadmium (Cd)-Total			<0.0000012		mg/dm2.day		0.0000012	01-AUG-19
Calcium (Ca)-Total			0.00135	MB-LOR	mg/dm2.day		0.00046	01-AUG-19
Chromium (Cr)-Total			<0.000012		mg/dm2.day		0.000012	01-AUG-19
Cobalt (Co)-Total			<0.0000023		mg/dm2.day		0.0000023	01-AUG-19
Copper (Cu)-Total			0.000020	MB-LOR	mg/dm2.day		0.000012	01-AUG-19
Lead (Pb)-Total			0.0000016	MB-LOR	mg/dm2.day		0.0000012	01-AUG-19
Iron (Fe)-Total			<0.00069		mg/dm2.day		0.00069	01-AUG-19
Lithium (Li)-Total			<0.00012		mg/dm2.day		0.00012	01-AUG-19
Magnesium (Mg)-Total			<0.00012		mg/dm2.day		0.00012	01-AUG-19
Manganese (Mn)-Total			<0.0000023		mg/dm2.day		0.0000023	01-AUG-19
Molybdenum (Mo)-Total			<0.0000012		mg/dm2.day		0.0000012	01-AUG-19
Nickel (Ni)-Total			<0.000012		mg/dm2.day		0.000012	01-AUG-19
Phosphorus (P)-Total			<0.0012		mg/dm2.day		0.0012	01-AUG-19

Quality Control Report

Workorder: L2307048

Report Date: 02-AUG-19

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-DUST(DM2)-MS-VA Dustfall								
Batch	R4735913							
WG3119551-1 MB								
Potassium (K)-Total			<0.0012		mg/dm ² .day		0.0012	01-AUG-19
Selenium (Se)-Total			<0.000023		mg/dm ² .day		0.000023	01-AUG-19
Silicon (Si)-Total			<0.0012		mg/dm ² .day		0.0012	01-AUG-19
Silver (Ag)-Total			<0.0000002		mg/dm ² .day		0.00000023	01-AUG-19
Sodium (Na)-Total			<0.0012		mg/dm ² .day		0.0012	01-AUG-19
Strontium (Sr)-Total			<0.0000023		mg/dm ² .day		0.0000023	01-AUG-19
Thallium (Tl)-Total			<0.0000023		mg/dm ² .day		0.0000023	01-AUG-19
Tin (Sn)-Total			<0.0000023		mg/dm ² .day		0.0000023	01-AUG-19
Titanium (Ti)-Total			<0.00023		mg/dm ² .day		0.00023	01-AUG-19
Uranium (U)-Total			<0.0000002		mg/dm ² .day		0.00000023	01-AUG-19
Vanadium (V)-Total			<0.000023		mg/dm ² .day		0.000023	01-AUG-19
Zinc (Zn)-Total			0.000245	MB-LOR	mg/dm ² .day		0.000069	01-AUG-19

Quality Control Report

Workorder: L2307048

Report Date: 02-AUG-19

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Legend:

Limit	ALS Control Limit (Data Quality Objectives)
DUP	Duplicate
RPD	Relative Percent Difference
N/A	Not Available
LCS	Laboratory Control Sample
SRM	Standard Reference Material
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ADE	Average Desorption Efficiency
MB	Method Blank
IRM	Internal Reference Material
CRM	Certified Reference Material
CCV	Continuing Calibration Verification
CVS	Calibration Verification Standard
LCSD	Laboratory Control Sample Duplicate

Sample Parameter Qualifier Definitions:

Qualifier	Description
DUP-H	Duplicate results outside ALS DQO, due to sample heterogeneity.
MB-LOR	Method Blank exceeds ALS DQO. Limits of Reporting have been adjusted for samples with positive hits below 5x blank level.
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Hold Time Exceedances:

All test results reported with this submission were conducted within ALS recommended hold times.

ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where available). For more information, please contact ALS.

The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide confidence in the accuracy of associated test results.

Please note that this report may contain QC results from anonymous Sample Duplicates and Matrix Spikes that do not originate from this Work Order.

Your P.O. #: 4500022601
 Your Project #: TC111504.2015.6
 Site#: 2019/04/01 - 2019/05/02
 Site Location: NEW GOLD - EMO, ON

Attention: GARNET CORNELL

NEW GOLD INC.
 EMO, ON
 5967 HIGHWAY 11/71
 PO BOX 5
 EMO, ON
 CANADA POW 1E0

Report Date: 2019/05/22
Report #: R2725350
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B935632

Received: 2019/05/13, 10:04

Sample Matrix: Air
 # Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
NO2 Passive Analysis	2	2019/05/13	2019/05/22	PTC SOP-00148	Passive NO2 in ATM
SO2 Passive Analysis	2	2019/05/13	2019/05/22	PTC SOP-00149	Passive SO2 in ATM

This report shall not be reproduced except in full, without the written approval of the laboratory.
 Results relate only to the items tested.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

Levi Manchak, Project Manager SR

Email: LManchak@maxxam.ca

Phone# (780)378-8542

=====

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Job #: B935632

Report Date: 2019/05/22

NEW GOLD INC.

Client Project #: TC111504.2015.6

Site Location: NEW GOLD - EMO, ON

Your P.O. #: 4500022601

Sampler Initials: KH

RESULTS OF CHEMICAL ANALYSES OF AIR

Maxxam ID		VR0235	VR0236		
Sampling Date		2019/04/01	2019/04/01		
	UNITS	RRP SOUTH	RRP NORTH	RDL	QC Batch
Passive Monitoring					
Calculated NO2	ppb	1.0	0.4	0.1	9415417
Calculated SO2	ppb	0.2	<0.1	0.1	9415505
RDL = Reportable Detection Limit					

Maxxam Job #: B935632

Report Date: 2019/05/22

NEW GOLD INC.

Client Project #: TC111504.2015.6

Site Location: NEW GOLD - EMO, ON

Your P.O. #: 4500022601

Sampler Initials: KH

GENERAL COMMENTS

Results relate only to the items tested.

Maxxam Job #: B935632

Report Date: 2019/05/22

NEW GOLD INC.

Client Project #: TC111504.2015.6

Site Location: NEW GOLD - EMO, ON

Your P.O. #: 4500022601

Sampler Initials: KH

QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
9415417	YL6	Spiked Blank	Calculated NO2			100	%	90 - 110
9415417	YL6	Method Blank	Calculated NO2		<0.1		ppb	
9415505	OZ	Spiked Blank	Calculated SO2			102	%	90 - 110
9415505	OZ	Method Blank	Calculated SO2		<0.1		ppb	

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Maxxam Job #: B935632

Report Date: 2019/05/22

NEW GOLD INC.

Client Project #: TC111504.2015.6

Site Location: NEW GOLD - EMO, ON

Your P.O. #: 4500022601

Sampler Initials: KH

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



Linda Lin, Supervisor, Centre for Passive Sampling Technology

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BUREAU
VERITAS

Your P.O. #: 4500022601
Your Project #: TC111504.2015.6
Site#: 2019/05/02 - 2019/05/31
Site Location: NEW GOLD - EMO, ON

Attention: GARNET CORNELL

NEW GOLD INC.
EMO, ON
5967 HIGHWAY 11/71
PO BOX 5
EMO, ON
CANADA POW 1E0

Report Date: 2019/06/20
Report #: R2740286
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: B945637

Received: 2019/06/12, 10:54

Sample Matrix: Air
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
NO2 Passive Analysis	2	2019/06/13	2019/06/20	PTC SOP-00148	Passive NO2 in ATM
SO2 Passive Analysis	2	2019/06/17	2019/06/20	PTC SOP-00149	Passive SO2 in ATM

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Results relate only to the items tested.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

Levi Manchak, Project Manager SR
Email: Levi.MANCHAK@bvlabs.com
Phone# (780)378-8542

=====

BV Labs has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.



BUREAU
VERITAS

BV Labs Job #: B945637

Report Date: 2019/06/20

NEW GOLD INC.

Client Project #: TC111504.2015.6

Site Location: NEW GOLD - EMO, ON

Your P.O. #: 4500022601

Sampler Initials: KH

RESULTS OF CHEMICAL ANALYSES OF AIR

BV Labs ID		VW2648	VW2649		
Sampling Date		2019/05/02	2019/05/02		
	UNITS	RRP SOUTH	RRP NORTH	RDL	QC Batch
Passive Monitoring					
Calculated NO2	ppb	1.0	0.3	0.1	9464547
Calculated SO2	ppb	<0.1	<0.1	0.1	9471121
RDL = Reportable Detection Limit					



BUREAU
VERITAS

BV Labs Job #: B945637

Report Date: 2019/06/20

NEW GOLD INC.

Client Project #: TC111504.2015.6

Site Location: NEW GOLD - EMO, ON

Your P.O. #: 4500022601

Sampler Initials: KH

GENERAL COMMENTS

Results relate only to the items tested.



BUREAU
VERITAS

BV Labs Job #: B945637

Report Date: 2019/06/20

NEW GOLD INC.

Client Project #: TC111504.2015.6

Site Location: NEW GOLD - EMO, ON

Your P.O. #: 4500022601

Sampler Initials: KH

QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
9464547	YL6	Spiked Blank	Calculated NO2			99	%	90 - 110
9464547	YL6	Method Blank	Calculated NO2		<0.1		ppb	
9471121	OZ	Spiked Blank	Calculated SO2			100	%	90 - 110
9471121	OZ	Method Blank	Calculated SO2		<0.1		ppb	

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.



BUREAU
VERITAS

BV Labs Job #: B945637

Report Date: 2019/06/20

NEW GOLD INC.

Client Project #: TC111504.2015.6

Site Location: NEW GOLD - EMO, ON

Your P.O. #: 4500022601

Sampler Initials: KH

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Linda Lin, Supervisor, Centre for Passive Sampling Technology

BV Labs has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.



BUREAU
VERITAS

Your P.O. #: 4500022601
Your Project #: TC111504.2015.6
Site#: 2019/05/31 - 2019/07/02
Site Location: NEW GOLD - EMO, ON

Attention: GARNET CORNELL

NEW GOLD INC.
EMO, ON
5967 HIGHWAY 11/71
PO BOX 5
EMO, ON
CANADA POW 1E0

Report Date: 2019/07/18
Report #: R2754365
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: B955233

Received: 2019/07/10, 10:38

Sample Matrix: Air
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
NO2 Passive Analysis	2	2019/07/15	2019/07/18	PTC SOP-00148	Passive NO2 in ATM
SO2 Passive Analysis	2	2019/07/15	2019/07/18	PTC SOP-00149	Passive SO2 in ATM

This report shall not be reproduced except in full, without the written approval of the laboratory.
Results relate only to the items tested.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Levi Manchak, Project Manager SR
Email: Levi.MANCHAK@bvlabs.com
Phone# (780)378-8542

=====
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BUREAU
VERITAS

BV Labs Job #: B955233

Report Date: 2019/07/18

NEW GOLD INC.

Client Project #: TC111504.2015.6

Site Location: NEW GOLD - EMO, ON

Your P.O. #: 4500022601

Sampler Initials: KH

RESULTS OF CHEMICAL ANALYSES OF AIR

BV Labs ID		WB3945	WB3946		
Sampling Date		2019/05/31	2019/05/31		
	UNITS	RRP SOUTH	RRP NORTH	RDL	QC Batch
Passive Monitoring					
Calculated NO2	ppb	0.6	0.5	0.1	9507307
Calculated SO2	ppb	<0.1	<0.1	0.1	9507450
RDL = Reportable Detection Limit					



BUREAU
VERITAS

BV Labs Job #: B955233

Report Date: 2019/07/18

NEW GOLD INC.

Client Project #: TC111504.2015.6

Site Location: NEW GOLD - EMO, ON

Your P.O. #: 4500022601

Sampler Initials: KH

GENERAL COMMENTS

Travel blank result for SO₂ exceeded acceptance criteria of >RDL. Possible contamination may have occurred. Sample results have been blank subtracted.

Results relate only to the items tested.



BUREAU
VERITAS

BV Labs Job #: B955233

Report Date: 2019/07/18

NEW GOLD INC.

Client Project #: TC111504.2015.6

Site Location: NEW GOLD - EMO, ON

Your P.O. #: 4500022601

Sampler Initials: KH

QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
9507307	YL6	Spiked Blank	Calculated NO2			99	%	90 - 110
9507307	YL6	Method Blank	Calculated NO2		<0.1		ppb	
9507450	OZ	Spiked Blank	Calculated SO2			102	%	90 - 110
9507450	OZ	Method Blank	Calculated SO2		<0.1		ppb	

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.



BUREAU
VERITAS

BV Labs Job #: B955233

Report Date: 2019/07/18

NEW GOLD INC.

Client Project #: TC111504.2015.6

Site Location: NEW GOLD - EMO, ON

Your P.O. #: 4500022601

Sampler Initials: KH

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Linda Lin, Supervisor, Centre for Passive Sampling Technology

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APPENDIX D

PQ200 & TE-5170 CALIBRATION SHEETS – Q2 2019

MFC SAMPLER CALIBRATION SHEET



Site Name Tait Road Station
 Project New Gold Rainy River
 Site Operator Environment

Date 2019-06-28 Start Time 12:22
 Stop Time 12:36

Sampler Information:
 Manufacturer: Tish Environmental
 Model: TE-5170
 Serial #: 3150

Pre-Calibration Chart Flow Reading 50
 Post-Calibration Chart Flow Reading 44

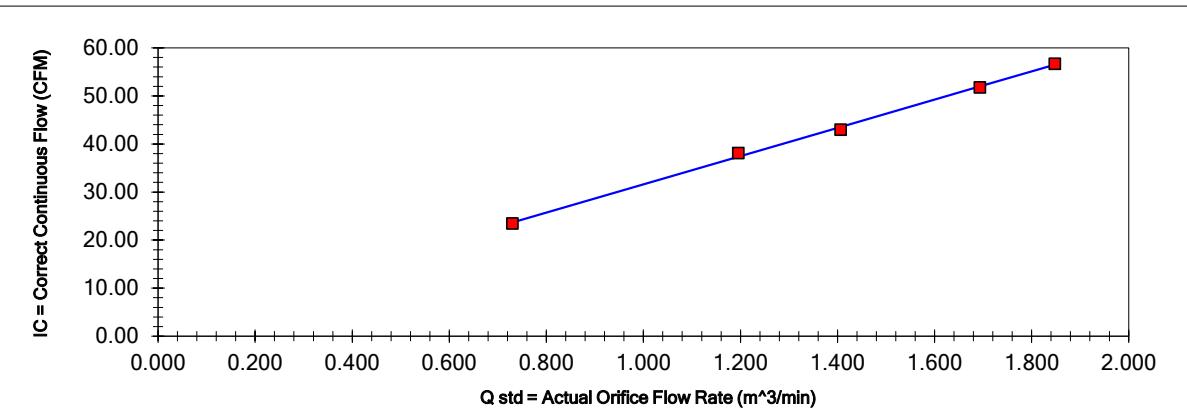
Ambient Conditions:

P_a (in Hg) 28.70 P_a (mm Hg) 724 T_a ($^{\circ}$ C) 26.2 T_a ($^{\circ}$ K) 299

Calibration Orifice Information:

Orifice S/N 3662 Calibration Date 2019-06-17
 Orifice cal relationship: $m =$ 1.67950 $b =$ -0.0291

Flow Rate Reading	Orifice Delta H_2O (in)	X axis = Qstd Orifice Flow (m^3/min) ^{Eq. 1}	I = Continuous Flow (Chart Reading)	Y axis = IC Correct Continuous Flow ^{Eq. 2} (Chart Corrected)
1	9.20	1.776	66.00	64.29
2	8.60	1.718	64.00	62.34
3	6.80	1.530	59.00	57.47
4	5.40	1.365	52.00	50.65
5	3.40	1.087	45.00	43.83



$$(Eq. 1) Q_{std} = 1/m[\sqrt{((H_2O)(P_a/760)(298/T_a))} - b]$$

$$(Eq. 2) IC = I[\sqrt{(P_a/760)(298/T_a)}]$$

Sampler Calibration Relationship (Qstd on x-axis; IC on y-axis):

m (slope) = 30.1526
 b (intercept) = 10.6316
 r (correlation)* = 0.9965

Average Sampler Flow: 1.2626 m^3/min^{**}

*The acceptable operating flow range of a TSP sampler is 1.1 to 1.7 m^3/min

Estimated Sampler Volume (24-hours): 1818.2009 m^3

*A correlation coefficient (r) below 0.990 indicates a calibration is not linear, this is most likely due to an air leak. A calibration should be performed again.

= cell containing equations

Comments

Calibrated By Kelsea Hunsperger

MFC SAMPLER CALIBRATION SHEET



Site Name Gallinger Road Station
Project New Gold Rainy River
Site Operator Environment

Date 2019-06-28 **Start Time** 11:38
Stop Time 11:50

Sampler Information:
Manufacturer: Tish Environmental
Model: TE-5170
Serial #: 3105

Pre-Calibration Chart Flow Reading 42
Post-Calibration Chart Flow Reading 42

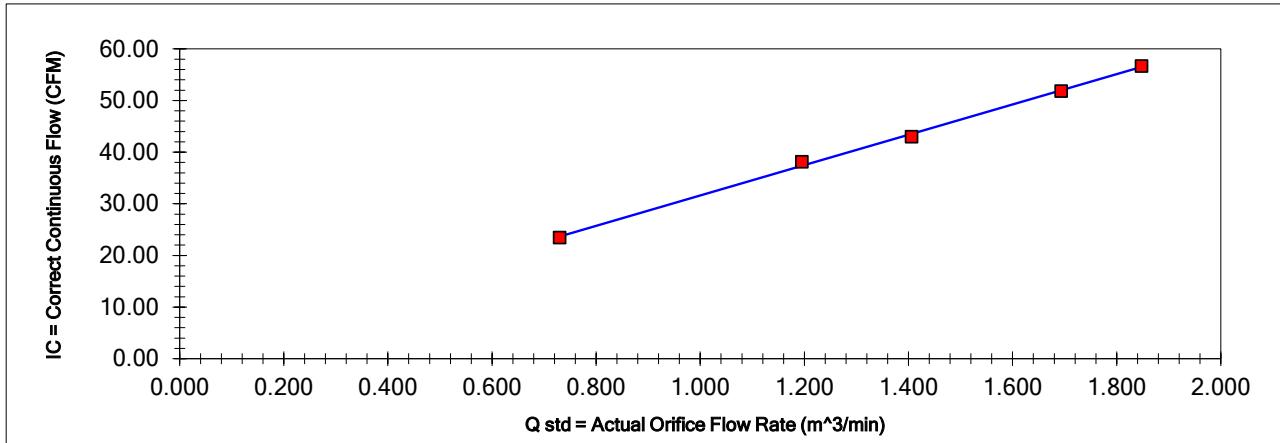
Ambient Conditions:

Pa (in Hg) 28.74 **Pa (mm Hg)** 725 **Ta (°C)** 24.8 **Ta (°K)** 298

Calibration Orifice Information:

Orifice S/N 3662 **Calibration Date** 2019-06-17
Orifice cal relationship: $m = 1.67950$ $b = -0.0291$

Flow Rate Reading	Orifice Delta H ₂ O (in)	X axis = Qstd Orifice Flow (m ³ /min) ^{Eq. 1}	I = Continuous Flow (Chart Reading)	Y axis = IC Correct Continuous Flow ^{Eq. 2} (Chart Corrected)
1	9.90	1.848	58.00	56.67
2	8.30	1.693	53.00	51.78
3	5.70	1.406	44.00	42.99
4	4.10	1.195	39.00	38.10
5	1.50	0.730	24.00	23.45



$$(Eq. 1) Q_{std} = 1/m[\text{Sqrt}((H_2O)(Pa/760)(298/Ta))-b]$$

$$(Eq. 2) IC = I[\text{Sqrt}((Pa/760)(298/Ta))]$$

Sampler Calibration Relationship (Qstd on x-axis; IC on y-axis):

m (slope) = 29.3793
b (intercept) = 2.2183
r (correlation)* = 0.9993

Average Sampler Flow: 1.2547 m³/min**

**The acceptable operating flow range of a TSP sampler is 1.1 to 1.7 m³/min

Estimated Sampler Volume (24-hours): 1806.7989 m³

*A correlation coefficient (r) below 0.990 indicates a calibration is not linear, this is most likely due to an air leak. A calibration should be performed again.

= cell containing equations

Comments

Calibrated By Kelsea Hunsperger

PQ200 Calibration Sheet

Calibrated By: Kelsea Hunsperger

Date: 2019/06/28

Site Name: New Gold Rainy River Mine

Site Location: Tait Road Station

PQ200 Serial Number: 1751

Calibrator Make: BGI

Calibrator Serial Number: 172457

NIST Certificate Expiry Date: April 30, 2020

System Clock Time:

Actual Time: 12:42

Displayed Time: 12:42

Displayed Year: 2019

Displayed Date: 28 Jun

Ambient Temperature (°C):

PQ200 Reading: 26.4

Actual Reading: 25

Difference (+/- 2°C): 1.4

Temp Reset (Y/N): N

Ambient Barometric Pressure (mmHg):

PQ200 Reading: 730

Actual Reading: 731.5

Difference (+/- 10mmHg): 1.5

Reset (Y/N): N

Flow Check (LPM):

Target Flow: 16.70

Measured Flow: 16.61

Difference (+/- 2%): 0.09 (0.5%)

3 Point Flow Calibration (Y/N): N

Inspection of Inlet/Seals/Filter:

Cleanliness of Inlet: Good

Glass Jar: Good

Glass Jar Gasket: Good

PM2.5 VSCC Inlet: Good

Filter Holder: Good

Filter Holder Seals: Good

Filter Tensioner: Good

Cleanliness of Fan Filter: Good

Comments/Recommendations:

PQ200 Calibration Sheet

Calibrated By: Kelsea Hunsperger

Date: 2019/06/28

Site Name: New Gold Rainy River Mine

Site Location: Gallinger Road Station

PQ200 Serial Number: 1752

Calibrator Make: BGI

Calibrator Serial Number: 172457

NIST Certificate Expiry Date: April 30, 2020

System Clock Time:

Actual Time: 11:46

Displayed Time: 11:46

Displayed Year: 2019

Displayed Date: 28 Jun

Ambient Temperature (°C):

PQ200 Reading: 27.7

Actual Reading: 27.8

Difference (+/- 2°C): 0.1

Temp Reset (Y/N): N

Ambient Barometric Pressure (mmHg):

PQ200 Reading: 730

Actual Reading: 730.5

Difference (+/- 10mmHg): 0.5

Reset (Y/N): N

Flow Check (LPM):

Target Flow: 16.70

Measured Flow: 16.81

Difference (+/- 2%): 0.11 (0.7%)

3 Point Flow Calibration (Y/N): N

Inspection of Inlet/Seals/Filter:

Cleanliness of Inlet: Good

Glass Jar: Good

Glass Jar Gasket: Good

PM2.5 VSCC Inlet: Good

Filter Holder: Good

Filter Holder Seals: Good

Filter Tensioner: Good

Cleanliness of Fan Filter: Good

Comments/Recommendations:



**NEW GOLD INC.
RAINY RIVER MINE**

**AMBIENT AIR QUALITY MONITORING PROGRAM
THIRD QUARTER 2019 REPORT**

NOVEMBER 2019

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
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
PM2.5	Particulate Matter less than 2.5 microns in diameter
US EPA	United States Environmental Protection Agency
µg/m ³	Microgram per Cubic Metre

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1.0 INTRODUCTION

The following is a summary of the Third Quarter (Q3) 2019 results for the ambient air quality monitoring program undertaken at New Gold Inc.'s Rainy River Mine located northwest of Emo, Ontario.

In Q3 of 2019, New Gold Inc. (New Gold) staff operated and maintained the ambient air quality monitoring sampling stations, communicated with the laboratory staff as required, prepared the data summary reports, and performed a Q3 calibration on September 16, 2019 (PQ200s) and September 27, 2019 (TE-5170s).

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;
- Sampling dates (start and end where applicable); and
- A summary of exceedances of an Ontario Standard, 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, and precipitation data.

The Ambient Air Monitoring Program was carried out per ECA 0412-A2LR4V and the MECP program approval letter dated November 9, 2016.

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 two stations is shown in Figure 2-1. UTM co-ordinates for each station based upon NAD 83, are presented in Table 2-1. Imagery showing each station are presented as Figures 2-2 and 2-3.

There were no changes to the station locations in Q3 2019.

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

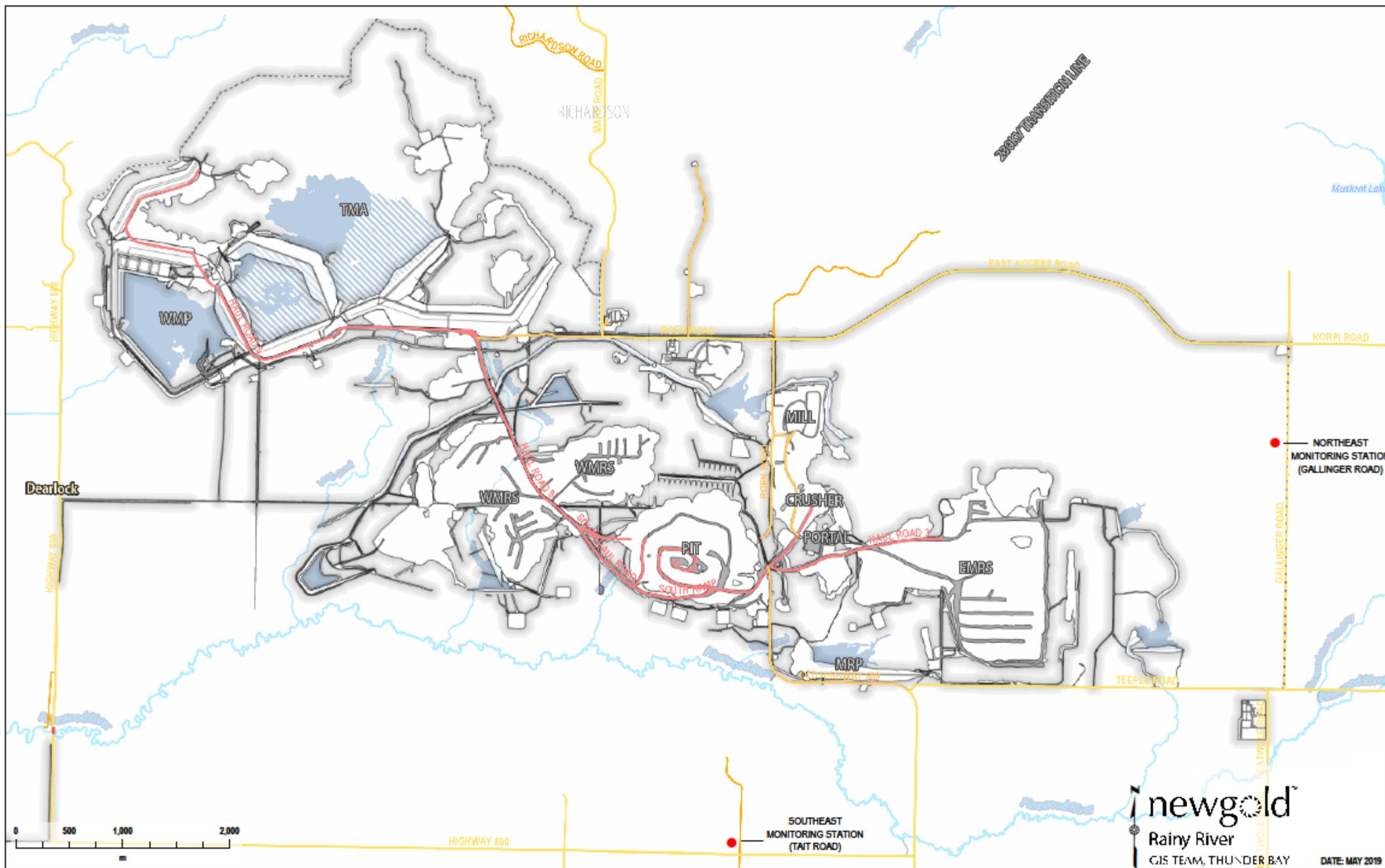


Figure 2-1: Ambient Air Monitoring Stations



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

3.0 ANALYTICAL AND MONITORING METHODS

3.1 TSP and Metals

The 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). Measurements of 24-hour average TSP and metal concentrations were collected as specified in the Operations Manual (MECP 2018); particulate samples 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). 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.

Metal concentrations were determined using standard Inductively Coupled Plasma Atomic Emission Spectroscopy (ICP/AES) methodology. Method detection limits are as shown on the data sheets in Appendix A-1.

The lowest detectable limit of total particulate on the filter is 2.3 milligrams (mg). A typical 24-hour sample volume of 1,630 m³ results in a method detection limit of 1.4 micrograms per cubic metre ($\mu\text{g}/\text{m}^3$).

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.

3.2 PM_{2.5}

Sampling was performed with PQ200 samplers. 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); particulate samples were collected every sixth day as per the North American schedule (US EPA 2017).

The lowest detectable limit of PM_{2.5} on the Teflon filters is 15 μg . A typical 24-hour sample volume of 24 m³ results in a method detection limit of 0.6 $\mu\text{g}/\text{m}^3$.

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

3.3 Total Dustfall

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). Standard dustfall samplers were used to measure total dustfall deposition. The method detection limit for total dustfall is 0.3 g/m²/30 days.

3.4 Passive Sampling for SO₂ and NO₂

SO₂ and NO₂ concentrations were monitored with passive sampling devices. 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.

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). Required meteorological data were obtained from the Environment and Climate Change Canada website. Fort Frances meteorological station (Climate ID 6022474) is downloaded by Maxxam Analytics with each- sample submission. For both SO₂ and NO₂, the analytical method detection limit is in the order of 0.1 parts per billion (ppb). 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 MECP guidelines for monthly concentrations of SO₂ and NO₂ obtained from passive sampling, the data is only used for screening purposes. For NO₂, the monthly results were compared to the MECP 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 SO₂, the results were compared against the 30-day Alberta Ambient Air Quality Objective of 30 µg/m³ (AEP 2016).

3.5 Field Operations

3.5.1 Hi-Vol and PQ200 Samplers

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

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 litres per minute (LPM) for each station.

New Gold staff performed flow calibrations on Hi Vol TE-5170 samplers using a Tisch Delta Calibration kit.

Q3 Calibrations were performed on all Hi-Vol samplers on September 27, 2019. Q3 Calibrations were performed on all PQ200 samplers on September 16, 2019. Calibration sheets can be found in Appendix E.

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 deployed 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

MECP conducted an instrumentation audit of both Tait Road and Gallinger Road Air Quality Monitoring Stations on September 18, 2019. No issues were found as a result of the audit. Audit Records are attached this report as Appendix C.

3.5.5 Equipment and Sampling Issues

During Q3 2019, 6 samples were invalidated, as discussed below:

- July: Dustfall sample at the Gallinger Road station was invalidated due to organic influences.
- July 14: PM2.5 sample at the Gallinger Road Station was invalidated due to insufficient run time.
- August 7: PM2.5 sample at the Gallinger Road Station was invalidated due to insufficient run time.
- August 13: PM2.5 sample at the Gallinger Road Station were invalidated due to insufficient run time.
- August 19: PM2.5 sample at the Tait Road Station were invalidated due to excessive run time.
- September 24: PM2.5 sample at the Tait Road Station were invalidated due to technician error, monitor set for wrong date.

4.0 RESULTS

Sampling program results for Q3 2019 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 SO₂ and NO₂ data. For the purpose of 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 Q3 2019 can be found in Appendix D.

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

Summaries of the statistical analyses for Q3 2019 for the TSP, metals, and PM_{2.5} concentrations are presented in Tables 4-1, 4-2, and 4-3, respectively. During the quarter, the 1 in 6 day sampling schedule presented a possible 16 sampling days between July 1, 2019 and September 30, 2019.

A summary of the statistical analyses for Q3 2019 for the total dustfall data is presented in Table 4-4. A summary of the statistical analysis for the Q3 2019 passive SO₂ and NO₂ results is presented in Table 4-5.

4.1 TSP and Metals

Tait Road and Gallinger Road stations both collected 16 valid samples, resulting in 100% valid data for Q3 2019 at each station.

For the quarter, the geometric mean TSP concentrations were 24.31 µg/m³ for the Tait Road station and 23.70 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 52.89 µg/m³ at the Tait Road station on September 18, 2019, and 46.49 µg/m³ at the Gallinger Road station on July 8, 2019.

There were no exceedances of an MECP AAQC measured for any of TSP, metals, or metalloids in Q3 2019 at either station.

Appendix A-1 and Figure 4-1 present individual sample data. The Q3 2019 TSP and metals summary statistics are summarized in Tables 4-1 and 4-2, respectively.

4.2 PM_{2.5}

The Tait Road station collected 14 valid samples, resulting in 88% valid data for Q3 2019. The Gallinger Road Station collected 13 valid samples, resulting in 81% valid data for Q3 2019.

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 PM_{2.5} was 15.94 µg/m³ at the Tait Road station (July 8, 2019), and 13.24 µg/m³ at the Gallinger Road station (July 8, 2019).

There were no PM_{2.5} exceedances of the MECP AAQC of 30 µg/m³ or CAAQS (ECCC 2013) of 28 µg/m³ measured in Q3 2019. Appendix A-1 and Figure 4-2 present individual sample data. The Q3 2019 PM_{2.5} summary statistics are summarized in Table 4-3.

4.3 Total Dustfall

In Q3 2019, three valid samples were collected at the Tait Road Station, and two valid samples were collected at the Gallinger Road Station. Each dustfall jar was exposed for approximately 30-days to coincide with each calendar month in the quarter.

Values reported by the laboratory as below the detection limit were substituted with one-half of the detection limit. The maximum 30-day concentration for dustfall was 4.65 µg/m³ at the Tait Road station (August), and 2.01 µg/m³ at the Gallinger Road station (August).

One dustfall sample at the Gallinger Road Station exceeded the 30-day MECP AAQC of 7 g/m² measured in Q3 2019. The elevated levels occurred during the month of July 2019. It was determined that of the 9.00 µg/m³ total dustfall measurement, 4.77 µg/m³ was volatile (organic) matter (insects, bird droppings, etc.). This was reported to MECP on November 1, 2019 via Transmittal MECP-IFI-0031 Rev E. A copy of the report can be found In Appendix B. The sample was invalidated in this report due to the organic influences as mentioned above.

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

4.4 Passive SO₂ and NO₂

In Q3 2019, 3 valid samples were collected at each station of each SO₂ and NO₂.

There are no MECP standards, guidelines or AAQCs for SO₂ or NO₂ for a 30-day averaging period. The 30-day measured average SO₂ or NO₂ concentrations allow for future analysis of trends in the ambient concentrations, to identify any notable increases, and for potential comparison with dispersion modelling results.

For NO₂, the monthly results were compared to the MECP 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 SO₂, the results were compared against the Alberta Ambient Air Quality Objective of 30 µg/m³ (AEP 2017).

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

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 AAQC standard for all Q3 2019 samples.

Table 4-1: Summary Statistics For Q3 2019 TSP Concentration Data

Statistics	Tait Road (SW)	Gallinger (NE)
Geometric mean ($\mu\text{g}/\text{m}^3$)	24.31	23.70
Arithmetic mean ($\mu\text{g}/\text{m}^3$)	29.50	30.21
July Maximum ($\mu\text{g}/\text{m}^3$)	39.49	46.49
August Maximum ($\mu\text{g}/\text{m}^3$)	47.73	44.97
September Maximum ($\mu\text{g}/\text{m}^3$)	52.89	41.15
Maximum 24-hr ($\mu\text{g}/\text{m}^3$)	52.89	46.49
90th percentile	46.35	44.65
95th percentile	49.02	45.43
24-hr AAQC	120	120
No. Valid Samples	16	16
Valid Data	100%	100%
No. Samples > AAQC (particulate)	0	0
No. Samples > AAQC (metals)	0	0
No. Samples > AAQC (metalloids)	0	0

Table 4-2: Summary Statistics For Q3 2019 Metals Concentration Data

Metal	24-hr AAQC ($\mu\text{g}/\text{m}^3$)	Tait Road (SW)		Gallinger Road (NE)	
		Maximum 24-hr Concentration ($\mu\text{g}/\text{m}^3$)	Fraction of 24-hr AAQC	Maximum 24-hr Concentration ($\mu\text{g}/\text{m}^3$)	Fraction of 24-hr AAQC
As	0.3	0.0012	0.40%	0.000896	0.30%
Cd	0.025	0.000914	3.66%	0.000862	3.45%
Cr	0.5	0.00454	0.91%	0.00332	0.66%
Co	0.1	0.000679	0.68%	0.000598	0.60%
Cu	50	0.041	0.08%	0.461	0.92%
Fe	4	0.842	21.50%	0.401	10.03%
Pb	0.5	0.00102	0.20%	0.00233	0.47%
Mn	0.4	0.0313	7.83%	0.0196	4.90%
Ni	0.2	0.00102	0.51%	0.000896	0.45%
Se	10	0.00339	0.03%	0.00299	0.03%
V	2	0.0017	0.09%	0.00149	0.07%
Zn	120	0.0211	0.02%	0.0185	0.02%

Table 4-3: Summary Statistics for Q3 2019 PM_{2.5} Concentration Data

Statistics	Tait Road (SW)	Gallinger (NE)
Geometric mean ($\mu\text{g}/\text{m}^3$)	3.20	1.97
Arithmetic mean ($\mu\text{g}/\text{m}^3$)	4.81	3.52
July Maximum ($\mu\text{g}/\text{m}^3$)	15.94	13.24
August Maximum ($\mu\text{g}/\text{m}^3$)	6.74	7.33
September Maximum ($\mu\text{g}/\text{m}^3$)	4.63	5.60
Maximum 24-hr ($\mu\text{g}/\text{m}^3$)	15.94	13.24
90th percentile	6.89	7.04
95th percentile	10.10	9.99
24-hr CAAQS	28	28
No. Valid Samples	14	13
Valid Data	88%	81%
No. Samples > AAQC (particulate)	0	0

Table 4-4: Summary Statistics for Q3 2019 Total Dustfall Data

Statistics	Tait Road (SW)	Gallinger (NE)
Arithmetic mean ($\mu\text{g}/\text{m}^3/30\text{d}$)	3.17	1.86
Maximum 24-hr ($\mu\text{g}/\text{m}^3/30\text{d}$)	4.65	2.01
30-day AAQC	7	7
No. > AAQC	0	0
No. Valid Samples	3	2
Valid Data	100%	66%

Table 4-5: Summary Statistics for Q3 2019 Passive SO₂ and NO₂ Concentration Data

Statistics	Tait Road (SW)		Gallinger Road (NE)	
	SO ₂	NO ₂	SO ₂	NO ₂
Mean ($\mu\text{g}/\text{m}^3$)	0.13	0.94	0.13	1.32
Maximum ($\mu\text{g}/\text{m}^3$)	0.13	1.32	0.13	1.69
AAQC* 24-hr converted to 30 day ($\mu\text{g}/\text{m}^3$)	N/A	78	N/A	78
Alberta AAQO ($\mu\text{g}/\text{m}^3$)	30	N/A	30	N/A
No. valid samples ($\mu\text{g}/\text{m}^3$)	3	3	3	3
Valid data	100%	100%	100%	100%

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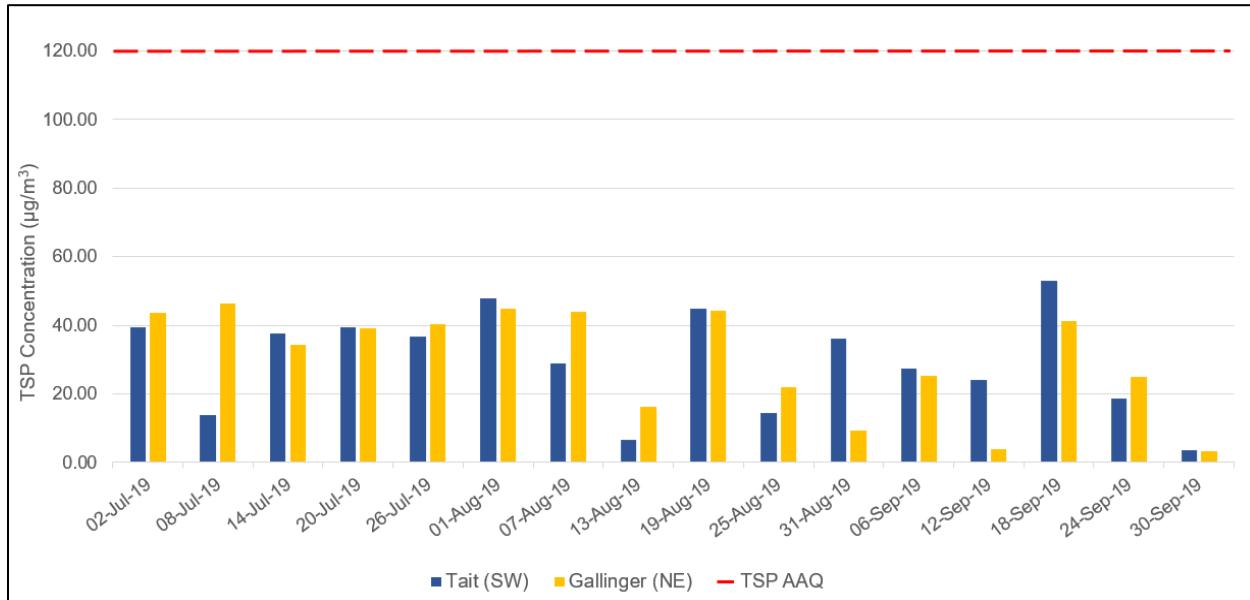


Figure 4-1: TSP Concentrations (Q3 2019)

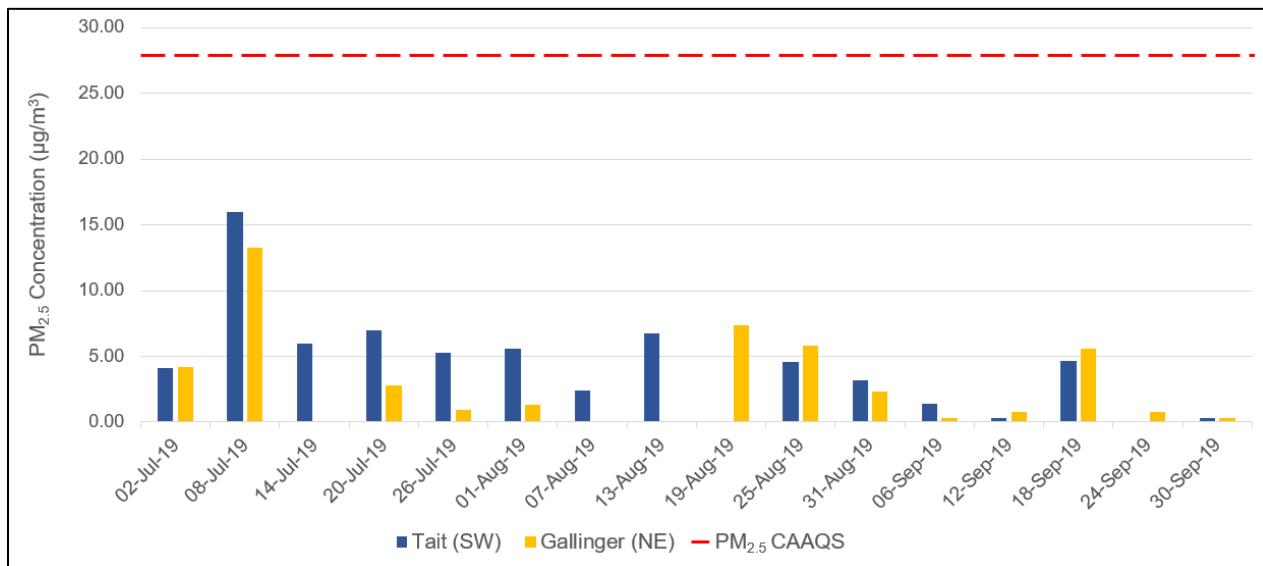


Figure 4-2: PM_{2.5} Concentrations (Q3 2019)

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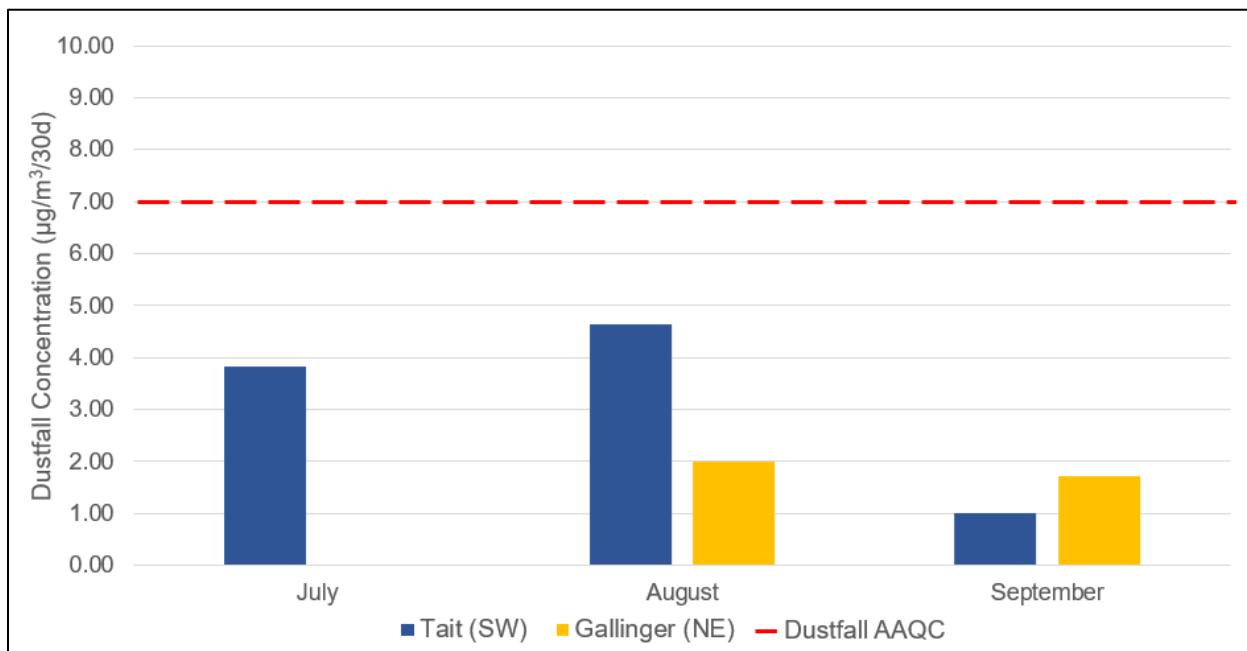


Figure 4-3: Dustfall Concentrations (Q3 2019)

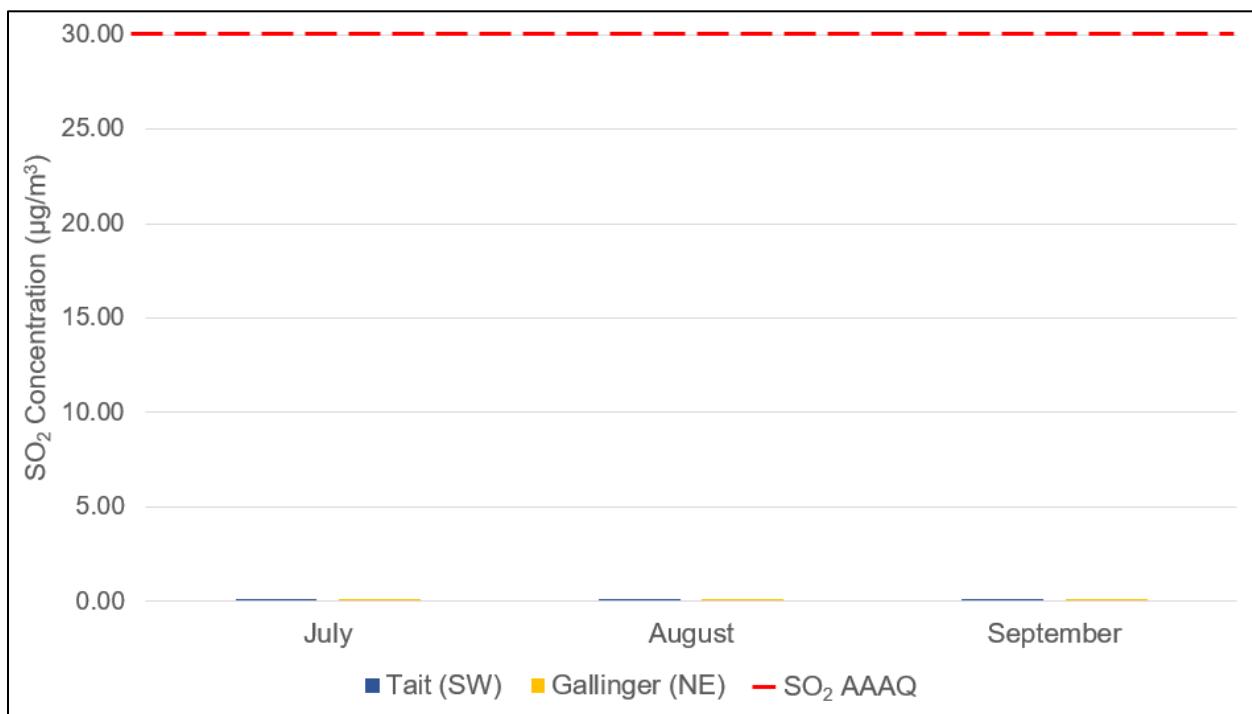


Figure 4-4: SO_2 Concentrations (Q3 2019)

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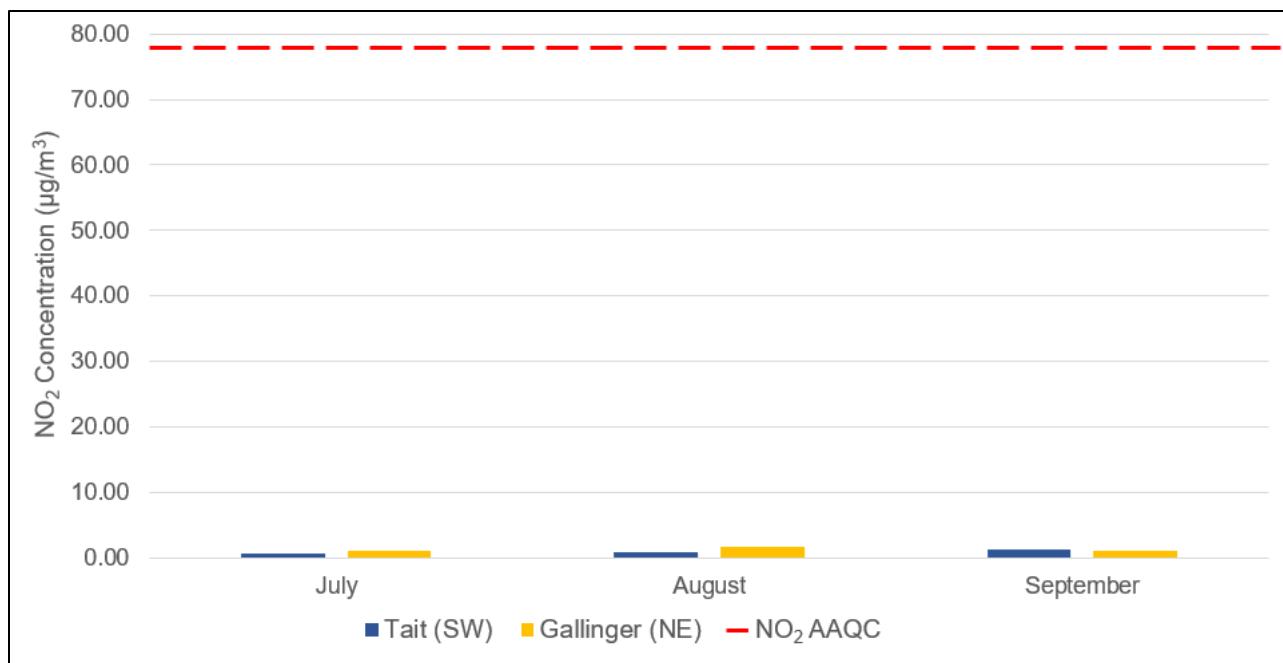


Figure 4-5: NO₂ Concentrations (Q3 2019)

5.0 CONCLUSIONS

A summary of the Q3 2019 ambient air quality monitoring program results is provided below:

- The Tait Road and Gallinger Road stations collected 16 valid TSP samples, resulting in 100% sample validity. Metal and metalloid concentrations were measured on each of the valid TSP filters. There were no measured exceedances of an MECP AAQC for TSP, metals, or metalloids in Q3 2019.
- 14 and 13 valid PM_{2.5} samples were collected at the Tait and Gallinger Road stations, resulting in 88% and 81% valid data, respectively. There were no exceedances of the 24-hour PM_{2.5} CAAQS in Q3 2019.
- 3 valid dustfall samples were collected at the Tait Road station (100% sample validity). 2 valid dustfall samples were collected at the Gallinger Road Station (67% sample validity). Note that one sample was invalidated due to contamination of the sample by organic matter including insects and bird droppings. Details can be found in Appendix B.
- 3 valid passive SO₂ and NO₂ samples were collected at each of the two stations (100% sample validity). There were no exceedances of AEP Criterion for SO₂ or the 30-day equivalent AAQC standard for NO₂ in Q2 2019.

- Alberta Environment and Parks (AEP). 2017. 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 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.
- Ministry of the Environment Conservation and Parks (MECP). Updates: April 30, 2019. Ontario's Ambient Air Quality Criteria, PIBS # 6570e01.
- 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 November 12, 2019).

7.0 CLOSING

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This *Rainy River* *Mine Ambient Air Quality Monitoring Program Second Quarter 2019 Report* was prepared by New Gold Inc. The quality of information, conclusions and estimates contained herein are 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.

If you require further information regarding the above or the mine in general, please contact the undersigned at (807) 482-0900 ext. 8328.

Sincerely,

**New Gold Inc.
Rainy River Mine**

Prepared by:



Kelsea Hunsperger, BSc.
Environmental Specialist



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 (Third Quarter 2019)
 (results expressed in $\mu\text{g}/\text{m}^3$)

Date	PM2.5	TSP	As	Cd	Cr	Co	Cu	Fe	Pb	Mn	Ni	Se	V	Zn
02-Jul-19	4.08	39.49	<i>8.49E-04</i>	<i>5.66E-04</i>	3.00E-03	<i>5.66E-04</i>	4.10E-02	2.85E-01	<i>8.49E-04</i>	1.49E-02	<i>8.49E-04</i>	<i>2.83E-03</i>	<i>1.41E-03</i>	9.22E-03
08-Jul-19	15.94	13.90	<i>9.14E-04</i>	<i>9.14E-04</i>	3.47E-03	<i>6.10E-04</i>	3.73E-02	2.77E-01	<i>9.14E-04</i>	1.66E-02	<i>9.14E-04</i>	<i>3.05E-03</i>	<i>1.52E-03</i>	1.84E-02
14-Jul-19	5.99	37.50	<i>9.94E-04</i>	<i>6.63E-04</i>	3.58E-03	<i>6.63E-04</i>	3.04E-02	2.62E-01	<i>9.94E-04</i>	1.11E-02	<i>9.94E-04</i>	<i>3.31E-03</i>	<i>1.66E-03</i>	9.08E-03
20-Jul-19	6.95	39.36	<i>1.02E-03</i>	<i>6.78E-04</i>	3.46E-03	<i>6.78E-04</i>	3.00E-02	2.43E-01	<i>1.02E-03</i>	1.16E-02	<i>1.02E-03</i>	<i>3.39E-03</i>	<i>1.69E-03</i>	1.39E-02
26-Jul-19	5.29	36.64	<i>1.01E-03</i>	<i>6.76E-04</i>	3.58E-03	<i>6.76E-04</i>	2.25E-02	2.04E-01	<i>1.01E-03</i>	1.30E-02	<i>1.01E-03</i>	<i>3.38E-03</i>	<i>1.69E-03</i>	1.15E-02
01-Aug-19	5.62	47.73	<i>1.00E-03</i>	<i>6.68E-04</i>	4.08E-03	<i>6.68E-04</i>	3.34E-02	5.05E-01	<i>1.00E-03</i>	2.20E-02	<i>1.00E-03</i>	<i>3.34E-03</i>	<i>1.67E-03</i>	1.00E-02
07-Aug-19	2.37	28.98	<i>1.02E-03</i>	<i>6.77E-04</i>	<i>1.69E-03</i>	<i>6.77E-04</i>	3.14E-02	2.53E-01	<i>1.02E-03</i>	6.30E-03	<i>1.02E-03</i>	<i>3.38E-03</i>	<i>1.69E-03</i>	6.03E-03
13-Aug-19	6.74	6.56	<i>9.94E-04</i>	<i>6.63E-04</i>	4.31E-03	<i>6.63E-04</i>	3.22E-02	8.42E-01	<i>9.94E-04</i>	3.13E-02	<i>9.94E-04</i>	<i>3.31E-03</i>	<i>1.66E-03</i>	2.11E-02
19-Aug-19	--	44.98	<i>1.00E-03</i>	<i>6.67E-04</i>	3.47E-03	<i>6.67E-04</i>	2.06E-02	7.87E-01	<i>1.00E-03</i>	1.92E-02	<i>1.00E-03</i>	<i>3.34E-03</i>	<i>1.67E-03</i>	6.74E-03
25-Aug-19	4.54	14.55	<i>9.53E-04</i>	<i>6.35E-04</i>	3.43E-03	<i>6.35E-04</i>	2.27E-02	2.64E-01	<i>9.53E-04</i>	7.11E-03	<i>9.53E-04</i>	<i>3.18E-03</i>	<i>1.59E-03</i>	8.38E-03
31-Aug-19	3.21	36.04	<i>1.02E-03</i>	<i>6.79E-04</i>	3.73E-03	<i>6.79E-04</i>	2.43E-02	6.20E-01	<i>1.02E-03</i>	1.60E-02	<i>1.02E-03</i>	<i>3.39E-03</i>	<i>1.70E-03</i>	8.08E-03
06-Sep-19	1.40	27.29	<i>1.02E-03</i>	<i>6.77E-04</i>	<i>1.69E-03</i>	<i>6.77E-04</i>	1.63E-02	1.96E-01	<i>1.02E-03</i>	4.47E-03	<i>1.02E-03</i>	<i>3.39E-03</i>	<i>1.69E-03</i>	4.88E-03
12-Sep-19	<i>0.32</i>	23.96	<i>8.75E-04</i>	<i>5.83E-04</i>	<i>1.46E-03</i>	<i>5.83E-04</i>	2.35E-02	2.62E-01	<i>8.75E-04</i>	5.95E-03	<i>8.75E-04</i>	<i>2.92E-03</i>	<i>1.46E-03</i>	7.35E-03
18-Sep-19	4.63	52.89	<i>9.73E-04</i>	<i>6.49E-04</i>	4.54E-03	<i>6.49E-04</i>	3.74E-02	3.42E-01	<i>9.73E-04</i>	1.67E-02	<i>9.73E-04</i>	<i>3.24E-03</i>	<i>1.62E-03</i>	1.89E-02
24-Sep-19	--	18.53	<i>9.33E-04</i>	<i>6.22E-04</i>	<i>1.55E-03</i>	<i>6.22E-04</i>	3.92E-02	1.88E-01	<i>9.33E-04</i>	1.26E-02	<i>9.33E-04</i>	<i>3.11E-03</i>	<i>1.55E-03</i>	5.35E-03
30-Sep-19	<i>0.31</i>	3.65	<i>1.01E-03</i>	<i>6.76E-04</i>	1.69E-03	<i>6.76E-04</i>	3.38E-02	3.92E-02	<i>1.01E-03</i>	1.08E-03	<i>1.01E-03</i>	<i>3.38E-03</i>	<i>1.69E-03</i>	3.79E-03

Geometric mean	3.20	24.31	9.72E-04	6.65E-04	2.84E-03	6.48E-04	2.88E-02	2.85E-01	9.72E-04	1.06E-02	9.72E-04	3.24E-03	1.62E-03	9.03E-03
Arithmetic mean	4.81	29.50	9.74E-04	6.68E-04	3.05E-03	6.49E-04	2.98E-02	3.48E-01	9.74E-04	1.31E-02	9.74E-04	3.25E-03	1.62E-03	1.02E-02
Max. concentration	15.94	52.89	1.02E-03	9.14E-04	4.54E-03	6.79E-04	4.10E-02	8.42E-01	1.02E-03	3.13E-02	1.02E-03	3.39E-03	1.70E-03	2.11E-02
Min. concentration	0.31	3.65	8.49E-04	5.66E-04	1.46E-03	5.66E-04	1.63E-02	3.92E-02	8.49E-04	1.08E-03	8.49E-04	2.83E-03	1.41E-03	3.79E-03
90th percentile	6.89	46.35	1.02E-03	6.78E-04	4.19E-03	6.77E-04	3.83E-02	7.04E-01	1.02E-03	2.06E-02	1.02E-03	3.39E-03	1.69E-03	1.86E-02
95th percentile	10.10	49.02	1.02E-03	7.38E-04	4.37E-03	6.78E-04	3.96E-02	8.01E-01	1.02E-03	2.43E-02	1.02E-03	3.39E-03	1.69E-03	1.94E-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	16	16	16	16	16	16	16	16	16	16	16	16	16
No. samples < mdL	2	0	16	16	4	16	0	0	16	0	16	16	16	0
Detection limit (μg)	15	2300	3	2	5	2	4	20	3	1	3	10	10	5
Half detection limit (μg)	7.5	1150	1.5	1	2.5	1	2	10	1.5	0.5	1.5	5	5	2.5
% < detection limit	13	0	100	100	25	100	0	0	100	0	100	100	100	0
% valid data	88	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

Northeast Gallinger Road Monitoring Results for TSP and Metals (Third Quarter 2019)
 (results expressed in $\mu\text{g}/\text{m}^3$)

Date	PM2.5	TSP	As	Cd	Cr	Co	Cu	Fe	Pb	Mn	Ni	Se	V	Zn
02-Jul-19	4.20	43.66	<u>8.64E-04</u>	<u>5.76E-04</u>	3.28E-03	<u>5.76E-04</u>	4.61E-01	2.43E-01	<u>8.64E-04</u>	1.67E-02	<u>8.64E-04</u>	<u>2.88E-03</u>	<u>1.44E-03</u>	1.79E-02
08-Jul-19	13.24	46.49	<u>8.60E-04</u>	<u>5.73E-04</u>	<u>1.43E-03</u>	<u>5.73E-04</u>	3.33E-01	1.16E-01	<u>8.60E-04</u>	1.04E-02	<u>8.60E-04</u>	<u>2.87E-03</u>	<u>1.43E-03</u>	1.61E-02
14-Jul-19	--	34.25	<u>8.51E-04</u>	<u>5.67E-04</u>	2.95E-03	<u>5.67E-04</u>	3.47E-01	1.24E-01	<u>8.51E-04</u>	7.37E-03	<u>8.51E-04</u>	<u>2.84E-03</u>	<u>1.42E-03</u>	1.10E-02
20-Jul-19	2.79	39.15	<u>8.62E-04</u>	<u>8.62E-04</u>	<u>1.44E-03</u>	<u>5.75E-04</u>	3.39E-01	1.47E-01	<u>8.62E-04</u>	8.16E-03	<u>8.62E-04</u>	<u>2.87E-03</u>	<u>1.44E-03</u>	1.80E-02
26-Jul-19	0.95	40.35	<u>8.77E-04</u>	<u>5.85E-04</u>	2.98E-03	<u>5.85E-04</u>	2.53E-01	2.02E-01	<u>8.77E-04</u>	1.29E-02	<u>8.77E-04</u>	<u>2.92E-03</u>	<u>1.46E-03</u>	1.85E-02
01-Aug-19	1.34	44.97	<u>8.60E-04</u>	<u>5.74E-04</u>	3.10E-03	<u>5.74E-04</u>	4.03E-01	3.15E-01	<u>8.60E-04</u>	1.96E-02	<u>8.60E-04</u>	<u>2.87E-03</u>	<u>1.43E-03</u>	1.17E-02
07-Aug-19	--	43.99	<u>8.51E-04</u>	<u>5.68E-04</u>	3.06E-03	<u>5.68E-04</u>	4.09E-01	3.86E-01	<u>8.51E-04</u>	1.24E-02	<u>8.51E-04</u>	<u>2.84E-03</u>	<u>1.42E-03</u>	1.53E-02
13-Aug-19	--	16.36	<u>8.40E-04</u>	<u>5.60E-04</u>	<u>1.40E-03</u>	<u>5.60E-04</u>	2.47E-01	1.70E-01	<u>8.40E-04</u>	4.54E-03	<u>8.40E-04</u>	<u>2.80E-03</u>	<u>1.40E-03</u>	9.24E-03
19-Aug-19	7.33	44.34	<u>8.79E-04</u>	<u>5.86E-04</u>	<u>1.46E-03</u>	<u>5.86E-04</u>	2.16E-01	4.01E-01	<u>8.79E-04</u>	1.45E-02	<u>8.79E-04</u>	<u>2.93E-03</u>	<u>1.46E-03</u>	1.31E-02
25-Aug-19	5.85	22.09	<u>8.52E-04</u>	<u>5.68E-04</u>	3.01E-03	<u>5.68E-04</u>	2.07E-01	1.84E-01	2.33E-03	5.91E-03	<u>8.52E-04</u>	<u>2.84E-03</u>	<u>1.42E-03</u>	1.24E-02
31-Aug-19	2.29	9.24	<u>8.55E-04</u>	<u>5.70E-04</u>	<u>1.43E-03</u>	<u>5.70E-04</u>	2.45E-01	1.34E-01	<u>8.55E-04</u>	6.04E-03	<u>8.55E-04</u>	<u>2.85E-03</u>	<u>1.43E-03</u>	9.29E-03
06-Sep-19	<u>0.32</u>	25.27	<u>8.39E-04</u>	<u>5.59E-04</u>	<u>1.40E-03</u>	<u>5.59E-04</u>	2.57E-01	1.03E-01	<u>8.39E-04</u>	2.96E-03	<u>8.39E-04</u>	<u>2.80E-03</u>	<u>1.40E-03</u>	6.82E-03
12-Sep-19	0.76	3.74	<u>8.49E-04</u>	<u>5.66E-04</u>	<u>1.42E-03</u>	<u>5.66E-04</u>	1.39E-01	2.55E-02	<u>8.49E-04</u>	8.49E-04	<u>8.49E-04</u>	<u>2.83E-03</u>	<u>1.42E-03</u>	8.04E-03
18-Sep-19	5.60	41.15	<u>8.60E-04</u>	<u>5.73E-04</u>	3.32E-03	<u>5.73E-04</u>	1.32E-01	2.81E-01	<u>8.60E-04</u>	1.42E-02	<u>8.60E-04</u>	<u>2.87E-03</u>	<u>1.43E-03</u>	1.78E-02
24-Sep-19	0.81	25.11	<u>8.66E-04</u>	<u>5.77E-04</u>	<u>1.44E-03</u>	<u>5.77E-04</u>	2.10E-01	1.59E-01	<u>8.66E-04</u>	1.10E-02	<u>8.66E-04</u>	<u>2.89E-03</u>	<u>1.44E-03</u>	7.10E-03
30-Sep-19	<u>0.31</u>	3.17	<u>8.96E-04</u>	<u>5.98E-04</u>	<u>1.49E-03</u>	<u>5.98E-04</u>	2.04E-01	2.51E-02	<u>8.96E-04</u>	5.98E-04	<u>8.96E-04</u>	<u>2.99E-03</u>	<u>1.49E-03</u>	3.11E-03

Geometric mean	1.97	23.70	8.60E-04	5.88E-04	2.01E-03	5.73E-04	2.59E-01	1.49E-01	9.16E-04	6.74E-03	8.60E-04	2.87E-03	1.43E-03	1.11E-02
Arithmetic mean	3.52	30.21	8.60E-04	5.91E-04	2.16E-03	5.73E-04	2.75E-01	1.88E-01	9.52E-04	9.27E-03	8.60E-04	2.87E-03	1.43E-03	1.22E-02
Max. concentration	13.24	46.49	8.96E-04	8.62E-04	3.32E-03	5.98E-04	4.61E-01	4.01E-01	2.33E-03	1.96E-02	8.96E-04	2.99E-03	1.49E-03	1.85E-02
Min. concentration	0.31	3.17	8.39E-04	5.59E-04	1.40E-03	5.59E-04	1.32E-01	2.51E-02	8.39E-04	5.98E-04	8.39E-04	2.80E-03	1.40E-03	3.11E-03
90th percentile	7.04	44.65	8.78E-04	5.92E-04	3.19E-03	5.85E-04	4.06E-01	3.50E-01	8.87E-04	1.56E-02	8.78E-04	2.93E-03	1.46E-03	1.79E-02
95th percentile	9.99	45.43	8.84E-04	6.77E-04	3.17E-03	5.89E-04	4.04E-01	3.90E-01	1.33E-03	1.61E-02	8.84E-04	2.95E-03	1.47E-03	1.81E-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	13	16	16	16	16	16	16	16	16	16	16	16	16	16
No. samples < mdl	2	0	16	16	9	16	0	0	15	0	16	16	16	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	14	0	100	100	56	100	0	0	94	0	100	100	100	0
% valid data	81	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

RAINY RIVER MINE

Ambient Air Quality Monitoring Program
 Third Quarter 2019 Report



APPENDIX A-2
TOTAL DUSTFALL SAMPLING RESULTS

newgold™ Rainy River

Tait Road Monitoring Results for Dustfall (Third Quarter 2019) (results expressed in g/m²/30days)

Month	No. Exposure Days	Dustfall (insoluble)	Dustfall (soluble)	Dustfall (total)
July	31	2.31	1.53	3.84
August	33	3.03	1.62	4.65
September	27	0.51	0.54	1.02
Arithmetic mean				3.17
Max. concentration				4.65
Min. concentration				1.02
AAQC				7
No. > AAQC value**				0
No. of valid samples				3
% Valid data				100
No. samples < mdl				0
Detection limit*				0.30
Half detection limit				0.17

Gallinger Road Monitoring Results for Dustfall (Third Quarter 2019) (results expressed in g/m²/30days)

Month	No. Exposure Days	Dustfall (insoluble)	Dustfall (soluble)	Dustfall (total)
July	--	--	--	--
August	33	1.26	0.75	2.01
September	27	0.96	0.75	1.71
Arithmetic mean				1.86
Max. concentration				2.01
Min. concentration				1.71
AAQC				7
No. > AAQC value**				0
No. of valid samples				2
% Valid data				67
No. samples < mdl				0
Detection limit*				0.30
Half detection limit				0.17

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

RAINY RIVER MINE

Ambient Air Quality Monitoring Program
Third Quarter 2019 Report



APPENDIX A-3

SO₂ AND NO₂ PASSIVE SAMPLING RESULTS

newgold™ Rainy River

Monitoring Results for Passive SO₂ and NO₂ (Third Quarter 2019) (results expressed in µg/m³)

Tait Road		
Month	SO ₂	NO ₂
July	<u>0.13</u>	0.56
August	<u>0.13</u>	0.94
September	<u>0.13</u>	1.32
Arithmetic mean	0.13	0.94
Max. concentration	0.13	1.32
Min. concentration	0.13	0.56
AAQC* (24-hr AAQC converted to equivalent 30 day average)	N/A	78 µg/m ³
Alberta Ambient Air Quality Objectives 2013	30 µg/m ³	N/A
No. of valid samples	3	3
No. samples < mdl	3	0
Detection limit	0.26	0.19
Half detection limit	0.13	0.09

Monitoring Results for Passive SO₂ and NO₂ (Third Quarter 2019) (results expressed in µg/m³)

Gallinger Road		
Month	SO ₂	NO ₂
July	<u>0.13</u>	1.13
August	<u>0.13</u>	1.69
September	<u>0.13</u>	1.13
Arithmetic mean	0.13	1.32
Max. concentration	0.13	1.69
Min. concentration	0.13	1.13
AAQC* (24-hr AAQC converted to equivalent 30 day average)	N/A	78 µg/m ³
Alberta Ambient Air Quality Objectives 2013	30 µg/m ³	N/A
No. of valid samples	3	3
No. samples < mdl	3	0
Detection limit	0.26	0.19
Half detection limit	0.13	0.09

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

RAINY RIVER MINE

Ambient Air Quality Monitoring Program
Third Quarter 2019 Report



APPENDIX B

NOTICES OF EXCEEDANCE FOR Q3 2019



November 1, 2019

Matt Hoffmeister & Jason Tittlemier
Senior Environmental Officers
Ministry of the Environment, Conservation & Parks
Kenora Area Office
Kenora, ON

SUBJECT: AMBIENT AIR QUALITY – JULY TOTAL DUSTFALL EXCEEDANCE

Dear Mr. Hoffmeister, Mr. Tittlemier;

On November 1st, it was determined that the thirty-day averaging period for total dustfall at the Gallinger Road (North) Air Quality Station exceeded the Ontario Ambient Air Quality Criteria (AAQC) 30-day standard for the month of July.

Dustfall samples are collected each calendar month (+/- 5 days of a 30-day period) as per Rainy River Mine's Ambient Air Quality Monitoring Plan, accepted by MECP on November 9, 2016. For the month of July, the sample result was 9.00 g/m²/30days, with the AAQC 30-day standard being 7 g/m²/30days.

Upon further analysis of the laboratory results, it was determined that 7.05 g/m²/30-day of the total dustfall was volatile (organic) matter. Tables 1, 2 & 3 outline the laboratory results for this sample. As seen in Figure 1, the dustfall jar for the month of July collected at least one large intact insect as well as other organic influences. As a result, the elevated total dustfall is likely cause by these organic sources.

Table 1. July Total Dustfall Laboratory Results (Gallinger Road Station)

Parameter	Result (g/m ² /30-day)
Total Dustfall	9.00
Total Fixed (non-organic)	1.95
Total Volatile (organic)	7.05

Table 2. July Soluble Dustfall Laboratory Results (Gallinger Road Station)

Parameter	Result (g/m ² /30-day)
Soluble Dustfall	4.23
Soluble Fixed (non-organic)	1.20
Soluble Volatile (organic)	3.03

newgold™ Rainy River

Table 3. July Insoluble Dustfall Laboratory Results (Gallinger Road Station)

Parameter	Result (g/m ² /30-day)
Insoluble Dustfall	4.77
Insoluble Fixed (non-organic)	0.72
Insoluble Volatile (organic)	4.05



Figure 1. July Dustfall Jar illustrating organic influences.

Attached find the Notification of Exceedance form (NOE) as per our ECA approval number 0412-A2LR4V. Once you have had the chance to review this document and attachment, please contact the undersigned with any questions or concerns.

Respectfully,

Kelsea Hunsperger
Environmental Specialist
kelsea.hunsperger@newgold.com
(807) 482-0900 ext. 8328

General Information

Information requested in this notification form is collected under the authority of the *Environmental Protection Act*, R.S.O. 1990 (EPA) and Ontario Regulation 419/05: Air Pollution – Local Air Quality (the Regulation) made under the EPA and will be used to collect information relating to a measured or modelled air-related exceedance as required by s.25(9), s.28(1) and s.30(3) of the Regulation. The Ministry of the Environment and Climate Change (Ministry) may also request additional information.

1. Questions regarding completion and submission of this notification form should be directed to your local Ministry District Office. A list of these District Offices (including fax numbers) is available on the [Ministry Internet site](#) at <http://www.ontario.ca/environment-and-energy/ministry-environment-and-climate-change-district-locator>. A copy of this form may be acquired through the Ministry public web site <http://www.ontario.ca/environment-and-energy/rules-air-quality-and-pollution> or by contacting any Ministry office.
2. For notification under s.25(9) or s.28(1), the completed notification form should be sent, as soon as practicable, to the local Ministry District Office which has jurisdiction over the area in which the facility is located. A list of these District Offices (including fax numbers) is available on the [Ministry Internet site](#) at <http://www.ontario.ca/environment-and-energy/ministry-environment-and-climate-change-district-locator>.
3. For notification under s.30(3), the completed notification form should be immediately faxed to the local Ministry District Office which has jurisdiction over the area which the facility is located. A list of these District Offices (including fax numbers) is available on the [Ministry Internet site](#) at <http://www.ontario.ca/environment-and-energy/ministry-environment-and-climate-change-district-locator>. If the exceedance is determined outside of the business hours of the District Office then the completed notification form should be faxed to the Spills Action Center (1-800-268-6061).
4. Information on this form may be claimed as confidential but will be subject to the *Freedom of Information and Protection of Privacy Act* (FOIPPA) and the EBR. If you do not claim confidentiality at the time of submitting the information, the MOECC Ministry may make the information available to the public without further notice to you.

Instructions

This form should be used to notify the Ministry of a measured or modelled air-related exceedance. Notification is required under the Regulation and failure to notify the Ministry constitutes an offence under the Regulation and the EPA.

The publication titled “Air Contaminants Benchmarks (ACB) List: Standards, guidelines and screening levels for assessing point of impingement concentrations of air contaminants” contains two types of benchmarks: Benchmark 1 values (standards and guidelines) and Benchmark 2 values (screening levels). This list is available on the [Internet site](#) at <https://www.ontario.ca/page/air-contaminants-benchmarks-list-standards-guidelines-and-screening-levels-assessing-point>. This form is to be used to notify the Ministry of an exceedance of a Benchmark 1 value. If a concentration of a contaminant exceeds a Benchmark 1 value that is based on a guideline value, it is an indication that discharges of the contaminant may cause an adverse effect. If a concentration of a contaminant exceeds a Benchmark 2 value, it may be an indication that discharges of the contaminant may cause an adverse effect – further assessment should be undertaken to determine if an adverse effect may occur. If so, this form should be used to notify the Ministry.

This form may be used for notification of exceedances of more than one contaminant; Table 1 (or equivalent) should be completed for modelled exceedances. Table 2 should be completed for measured exceedances. If this notification is made pursuant to s. 30 then this form must be submitted immediately.

Note: The Ministry publishes a separate list of Ontario’s Ambient Air Quality Criteria (AAQCs) which can be found on our [website](#) <http://www.ontario.ca/document/ontarios-ambient-air-quality-criteria-sorted-contaminant-name>. AAQCs are intended to address general air quality, not contributions of a contaminant to air quality from a facility. Hence, the notification requirements under the Regulation do not apply to AAQCs.

Regulatory Authority

Exceedance of a Benchmark 1 Value (Standard or Guideline)

"28. (1) A person who discharges or causes or permits the discharge of a contaminant shall, as soon as practicable, notify a provincial officer in writing if,

- (a) the person uses an approved dispersion model to predict concentrations of the contaminant that result from the discharges and,
 - i. the use of the model indicates that discharges of the contaminant may result in a contravention of section 19 or 20, or
 - ii. sections 19 and 20 do not apply to discharges of the contaminant and the use of the model indicates that discharges of the contaminant may cause an adverse effect;
 - (b) measurements of air samples indicate that discharges of the contaminant may result in a contravention of section 19 or 20; or
 - (c) sections 19 and 20 do not apply to discharges of the contaminant and measurements of air samples indicate that discharges of the contaminant may cause an adverse effect. ..."
3. The emission rate that, for the relevant averaging period, is derived from a combination of a method that complies with paragraph 1 or 2 and ambient monitoring, according to a plan approved by the Director as likely to provide an accurate reflection of emissions.

"25. (9) A person who is required under subsection (8) to complete the update of a report not later than March 31 in a year shall, as soon as practicable after that date, notify a provincial officer in writing if the person has started to use an approved dispersion model with respect to a contaminant for the purpose of completing the update but has not yet complied with section 12, and,

- (a) the use of the model indicates that discharges of the contaminant may result in a contravention of section 19 or 20; or
- (b) sections 19 and 20 do not apply to discharges of the contaminant and the use of the model indicates that discharges of the contaminant may cause an adverse effect. ..."

Exceedance of an Upper Risk Threshold

"30. (1) A person who discharges or causes or permits the discharge of a contaminant listed in Schedule 6 into the air shall comply with subsections (3) and (4) if there is reason to believe, based on any relevant information, that discharges of the contaminant may result in,

- (a) the concentration of the contaminant exceeding the half hour upper risk threshold set out for that contaminant in Schedule 6 at a point of impingement, if section 19 applies to the person in respect of the contaminant; or
 - (b) the other time period upper risk threshold set out for that contaminant in Schedule 6 at a point of impingement, if section 20 applies to the person in respect of the contaminant.
- (1.1) The two items in Schedule 6 that set out upper risk thresholds for total reduced sulphur (TRS) compounds specify the facilities to which they apply.
- (2) Without limiting the generality of subsection (1), the reference in that subsection to relevant information includes relevant information from predictions of a dispersion model, including,
- (a) an approved dispersion model or other dispersion model; or
 - (b) a dispersion model that is not used in accordance with this Regulation.
- (3) If subsection (1) applies to a discharge, the person who discharged or caused or permitted the discharge of the contaminant shall immediately notify the Director in writing. ..."

Section 1 - Ministry of the Environment and Climate Change District Office Information

Date Form Submitted (yyyy/mm/dd) 2019/11/01	Date Exceedance Determined (yyyy/mm/dd) 2019/11/01
---	--

Supporting information attached? Yes No If yes, number of pages 1

Section 2 - Facility and Site Information

Name of Person Making the Notification

Last Name Hunsperger First Name Kelsea

Business Name (the name under which the entity is operating or trading - also referred to as trade name)

New Gold Inc.

Business Number

Business Activity Description (a description of the business endeavour, this may include products sold, services provided, equipment used, etc.)

Gold Mining

Site Name Rainy River Mine MOECC District Office
Kenora Area Office

Primary North American Industry Classification System (NAICS) Code Section 19 (Schedule 2) Section 20 (Schedule 3)
212220 applies applies

Other NAICS Code

Civic Address

Unit Number	Street Number 24	Street Name Marr Road	PO Box P0W1A0
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Survey Address

Lot and Concession: used to indicate location within a subdivided township and consists of a lot number and a concession number. **Part and Reference:** used to indicate location within an unsubdivided township or unsurveyed territory, and consists of a part and a reference plan number indicating the location within that plan. Attach copy of the plan.

Lot Concession Part Reference Plan

Non Address Information (includes any additional information to clarify requestor's physical location)

Municipality/Unorganized Township or Territory Upper Tier/District
Chapple/Rainy River Postal Code

Telephone Number ext. Fax Number Mobile Number Email Address

Geo Reference

Description of location	Map Datum	Zone	Accuracy Estimate	Geo-Referencing Method	UTM Easting	UTM Northing
Rural Property	NAD83	15U	+/- 5m	GIS	426537	5411220

Environmental Compliance Approval (ECA) Number(s) and/or Environmental Activity and Sector Registry (EASR) Number(s) – attach a separate list if more space is required

1 ECA 0412-A2LR4V 2 _____ 3 _____
4 _____ 5 _____ 6 _____

Section 3 - Type of Notification – Table 1 or Table 2 should be completed and submitted with this notification

This is a notification under subsection 28(1) – Notice to Provincial Officer as a result of modelling or measurements (select all that apply)

Exceedance of Benchmark 1 Value (Standard) Exceedance of Benchmark 1 Value (Guideline) Exceedance of Benchmark 2 Value (determined discharge may cause adverse effect)

Other (explain)

This is a notification under subsection 25(9) – Notice to Provincial Officer as a result an update of an Emission Summary and Dispersion Modelling Report (ESDM) (select all that apply)

Exceedance of Benchmark 1 Value (Standard) Exceedance of Benchmark 1 Value (Guideline) Exceedance of Benchmark 2 Value (determined discharge may cause adverse effect)

Other (explain)

Date that Refinement (see section 12 of the regulation) is anticipated to be complete (yyyy/mm/dd)

This is a notification under subsection 30(3) – Notice to the Director as a result of an exceedance of Upper Risk Threshold (URT) (Schedule 6)

Yes No

Section 4 - Follow-Up Action

Section 28 Notifications

Will an Abatement Plan be submitted to the Ministry within 30 days of this notice as per s.29?

Yes No If No, please provide the following

Type of Previously Submitted Abatement Plan
[Assessing for Contamination](#)

Date Submitted under s.29 of the Regulation (yyyy/mm/dd)

Subsection 30(3) Notifications for URT Exceedance

Has an ESDM Report been prepared in accordance with s.30(4) and submitted to the Ministry?

Yes No If No, what is the anticipated submission date for the ESDM* (yyyy/mm/dd)?

*Note: ESDM Report must be submitted within three months of the discharge

Section 5 - Model Based Assessment – please complete this section if notifying of a modelled exceedance (complete Table 1)

Was an ESDM Report prepared in accordance with s.26 of the Regulation?

Yes No

If yes, was the ESDM Report prepared to fulfill (select all that apply)

- s.22 of the Regulation - Application for ECA under s. 20.2 of the *Environmental Protection Act*
- s.9 of the EPA – Condition of an ECA (e.g. ECA with Limited Operational Flexibility)
- s.23 of the Regulation - Requirement for Schedule 4 and 5 sector facilities
- s.24 of the Regulation - Notice issued by Director
- s.25 of the Regulation - Requirement for updating ESDM Report
- s.30(4) of the Regulation – Required as result of URT exceedance
- s.33(1) of the Regulation – Required as part of a request for a site-specific standard

s.11 (1) of Ontario Regulation 1/17 – Registrations under Part II.2 of the Act – Activities Requiring Assessment of Air Emissions (Air Emissions EASR Regulation)

Other (please specify) _____

What approved dispersion model was used? Include version number (select all that apply)

Appendix to Reg. 346 AERMOD ASHRAE SCREEN 3

Other (please specify) (if other, provide copy of section 7 notice) _____

Was the approved dispersion model refined as required by s.12 of the Regulation (i.e. operating conditions, emission rates)?

Yes No

What meteorological data was used?

Regional Data Regional data refined, in consultation with the EMRB, to reflect local land use conditions

Local or Site-Specific Data Data from a computational method

Did you receive approval under s. 13 for the Meteorological Data? Yes No

Have you modelled a concentration at a Point of Impingement (POI) other than the maximum POI? (please include figure showing maximum POI location)

Yes No

If Yes, specify additional locations (i.e., land use) at which the exceedence may occur (select all that apply – please include figure showing additional modelled locations):

Health Care Seniors Residence/Long Term Care Facility Child Care Facility Educational Facility

Dwelling

Location Specified by the Director (explain) _____

Other Location (explain) _____

Section 6 - Measurement Based Assessment – please complete this section if notifying of a measured **exceedance** (Complete Table 2 or equivalent)

Type of Monitor / Measurement Type	Date of Exceedance (yyyy/mm/dd)	Duration of Exceedance
Dustfall Jar	2019/08/02	30-day average

Is the monitoring approved by the Ministry?

Yes No If yes, please describe the approval [Ambient Air Quality Monitoring Plan approved Nov. 9, 2016](#)

Monitoring Reference Number: (if available)

Specify the location (i.e., land use) at which the exceedence did occur (select all that apply):

Health Care Seniors Residence/Long Term Care Facility Child Care Facility Educational Facility

Dwelling

Location Specified by the Director (explain) _____

Other Location (explain) [Gallinger Road Station](#)

Section 7 - Statement of Company Official

I, the undersigned hereby declare that, to the best of my knowledge:

- The information contained herein and the information submitted is complete and accurate in every way and I am aware of the penalties against providing false information as per s.184 (2) of the *Environmental Protection Act*.
- I have been authorized to act on behalf of the company identified in this form for the purpose of providing this notification of exceedance under the Regulation to the Ministry of the Environment and Climate Change.
- I have used the most recent notification form (as obtained from the Ministry Internet site at <http://www.ontario.ca/environment-and-energy/rules-air-quality-and-pollution> or from my local Ministry District Office and I have included all necessary information required by the Regulation and identified on this form.

Name of Signing Authority
Kelsea Hunsperger

Title
Environmental Specialist

Telephone Number 807 482-0900	Fax Number ext.8328	Mobile Number	Email Address kelsea.hunsperger@newgold.com
Signature		Date (yyyy/mm/dd) 2019/11/01	

Address Information

Same as Site Physical Address? Yes No (If no, please provide signing authority mailing address information below)

Civic Address

Unit Number	Street Number 24	Street Name Marr Road	PO Box P0W1A0
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Delivery Designator: If signing authority mailing address is a Rural Route, Suburban Service, Mobile Route or General Delivery (i.e., RR#3)

Municipality/Unorganized Township or Territory Chapple/Rainy River	County/District	Province/State	Country	Postal Code
--	-----------------	----------------	---------	-------------

Table 1 - Information About Modelled Exceedance

Contaminant ^(a)	CAS ^(b) Number	Air Dispersion Model Used (include version number)	Maximum POI ^(c) Concentration ($\mu\text{g}/\text{m}^3$)	Averaging Period (hours)(minute/hour/day/annual)	Ministry Limit ($\mu\text{g}/\text{m}^3$) or URT ($\mu\text{g}/\text{m}^3$)	Limiting Effect	Schedule 2, Schedule 3, Guideline, Schedule 6 URT or Other (specify) ^(d)	Benchmark 1, Benchmark 2, or No Benchmark ^(e) (specify)	Percentage of Ministry Limit or URT

Provide additional information as needed (e.g. Location of Maximum POI Concentrations (e.g. UTM, street address, land use at Maximum POI if known, etc.)

Notes:

(a) Proper Chemical Name should be given (Abbreviations, acronyms, numeric codes, trade names and mixtures NOT ACCEPTABLE).

(b) CAS Number : Chemical Abstracts Services Number (UNIQUE Identifier for a chemical)

(c) POI Concentration : Point of Impingement Concentration

(d) Schedule 2 = section 19 applies; Schedule 3 = section 20 applies

(e) If a B2 value is exceeded, the regulation requires potential adverse effects to be assessed. If it is determined that an adverse effect may occur for the contaminant in question, this should be included in the table

Table 2 - Information About Measured Exceedance

Contaminant ^(a)	CAS ^(b) Number	Type of Assessment (Measurement Method)	Maximum POI ^(c) Concentration ($\mu\text{g}/\text{m}^3$)	Averaging Period (minute/hour/day/annual)	Ministry Limit ($\mu\text{g}/\text{m}^3$) or URT ($\mu\text{g}/\text{m}^3$)	Limiting Effect	Schedule 2, Schedule 3, Guideline, Schedule 6 URT, or Other (specify)	Benchmark 1, Benchmark 2, or No Benchmark ^(d) (specify)	Percentage of Ministry Limit or URT

* For additional measurement locations / sampling times, please include additional tables

** If you are reporting more than one exceedence, include the time of the exceedence in the contaminant column

Notes:

(a) Proper Chemical Name should be given (Abbreviations, acronyms, numeric codes, trade names and mixtures NOT ACCEPTABLE).

(b) CAS Number : Chemical Abstracts Services Number (UNIQUE Identifier for a chemical)

(c) POI Concentration : Point of Impingement Concentration

(d) Schedule 2 = section 19 applies; Schedule 3 = section 20 applies

(e) If a B2 value is exceeded, the regulation requires potential adverse effects to be assessed. If it is determined that an adverse effect may occur for the contaminant in question, this should be included in the table



APPENDIX C

MECP AUDIT RECORD – SEPTEMBER 18, 2019

Ministry of the Environment
435 James Street South.
Suite 331
Thunder Bay, ON P7E 6S7

Ministère de l'Environnement
435, rue James sud
Bureau 331
Thunder Bay, ON P7E 6S7



Fax/télécopieur: (807) 475-1754
Phone/ téléphone: (807) 475-1205

Northern Region Technical Support Section – Thunder Bay

September 23, 2019

Kelsea Hunsperger
Environmental Specialist

New Gold Inc.

Rainy River Project
5967 Highway 11/71, P.O. Box 5, Emo
Ontario, Canada, P0W 1E0
M: (807) 707-3058

Dear Ms. Hunsperger:

Re: Air Monitoring Station Audit – Non-Continuous Monitors

On September 18th 2019 your company's station [s] were audited. Attached is a copy of the Audit record, below is a summary of the results:

1. Tait Road (Station #62054)

Sampler Type	Sampler S/N	% Error	Criteria Met
PQ200 PM2.5	1751	0.4% Low	Yes
TSP Tisch	2362/3105	4.75% High	Yes
Dustfall Jars	N/A	N/A	Yes

2. Gallinger Road (Station #62055)

Sampler Type	Sampler S/N	% Error	Criteria Met
PQ200 PM2.5	1752	0.6% High	Yes
TSP Tisch	3291	6.5% High	Yes
* Dustfall Jars*	N/A	N/A	Yes

*NOTE Gallinger Road station vegetation inside the gated station needs to be cleared out.

If you have any questions, do not hesitate to call.
Yours truly,

Jim Stachowich
Senior Environmental Officer
Air, Pesticides and Environmental Planning
Technical Support Section
Northern Region

c: Sylvie St.Jean Newgold Inc.
c: Jason Tittlemier Senior Environmental Officer, Kenora District Office, MOE
c: File AQ 06 13 Thunder Bay/NewGold Inc./62054/62055/2019/Qtr#2



Non-Continuous Instrumentation
Dustfall
Site Audit

Dustfall Site Audit				
Criteria		Requirements	Observed	Criteria Met?
				YES NO
Sampler height	3 m above ground		<input checked="" type="radio"/>	<input type="radio"/>
	270° arc of unrestricted airflow & wind from point source quadrant must be included in arc		<input checked="" type="radio"/>	<input type="radio"/>
Distance from Obstructions	No overhead obstructions (hydro telephone wires) to interfere with particle deposition		<input checked="" type="radio"/>	<input type="radio"/>
Distance from trees	Should be > 20 m from drip line of trees		<input checked="" type="radio"/>	<input type="radio"/>
Distance from road	No nearby unpaved roads & parking lot		<input checked="" type="radio"/>	<input type="radio"/>
Rooftop installation	Avoid building wake effect		<input checked="" type="radio"/>	<input type="radio"/>
	No nearby chimney or flues that could emit particles (soot/coal)		<input checked="" type="radio"/>	<input type="radio"/>
Bracket installation	Should be level & jar must be level in bracket		<input checked="" type="radio"/>	<input type="radio"/>
Ground cover	Should have vegetative cover		<input checked="" type="radio"/>	<input type="radio"/>
Liner	4 mil liner must be used		<input type="radio"/>	<input checked="" type="radio"/>
Comments/observations and overall audit opinion:				
<p>NO liners used in dustfall bags. Samples are sealed & sent for analysis.</p>				
Action Required (Auditor):	Signature: 			
Action Taken (Auditee):	Signature: 			



Site Information

Date YYYY	MM	DD	Company	New Gold TAIT Roads
Station/Site No.			Location Address	
62054				
Calibrator make			Instrument serial #	Instrument make
Tri-CAC TC-5			1751	PQ200
Calibrator Serial No.			Pollutant	PM2.5
Accuracy (GPS)			Zone	
Easting			Northing	
+/- 10% Objective/Criteria Met			<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Audit performed by (Name and Signature)				

Results

Calibration Orifice and Equation - Manometer

Calibration orifice number:	Manometer type:	Manometer S/N:
S = slope of the calibration orifice		
I = intercept of the calibration orifice		
Ambient Temperature	22.8	23.3
Ambient Pressure	718 mHg	0960 mbar
Audit Results		Required flow
Manometer reading (in.of water)		Hi-vol & PM 40 cfm
True flow calculated result: $\sqrt{MR \times S + I}$		PAH 30 cfm
Percent error = $(\text{true flow value} - \text{required flow}) \times 100 / \text{required flow}$		Dioxins 8 cfm
Leak Test		47 mm 16.7 L/M
Temperature Correction = $\text{SQRT } [298/(273 + -Ta)]$ Ta = AMBIENT TEMP °C		

Remarks

No backflow from pump

Signature (Witness)	Name	Title
KM	Kelsea Hunsperger	Shift Environmental Specialist
Has the instrument been restored to service? <input type="checkbox"/> Yes <input type="checkbox"/> No		

COPY 1

Site Information

Date	YYYY	MM	DD	Company	<i>New Gold TAIR class</i>
Station/Site No.				Location Address	<i>Off Hwy 66 Munroophis</i>
Calibrator make				Instrument serial #	<i>2362/3105</i>
				Pollutant	<i>TSP</i>
Calibrator Serial No.				Instrument make	<i>TISCH</i>
Accuracy (GPS)				Zone	
Easting				Northing	
+/- 10% Objective/Criteria Met <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No					
Audit performed by (Name and Signature) <i>Karen Schlueter</i>					

Results

Calibration Orifice and Equation - Manometer		
Calibration orifice number: <i>41</i>	Manometer type: <i>Air - Nitrometer</i>	Manometer S/N: <i>1200676</i>
<i>17.60</i>	S = slope of the calibration orifice	
<i>0.25</i>	I = intercept of the calibration orifice	
Ambient Temperature <i>22.8°C</i>	Ambient Pressure <i>0.987 mb</i>	
Audit Results		Required flow
Manometer reading (in. of water) <i>5.4</i>		Hi-vol & PM <i>40 cfm</i>
True flow calculated result: $\sqrt{MR} \times S + I$ <i>41.9</i>		PAH <i>30 cfm</i>
Percent error = $(\text{true flow value} - \text{required flow}) \times 100$ required flow <i>4.75% ↑</i>		Dioxins <i>8 cfm</i>
Leak Test		47 mm <i>16.7 L/M</i>
Temperature Correction = $\text{SQRT } [298/(273+/-Ta)]$ <i>Ta = AMBIENT TEMP °C</i>		

Remarks <i>No nothing to do with -</i>		
Signature (Witness) <i>KD</i>	Name <i>Kelsea Hunsperger</i>	Title <i>Environmental Specialist</i>
Has the instrument been restored to service? <input type="checkbox"/> Yes <input type="checkbox"/> No		

COPY 1



Non-Continuous Instrumentation

Dustfall
Site Audit

Third Consignment Offick In Toronto

Dustfall Site Audit

Site Name/Address:

New Gold Gallagher Ross

City/Town:

Chapple Manganese

Site ID #:

62055

Operator/Representative:

New Gold

Date (yr/mm/dd):

2013/09/18

Auditor:

Tom Scappone

Criteria	Requirements	Observed	Criteria Met?
			YES NO
Sampler height	3 m above ground		<input checked="" type="radio"/> <input type="radio"/>
	270° arc of unrestricted airflow & wind from point source quadrant must be included in arc		<input checked="" type="radio"/> <input type="radio"/>
Distance from Obstructions	No overhead obstructions (hydro telephone wires) to interfere with particle deposition		<input checked="" type="radio"/> <input type="radio"/>
Distance from trees	Should be > 20 m from drip line of trees		<input checked="" type="radio"/> <input type="radio"/>
Distance from road	No nearby unpaved roads & parking lot		<input checked="" type="radio"/> <input type="radio"/>
	Avoid building wake effect		<input checked="" type="radio"/> <input type="radio"/>
Rooftop installation	No nearby chimney or flues that could emit particles (soot/coal)		<input checked="" type="radio"/> <input type="radio"/>
Bracket installation	Should be level & jar must be level in bracket		<input checked="" type="radio"/> <input type="radio"/>
Ground cover	Should have vegetative cover		<input type="radio"/> <input checked="" type="radio"/>
Liner	4 mil liner must be used		<input type="radio"/> <input checked="" type="radio"/>

Comments/observations and overall audit opinion:

Dust fall sample taken & sent off for analysis

Action Required (Auditor):

Nothing required

Signature:

Action Taken (Auditee):

Signature:



Site Information

Date	YYYY	MM	DD	Company	NewGoro Galloway Ross	
Station/Site No.	Location Address			Chippewas Municipality		
Calibrator make	BGI Tru-Cal			Instrument serial #	P252	
Calibrator Serial No.	TC-5 5/16/04			Pollutant	PM 2.5	
Accuracy (GPS)				Zone		
Easting				Northing		
+/- 10% Objective/Criteria Met				<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
Audit performed by (Name and Signature)						

Tom Stellwagen

Results

Calibration Orifice and Equation - Manometer

Calibration orifice number:	Manometer type:	Manometer S/N:	
<i>Tri-Cal Just</i>			
S = slope of the calibration orifice			
I = intercept of the calibration orifice	<i>Tri-Cal Just</i>		
Ambient Temperature	26.0°C	Ambient Pressure	0958mb
Audit Results			Required flow
Manometer reading (in.of water)	Hi-vol & PM		40 cfm
True flow calculated result: $\sqrt{MR} \times S + I$	PAH		30 cfm
Percent error = $(\text{true flow value} - \text{required flow}) \times 100 / \text{required flow}$	Dioxins		8 cfm
Leak Test	16.7	16.7	47 mm
Temperature Correction = $\text{SQRT}[298/(273+/-Ta)]$	16.7 L/M		
Ta = AMBIENT TEMP °C			

Remarks

Nothing Recorded.

Signature (Witness)	Name	Title
<i>[Signature]</i>	Kelsea Hunsperger	Environmental Specialist
Has the instrument been restored to service? <input type="checkbox"/> Yes <input type="checkbox"/> No		

COPY 1



Site Information

Date	YYYY MM DD	Company	<i>New Goos</i>
Station/Site No.	Location Address	<i>Gallinger Loop TR 5002 Gallinger Loop TR 5002 Ottawas Municipality</i>	
Calibrator make		Instrument serial #	<i>3291</i>
Calibrator Serial No.		Pollutant	<i>TSP</i>
Accuracy (GPS)		Zone	
Easting		Northing	
+/- 10% Objective/Criteria Met	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Audit performed by (Name and Signature)	<i>Jim Stachowich</i>		

Results

Calibration Orifice and Equation - Manometer			
Calibration orifice number:	41	Manometer type:	<i>Fin - Neo Source</i>
17.6	S = slope of the calibration orifice		
0.25	I = intercept of the calibration orifice		
Ambient Temperature	<i>25.9</i>	Ambient Pressure	<i>0958 mb</i>
Audit Results		Required flow	
Manometer reading (in.of water)	<i>5.6</i>	Hi-vol & PM	<i>40 cfm</i>
True flow calculated result:	<i>42.6</i>	PAH	<i>30 cfm</i>
Percent error = $\frac{(\text{true flow value} - \text{required flow})}{\text{required flow}} \times 100$	<i>76.5%</i>	Dioxins	<i>8 cfm</i>
Leak Test		47 mm	<i>16.7 L/M</i>
Temperature Correction = $\text{SQRT } [298/(273+/-\text{Ta})]$		Ta = AMBIENT TEMP °C	

Remarks	<i>Worthington Rd. cut down Other than cut down vegetation Inside station setup = SS</i>	
Signature (Witness)	Name	Title
<i>[Signature]</i>	<i>Kelsea Hunsberger</i>	<i>Environmental Specialist</i>
Has the instrument been restored to service? <input type="checkbox"/> Yes <input type="checkbox"/> No		

COPY 1



APPENDIX D

LABORATORY RESULTS – CERTIFICATES OF ANALYSIS



BUREAU
VERITAS

Your P.O. #: 4500022601
Your Project #: TC111504.2015.6
Site#: 2019/07/02 - 2019/08/02
Site Location: NEW GOLD - EMO, ON

Attention: GARNET CORNELL

NEW GOLD INC.
EMO, ON
5967 HIGHWAY 11/71
PO BOX 5
EMO, ON
CANADA POW 1E0

Report Date: 2019/08/30
Report #: R2774645
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: B970779

Received: 2019/08/26, 14:00

Sample Matrix: Air
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
NO2 Passive Analysis	2	2019/08/27	2019/08/30	PTC SOP-00148	Passive NO2 in ATM
SO2 Passive Analysis	2	2019/08/28	2019/08/30	PTC SOP-00149	Passive SO2 in ATM

This report shall not be reproduced except in full, without the written approval of the laboratory.
Results relate only to the items tested.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Levi Manchak, Project Manager SR
Email: Levi.MANCHAK@bvlabs.com
Phone# (780)378-8542

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BUREAU
VERITAS

BV Labs Job #: B970779

Report Date: 2019/08/30

NEW GOLD INC.

Client Project #: TC111504.2015.6

Site Location: NEW GOLD - EMO, ON

Your P.O. #: 4500022601

Sampler Initials: KH

RESULTS OF CHEMICAL ANALYSES OF AIR

BV Labs ID		WJ1229	WJ1230		
Sampling Date		2019/07/02	2019/07/02		
	UNITS	RRP SOUTH	RRP NORTH	RDL	QC Batch
Passive Monitoring					
Calculated NO2	ppb	0.3	0.6	0.1	9563624
Calculated SO2	ppb	0.1	<0.1	0.1	9565740
RDL = Reportable Detection Limit					



BUREAU
VERITAS

BV Labs Job #: B970779

Report Date: 2019/08/30

NEW GOLD INC.

Client Project #: TC111504.2015.6

Site Location: NEW GOLD - EMO, ON

Your P.O. #: 4500022601

Sampler Initials: KH

GENERAL COMMENTS

Travel blank result for SO2 exceeded acceptance criteria of >RDL. Possible contamination may have occurred. Sample results have been blank subtracted.

Results relate only to the items tested.



BUREAU
VERITAS

BV Labs Job #: B970779

Report Date: 2019/08/30

NEW GOLD INC.

Client Project #: TC111504.2015.6

Site Location: NEW GOLD - EMO, ON

Your P.O. #: 4500022601

Sampler Initials: KH

QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
9563624	YL6	Spiked Blank	Calculated NO2			98	%	90 - 110
9563624	YL6	Method Blank	Calculated NO2		<0.1		ppb	
9565740	OZ	Spiked Blank	Calculated SO2			101	%	90 - 110
9565740	OZ	Method Blank	Calculated SO2		<0.1		ppb	

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.



BUREAU
VERITAS

BV Labs Job #: B970779

Report Date: 2019/08/30

NEW GOLD INC.

Client Project #: TC111504.2015.6

Site Location: NEW GOLD - EMO, ON

Your P.O. #: 4500022601

Sampler Initials: KH

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Linda Lin, Supervisor, Centre for Passive Sampling Technology

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BUREAU
VERITAS

Your P.O. #: 4500022601
Your Project #: TC111504.2015.6
Site#: 2019/08/02 - 2019/09/04
Site Location: NEW GOLD - EMO, ON

Attention: GARNET CORNELL

NEW GOLD INC.
EMO, ON
5967 HIGHWAY 11/71
PO BOX 5
EMO, ON
CANADA POW 1E0

Report Date: 2019/09/23
Report #: R2784791
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: B976568

Received: 2019/09/12, 11:10

Sample Matrix: Air
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
NO2 Passive Analysis	2	2019/09/13	2019/09/23	PTC SOP-00148	Passive NO2 in ATM
SO2 Passive Analysis	2	2019/09/16	2019/09/23	PTC SOP-00149	Passive SO2 in ATM

This report shall not be reproduced except in full, without the written approval of the laboratory.
Results relate only to the items tested.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Levi Manchak, Project Manager SR
Email: Levi.MANCHAK@bvlabs.com
Phone# (780)378-8542

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BUREAU
VERITAS

BV Labs Job #: B976568

Report Date: 2019/09/23

NEW GOLD INC.

Client Project #: TC111504.2015.6

Site Location: NEW GOLD - EMO, ON

Your P.O. #: 4500022601

Sampler Initials: KH

RESULTS OF CHEMICAL ANALYSES OF AIR

BV Labs ID		WL9622	WL9623		
Sampling Date		2019/08/02	2019/08/02		
	UNITS	RRP SOUTH	RRP NORTH	RDL	QC Batch
Passive Monitoring					
Calculated NO2	ppb	0.5	0.9	0.1	9586540
Calculated SO2	ppb	<0.1	<0.1	0.1	9590307
RDL = Reportable Detection Limit					



BUREAU
VERITAS

BV Labs Job #: B976568

Report Date: 2019/09/23

NEW GOLD INC.

Client Project #: TC111504.2015.6

Site Location: NEW GOLD - EMO, ON

Your P.O. #: 4500022601

Sampler Initials: KH

GENERAL COMMENTS

Results relate only to the items tested.



BUREAU
VERITAS

BV Labs Job #: B976568

Report Date: 2019/09/23

NEW GOLD INC.

Client Project #: TC111504.2015.6

Site Location: NEW GOLD - EMO, ON

Your P.O. #: 4500022601

Sampler Initials: KH

QUALITY ASSURANCE REPORT

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
	9586540	SS6	Spiked Blank	Calculated NO2			101	%	90 - 110
	9586540	SS6	Method Blank	Calculated NO2		<0.1		ppb	
	9590307	OZ	Spiked Blank	Calculated SO2			106	%	90 - 110
	9590307	OZ	Method Blank	Calculated SO2		<0.1		ppb	

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.



BUREAU
VERITAS

BV Labs Job #: B976568

Report Date: 2019/09/23

NEW GOLD INC.

Client Project #: TC111504.2015.6

Site Location: NEW GOLD - EMO, ON

Your P.O. #: 4500022601

Sampler Initials: KH

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Linda Lin, Supervisor, Centre for Passive Sampling Technology

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BUREAU
VERITAS

Your P.O. #: 4500022601
Your Project #: TC111504.2015.6
Site#: 2019/09/04 - 2019/10/01
Site Location: NEW GOLD - EMO, ON

Attention: GARNET CORNELL

NEW GOLD INC.
EMO, ON
5967 HIGHWAY 11/71
PO BOX 5
EMO, ON
CANADA POW 1E0

Report Date: 2019/10/18

Report #: R2797975

Version: 1 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: B985803

Received: 2019/10/07, 11:25

Sample Matrix: Air
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
NO2 Passive Analysis	2	2019/10/09	2019/10/18	PTC SOP-00148	Passive NO2 in ATM
SO2 Passive Analysis	2	2019/10/11	2019/10/18	PTC SOP-00149	Passive SO2 in ATM

This report shall not be reproduced except in full, without the written approval of the laboratory.

Results relate only to the items tested.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

Levi Manchak, Project Manager SR

Email: Levi.MANCHAK@bvlabs.com

Phone# (780)378-8542

=====

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BUREAU
VERITAS

BV Labs Job #: B985803

Report Date: 2019/10/18

NEW GOLD INC.

Client Project #: TC111504.2015.6

Site Location: NEW GOLD - EMO, ON

Your P.O. #: 4500022601

Sampler Initials: KH

RESULTS OF CHEMICAL ANALYSES OF AIR

BV Labs ID		WQ7151	WQ7152		
Sampling Date		2019/09/04	2019/09/04		
	UNITS	RRP SOUTH	RRP NORTH	RDL	QC Batch
Passive Monitoring					
Calculated NO2	ppb	0.7	0.6	0.1	9621619
Calculated SO2	ppb	<0.1	<0.1	0.1	9625034
RDL = Reportable Detection Limit					



BUREAU
VERITAS

BV Labs Job #: B985803

Report Date: 2019/10/18

NEW GOLD INC.

Client Project #: TC111504.2015.6

Site Location: NEW GOLD - EMO, ON

Your P.O. #: 4500022601

Sampler Initials: KH

GENERAL COMMENTS

Travel blank result for SO₂ exceeded acceptance criteria of >RDL. Possible contamination may have occurred. Sample results have been blank subtracted.

Results relate only to the items tested.



BUREAU
VERITAS

BV Labs Job #: B985803

Report Date: 2019/10/18

NEW GOLD INC.

Client Project #: TC111504.2015.6

Site Location: NEW GOLD - EMO, ON

Your P.O. #: 4500022601

Sampler Initials: KH

QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
9621619	YL6	Spiked Blank	Calculated NO2			99	%	90 - 110
9621619	YL6	Method Blank	Calculated NO2		<0.1		ppb	
9625034	OZ	Spiked Blank	Calculated SO2			100	%	90 - 110
9625034	OZ	Method Blank	Calculated SO2		<0.1		ppb	

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.



BUREAU
VERITAS

BV Labs Job #: B985803

Report Date: 2019/10/18

NEW GOLD INC.

Client Project #: TC111504.2015.6

Site Location: NEW GOLD - EMO, ON

Your P.O. #: 4500022601

Sampler Initials: KH

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Linda Lin, Supervisor, Centre for Passive Sampling Technology

BV Labs has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation please refer to the Validation Signature Page.



New Gold Inc. Rainy River Project
ATTN: Kelsea Hunsperger
5967 Highway 11/71
P.O. Box 5
Emo ON POW 1E0

Date Received: 14-AUG-19
Report Date: 30-AUG-19 08:47 (MT)
Version: FINAL

Client Phone: 807-482-0900

Certificate of Analysis

Lab Work Order #: L2328815

Project P.O. #: 4500018623

Job Reference: AIR QUALITY MONITORING

C of C Numbers:

Legal Site Desc:

A handwritten signature in black ink, appearing to read "wirek".

Claire Kocharakkal, B.Sc.
Account Manager

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2328815-1	NORTH-TSP-249							
Sampled By:	Client on 02-JUL-19							
Matrix:	Hi Vol Filter							
Miscellaneous Parameters								
Total particulate		75800		2300	ug		22-AUG-19	R4764910
Metals on High Volume Filter by ICPMS								
Arsenic (As)		<3.0		3.0	ug	23-AUG-19	26-AUG-19	R4777288
Cadmium (Cd)		<2.0		2.0	ug	23-AUG-19	26-AUG-19	R4777288
Cobalt (Co)		<2.0		2.0	ug	23-AUG-19	26-AUG-19	R4777288
Chromium (Cr)		5.7		5.0	ug	23-AUG-19	26-AUG-19	R4777288
Copper (Cu)		801		4.0	ug	23-AUG-19	26-AUG-19	R4777288
Iron (Fe)		422		20	ug	23-AUG-19	26-AUG-19	R4777288
Manganese (Mn)		29.0		1.0	ug	23-AUG-19	26-AUG-19	R4777288
Nickel (Ni)		<3.0		3.0	ug	23-AUG-19	26-AUG-19	R4777288
Lead (Pb)		<3.0		3.0	ug	23-AUG-19	26-AUG-19	R4777288
Selenium (Se)		<10		10	ug	23-AUG-19	26-AUG-19	R4777288
Vanadium (V)		<5.0		5.0	ug	23-AUG-19	26-AUG-19	R4777288
Zinc (Zn)		31.0		5.0	ug	23-AUG-19	26-AUG-19	R4777288
L2328815-2	SOUTH-TSP-249							
Sampled By:	Client on 02-JUL-19							
Matrix:	Hi Vol Filter							
Miscellaneous Parameters								
Total particulate		69800		2300	ug		22-AUG-19	R4764910
Metals on High Volume Filter by ICPMS								
Arsenic (As)		<3.0		3.0	ug	23-AUG-19	26-AUG-19	R4777288
Cadmium (Cd)		<2.0		2.0	ug	23-AUG-19	26-AUG-19	R4777288
Cobalt (Co)		<2.0		2.0	ug	23-AUG-19	26-AUG-19	R4777288
Chromium (Cr)		5.3		5.0	ug	23-AUG-19	26-AUG-19	R4777288
Copper (Cu)		72.5		4.0	ug	23-AUG-19	26-AUG-19	R4777288
Iron (Fe)		504		20	ug	23-AUG-19	26-AUG-19	R4777288
Manganese (Mn)		26.3		1.0	ug	23-AUG-19	26-AUG-19	R4777288
Nickel (Ni)		<3.0		3.0	ug	23-AUG-19	26-AUG-19	R4777288
Lead (Pb)		<3.0		3.0	ug	23-AUG-19	26-AUG-19	R4777288
Selenium (Se)		<10		10	ug	23-AUG-19	26-AUG-19	R4777288
Vanadium (V)		<5.0		5.0	ug	23-AUG-19	26-AUG-19	R4777288
Zinc (Zn)		16.3		5.0	ug	23-AUG-19	26-AUG-19	R4777288
L2328815-3	NORTH-TSP-250							
Sampled By:	Client on 08-JUL-19							
Matrix:	Hi Vol Filter							
Miscellaneous Parameters								
Total particulate		81100		2300	ug		22-AUG-19	R4764910
Metals on High Volume Filter by ICPMS								
Arsenic (As)		<3.0		3.0	ug	23-AUG-19	26-AUG-19	R4777288
Cadmium (Cd)		<2.0		2.0	ug	23-AUG-19	26-AUG-19	R4777288
Cobalt (Co)		<2.0		2.0	ug	23-AUG-19	26-AUG-19	R4777288
Chromium (Cr)		<5.0		5.0	ug	23-AUG-19	26-AUG-19	R4777288
Copper (Cu)		581		4.0	ug	23-AUG-19	26-AUG-19	R4777288
Iron (Fe)		202		20	ug	23-AUG-19	26-AUG-19	R4777288
Manganese (Mn)		18.2		1.0	ug	23-AUG-19	26-AUG-19	R4777288
Nickel (Ni)		<3.0		3.0	ug	23-AUG-19	26-AUG-19	R4777288
Lead (Pb)		<3.0		3.0	ug	23-AUG-19	26-AUG-19	R4777288
Selenium (Se)		<10		10	ug	23-AUG-19	26-AUG-19	R4777288
Vanadium (V)		<5.0		5.0	ug	23-AUG-19	26-AUG-19	R4777288
Zinc (Zn)		28.1		5.0	ug	23-AUG-19	26-AUG-19	R4777288

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2328815-4	SOUTH-TSP-250							
Sampled By:	Client on 08-JUL-19							
Matrix:	Hi Vol Filter							
Miscellaneous Parameters								
Total particulate		88600		2300	ug		22-AUG-19	R4764910
Metals on High Volume Filter by ICPMS								
Arsenic (As)		<3.0		3.0	ug	23-AUG-19	26-AUG-19	R4777288
Cadmium (Cd)		<2.0		2.0	ug	23-AUG-19	26-AUG-19	R4777288
Cobalt (Co)		<2.0		2.0	ug	23-AUG-19	26-AUG-19	R4777288
Chromium (Cr)		5.7		5.0	ug	23-AUG-19	26-AUG-19	R4777288
Copper (Cu)		61.2		4.0	ug	23-AUG-19	26-AUG-19	R4777288
Iron (Fe)		455		20	ug	23-AUG-19	26-AUG-19	R4777288
Manganese (Mn)		27.2		1.0	ug	23-AUG-19	26-AUG-19	R4777288
Nickel (Ni)		<3.0		3.0	ug	23-AUG-19	26-AUG-19	R4777288
Lead (Pb)		<3.0		3.0	ug	23-AUG-19	26-AUG-19	R4777288
Selenium (Se)		<10		10	ug	23-AUG-19	26-AUG-19	R4777288
Vanadium (V)		<5.0		5.0	ug	23-AUG-19	26-AUG-19	R4777288
Zinc (Zn)		30.2		5.0	ug	23-AUG-19	26-AUG-19	R4777288
L2328815-5	NORTH-TSP-251							
Sampled By:	Client on 14-JUL-19							
Matrix:	Hi Vol Filter							
Miscellaneous Parameters								
Total particulate		60400		2300	ug		22-AUG-19	R4764910
Metals on High Volume Filter by ICPMS								
Arsenic (As)		<3.0		3.0	ug	23-AUG-19	26-AUG-19	R4777288
Cadmium (Cd)		<2.0		2.0	ug	23-AUG-19	26-AUG-19	R4777288
Cobalt (Co)		<2.0		2.0	ug	23-AUG-19	26-AUG-19	R4777288
Chromium (Cr)		5.2		5.0	ug	23-AUG-19	26-AUG-19	R4777288
Copper (Cu)		612		4.0	ug	23-AUG-19	26-AUG-19	R4777288
Iron (Fe)		218		20	ug	23-AUG-19	26-AUG-19	R4777288
Manganese (Mn)		13.0		1.0	ug	23-AUG-19	26-AUG-19	R4777288
Nickel (Ni)		<3.0		3.0	ug	23-AUG-19	26-AUG-19	R4777288
Lead (Pb)		<3.0		3.0	ug	23-AUG-19	26-AUG-19	R4777288
Selenium (Se)		<10		10	ug	23-AUG-19	26-AUG-19	R4777288
Vanadium (V)		<5.0		5.0	ug	23-AUG-19	26-AUG-19	R4777288
Zinc (Zn)		19.4		5.0	ug	23-AUG-19	26-AUG-19	R4777288
L2328815-6	SOUTH-TSP-251							
Sampled By:	Client on 14-JUL-19							
Matrix:	Hi Vol Filter							
Miscellaneous Parameters								
Total particulate		56600		2300	ug		22-AUG-19	R4764910
Metals on High Volume Filter by ICPMS								
Arsenic (As)		<3.0		3.0	ug	23-AUG-19	26-AUG-19	R4777288
Cadmium (Cd)		<2.0		2.0	ug	23-AUG-19	26-AUG-19	R4777288
Cobalt (Co)		<2.0		2.0	ug	23-AUG-19	26-AUG-19	R4777288
Chromium (Cr)		5.4		5.0	ug	23-AUG-19	26-AUG-19	R4777288
Copper (Cu)		45.9		4.0	ug	23-AUG-19	26-AUG-19	R4777288
Iron (Fe)		396		20	ug	23-AUG-19	26-AUG-19	R4777288
Manganese (Mn)		16.7		1.0	ug	23-AUG-19	26-AUG-19	R4777288
Nickel (Ni)		<3.0		3.0	ug	23-AUG-19	26-AUG-19	R4777288
Lead (Pb)		<3.0		3.0	ug	23-AUG-19	26-AUG-19	R4777288
Selenium (Se)		<10		10	ug	23-AUG-19	26-AUG-19	R4777288
Vanadium (V)		<5.0		5.0	ug	23-AUG-19	26-AUG-19	R4777288
Zinc (Zn)		13.7		5.0	ug	23-AUG-19	26-AUG-19	R4777288

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2328815-7	NORTH-TSP-252							
Sampled By:	Client on 20-JUL-19							
Matrix:	Hi Vol Filter							
Miscellaneous Parameters								
Total particulate		68100		2300	ug		22-AUG-19	R4764910
Metals on High Volume Filter by ICPMS								
Arsenic (As)		<3.0		3.0	ug	23-AUG-19	26-AUG-19	R4777288
Cadmium (Cd)		<2.0		2.0	ug	23-AUG-19	26-AUG-19	R4777288
Cobalt (Co)		<2.0		2.0	ug	23-AUG-19	26-AUG-19	R4777288
Chromium (Cr)		<5.0		5.0	ug	23-AUG-19	26-AUG-19	R4777288
Copper (Cu)		590		4.0	ug	23-AUG-19	26-AUG-19	R4777288
Iron (Fe)		255		20	ug	23-AUG-19	26-AUG-19	R4777288
Manganese (Mn)		14.2		1.0	ug	23-AUG-19	26-AUG-19	R4777288
Nickel (Ni)		<3.0		3.0	ug	23-AUG-19	26-AUG-19	R4777288
Lead (Pb)		<3.0		3.0	ug	23-AUG-19	26-AUG-19	R4777288
Selenium (Se)		<10		10	ug	23-AUG-19	26-AUG-19	R4777288
Vanadium (V)		<5.0		5.0	ug	23-AUG-19	26-AUG-19	R4777288
Zinc (Zn)		31.3		5.0	ug	23-AUG-19	26-AUG-19	R4777288
L2328815-8	SOUTH-TSP-252							
Sampled By:	Client on 20-JUL-19							
Matrix:	Hi Vol Filter							
Miscellaneous Parameters								
Total particulate		58100		2300	ug		22-AUG-19	R4764910
Metals on High Volume Filter by ICPMS								
Arsenic (As)		<3.0		3.0	ug	23-AUG-19	26-AUG-19	R4777288
Cadmium (Cd)		<2.0		2.0	ug	23-AUG-19	26-AUG-19	R4777288
Cobalt (Co)		<2.0		2.0	ug	23-AUG-19	26-AUG-19	R4777288
Chromium (Cr)		5.1		5.0	ug	23-AUG-19	26-AUG-19	R4777288
Copper (Cu)		44.3		4.0	ug	23-AUG-19	26-AUG-19	R4777288
Iron (Fe)		358		20	ug	23-AUG-19	26-AUG-19	R4777288
Manganese (Mn)		17.1		1.0	ug	23-AUG-19	26-AUG-19	R4777288
Nickel (Ni)		<3.0		3.0	ug	23-AUG-19	26-AUG-19	R4777288
Lead (Pb)		<3.0		3.0	ug	23-AUG-19	26-AUG-19	R4777288
Selenium (Se)		<10		10	ug	23-AUG-19	26-AUG-19	R4777288
Vanadium (V)		<5.0		5.0	ug	23-AUG-19	26-AUG-19	R4777288
Zinc (Zn)		20.5		5.0	ug	23-AUG-19	26-AUG-19	R4777288
L2328815-9	NORTH-TSP-253							
Sampled By:	Client on 26-JUL-19							
Matrix:	Hi Vol Filter							
Miscellaneous Parameters								
Total particulate		69000		2300	ug		22-AUG-19	R4764910
Metals on High Volume Filter by ICPMS								
Arsenic (As)		<3.0		3.0	ug	23-AUG-19	26-AUG-19	R4777288
Cadmium (Cd)		<2.0		2.0	ug	23-AUG-19	26-AUG-19	R4777288
Cobalt (Co)		<2.0		2.0	ug	23-AUG-19	26-AUG-19	R4777288
Chromium (Cr)		5.1		5.0	ug	23-AUG-19	26-AUG-19	R4777288
Copper (Cu)		433		4.0	ug	23-AUG-19	26-AUG-19	R4777288
Iron (Fe)		345		20	ug	23-AUG-19	26-AUG-19	R4777288
Manganese (Mn)		22.1		1.0	ug	23-AUG-19	26-AUG-19	R4777288
Nickel (Ni)		<3.0		3.0	ug	23-AUG-19	26-AUG-19	R4777288
Lead (Pb)		<3.0		3.0	ug	23-AUG-19	26-AUG-19	R4777288
Selenium (Se)		<10		10	ug	23-AUG-19	26-AUG-19	R4777288
Vanadium (V)		<5.0		5.0	ug	23-AUG-19	26-AUG-19	R4777288
Zinc (Zn)		31.6		5.0	ug	23-AUG-19	26-AUG-19	R4777288

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2328815-10	SOUTH-TSP-253							
Sampled By:	Client on 26-JUL-19							
Matrix:	Hi Vol Filter							
Miscellaneous Parameters								
Total particulate		54200		2300	ug		22-AUG-19	R4764910
Metals on High Volume Filter by ICPMS								
Arsenic (As)		<3.0		3.0	ug	23-AUG-19	26-AUG-19	R4777288
Cadmium (Cd)		<2.0		2.0	ug	23-AUG-19	26-AUG-19	R4777288
Cobalt (Co)		<2.0		2.0	ug	23-AUG-19	26-AUG-19	R4777288
Chromium (Cr)		5.3		5.0	ug	23-AUG-19	26-AUG-19	R4777288
Copper (Cu)		33.3		4.0	ug	23-AUG-19	26-AUG-19	R4777288
Iron (Fe)		302		20	ug	23-AUG-19	26-AUG-19	R4777288
Manganese (Mn)		19.2		1.0	ug	23-AUG-19	26-AUG-19	R4777288
Nickel (Ni)		<3.0		3.0	ug	23-AUG-19	26-AUG-19	R4777288
Lead (Pb)		<3.0		3.0	ug	23-AUG-19	26-AUG-19	R4777288
Selenium (Se)		<10		10	ug	23-AUG-19	26-AUG-19	R4777288
Vanadium (V)		<5.0		5.0	ug	23-AUG-19	26-AUG-19	R4777288
Zinc (Zn)		17.0		5.0	ug	23-AUG-19	26-AUG-19	R4777288
L2328815-11	NORTH-TSP-254							
Sampled By:	Client on 01-AUG-19							
Matrix:	Hi Vol Filter							
Miscellaneous Parameters								
Total particulate		78400		2300	ug		22-AUG-19	R4764910
Metals on High Volume Filter by ICPMS								
Arsenic (As)		<3.0		3.0	ug	23-AUG-19	26-AUG-19	R4777288
Cadmium (Cd)		<2.0		2.0	ug	23-AUG-19	26-AUG-19	R4777288
Cobalt (Co)		<2.0		2.0	ug	23-AUG-19	26-AUG-19	R4777288
Chromium (Cr)		5.4		5.0	ug	23-AUG-19	26-AUG-19	R4777288
Copper (Cu)		702		4.0	ug	23-AUG-19	26-AUG-19	R4777288
Iron (Fe)		549		20	ug	23-AUG-19	26-AUG-19	R4777288
Manganese (Mn)		34.2		1.0	ug	23-AUG-19	26-AUG-19	R4777288
Nickel (Ni)		<3.0		3.0	ug	23-AUG-19	26-AUG-19	R4777288
Lead (Pb)		<3.0		3.0	ug	23-AUG-19	26-AUG-19	R4777288
Selenium (Se)		<10		10	ug	23-AUG-19	26-AUG-19	R4777288
Vanadium (V)		<5.0		5.0	ug	23-AUG-19	26-AUG-19	R4777288
Zinc (Zn)		20.4		5.0	ug	23-AUG-19	26-AUG-19	R4777288
L2328815-12	SOUTH-TSP-254							
Sampled By:	Client on 01-AUG-19							
Matrix:	Hi Vol Filter							
Miscellaneous Parameters								
Total particulate		71400		2300	ug		22-AUG-19	R4764910
Metals on High Volume Filter by ICPMS								
Arsenic (As)		<3.0		3.0	ug	23-AUG-19	26-AUG-19	R4777288
Cadmium (Cd)		<2.0		2.0	ug	23-AUG-19	26-AUG-19	R4777288
Cobalt (Co)		<2.0		2.0	ug	23-AUG-19	26-AUG-19	R4777288
Chromium (Cr)		6.1		5.0	ug	23-AUG-19	26-AUG-19	R4777288
Copper (Cu)		50.0		4.0	ug	23-AUG-19	26-AUG-19	R4777288
Iron (Fe)		756		20	ug	23-AUG-19	26-AUG-19	R4777288
Manganese (Mn)		32.9		1.0	ug	23-AUG-19	26-AUG-19	R4777288
Nickel (Ni)		<3.0		3.0	ug	23-AUG-19	26-AUG-19	R4777288
Lead (Pb)		<3.0		3.0	ug	23-AUG-19	26-AUG-19	R4777288
Selenium (Se)		<10		10	ug	23-AUG-19	26-AUG-19	R4777288
Vanadium (V)		<5.0		5.0	ug	23-AUG-19	26-AUG-19	R4777288
Zinc (Zn)		15.0		5.0	ug	23-AUG-19	26-AUG-19	R4777288

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2328815-13 TSP-TRAVEL BLANK Sampled By: Client on 01-AUG-19 Matrix: Hi Vol Filter Miscellaneous Parameters Total particulate	15900		2300	ug		22-AUG-19	R4764910
Metals on High Volume Filter by ICPMS Arsenic (As) Cadmium (Cd) Cobalt (Co) Chromium (Cr) Copper (Cu) Iron (Fe) Manganese (Mn) Nickel (Ni) Lead (Pb) Selenium (Se) Vanadium (V) Zinc (Zn)	<3.0 <2.0 <2.0 <5.0 <4.0 24 <1.0 <3.0 <3.0 <10 <5.0 <5.0		3.0 2.0 2.0 5.0 4.0 20 1.0 3.0 3.0 10 5.0 5.0	ug	23-AUG-19 23-AUG-19 23-AUG-19 23-AUG-19 23-AUG-19 23-AUG-19 23-AUG-19 23-AUG-19 23-AUG-19 23-AUG-19 23-AUG-19	26-AUG-19 26-AUG-19 26-AUG-19 26-AUG-19 26-AUG-19 26-AUG-19 26-AUG-19 26-AUG-19 26-AUG-19 26-AUG-19 26-AUG-19	R4777288 R4777288 R4777288 R4777288 R4777288 R4777288 R4777288 R4777288 R4777288 R4777288 R4777288
L2328815-14 NORTH-PM2.5-249 Sampled By: Client on 02-JUL-19 Matrix: 47mm Filter Miscellaneous Parameters Total particulate	101		15	ug		21-AUG-19	R4764888
L2328815-15 SOUTH-PM2.5-249 Sampled By: Client on 02-JUL-19 Matrix: 47mm Filter Miscellaneous Parameters Total particulate	98		15	ug		21-AUG-19	R4764888
L2328815-16 NORTH-PM2.5-250 Sampled By: Client on 08-JUL-19 Matrix: 47mm Filter Miscellaneous Parameters Total particulate	318		15	ug		21-AUG-19	R4764888
L2328815-17 SOUTH-PM2.5-250 Sampled By: Client on 08-JUL-19 Matrix: 47mm Filter Miscellaneous Parameters Total particulate	383		15	ug		21-AUG-19	R4764888
L2328815-18 NORTH-PM2.5-251 Sampled By: Client on 14-JUL-19 Matrix: 47mm Filter Miscellaneous Parameters Total particulate	36		15	ug		21-AUG-19	R4764888
L2328815-19 SOUTH-PM2.5-251 Sampled By: Client on 14-JUL-19 Matrix: 47mm Filter Miscellaneous Parameters Total particulate	144		15	ug		21-AUG-19	R4764888
L2328815-20 NORTH-PM2.5-252 Sampled By: Client on 20-JUL-19 Matrix: 47mm Filter Miscellaneous Parameters							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2328815-20 NORTH-PM2.5-252 Sampled By: Client on 20-JUL-19 Matrix: 47mm Filter Miscellaneous Parameters Total particulate	67		15	ug		21-AUG-19	R4764888
L2328815-21 SOUTH-PM2.5-252 Sampled By: Client on 20-JUL-19 Matrix: 47mm Filter Miscellaneous Parameters Total particulate	167		15	ug		21-AUG-19	R4764888
L2328815-22 NORTH-PM2.5-253 Sampled By: Client on 26-JUL-19 Matrix: 47mm Filter Miscellaneous Parameters Total particulate	23		15	ug		21-AUG-19	R4764888
L2328815-23 SOUTH-PM2.5-253 Sampled By: Client on 26-JUL-19 Matrix: 47mm Filter Miscellaneous Parameters Total particulate	127		15	ug		21-AUG-19	R4764888
L2328815-24 NORTH-PM2.5-254 Sampled By: Client on 01-AUG-19 Matrix: 47mm Filter Miscellaneous Parameters Total particulate	29		15	ug		21-AUG-19	R4764888
L2328815-25 SOUTH-PM2.5-254 Sampled By: Client on 01-AUG-19 Matrix: 47mm Filter Miscellaneous Parameters Total particulate	135		15	ug		21-AUG-19	R4764888
L2328815-26 PM2.5-TRAVEL BLANK Sampled By: Client on 01-AUG-19 Matrix: 47mm Filter Miscellaneous Parameters Total particulate	<15		15	ug		21-AUG-19	R4764888
L2328815-27 NORTH-DUSTFALL Sampled By: Client on 02-AUG-19 Matrix: Dustfall Dustfalls-Total, Soluble, Insoluble +FV Total Dustfall Total Insoluble Dustfall Total Soluble Dustfall Fixed Dustfall Fixed Insoluble Dustfall Fixed Soluble Dustfall Volatile Dustfall Volatile Insoluble Dustfall Volatile Soluble Dustfall Total Metals in Dustfalls by ICPMS Aluminum (Al)-Total Interval Antimony (Sb)-Total	3.00 1.59 1.41 0.65 0.24 0.40 2.35 1.35 1.01 0.00275 1 0.0000040		0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.000044 1 0.0000015	mg/dm ² .day mg/dm ² .day days mg/dm ² .day		20-AUG-19 20-AUG-19 20-AUG-19 20-AUG-19 20-AUG-19 20-AUG-19 20-AUG-19 20-AUG-19 20-AUG-19 20-AUG-19 20-AUG-19 20-AUG-19 20-AUG-19	R4764090 R4764090 R4764090 R4764090 R4764090 R4764090 R4764090 R4764090 R4764090 R4761228 R4759937 R4761228

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2328815-27 NORTH-DUSTFALL							
Sampled By:	Client on 02-AUG-19						
Matrix:	Dustfall						
Total Metals in Dustfalls by ICPMS							
Arsenic (As)-Total	0.0000036	0.0000015	mg/dm ² .day	20-AUG-19	20-AUG-19	R4761228	
Barium (Ba)-Total	0.000126	0.00000073	mg/dm ² .day	20-AUG-19	20-AUG-19	R4761228	
Beryllium (Be)-Total	<0.0000073	0.0000073	mg/dm ² .day	20-AUG-19	20-AUG-19	R4761228	
Bismuth (Bi)-Total	<0.0000073	0.0000073	mg/dm ² .day	20-AUG-19	20-AUG-19	R4761228	
Boron (B)-Total	<0.00015	0.00015	mg/dm ² .day	20-AUG-19	20-AUG-19	R4761228	
Cadmium (Cd)-Total	0.00000268	0.00000073	mg/dm ² .day	20-AUG-19	20-AUG-19	R4761228	
Calcium (Ca)-Total	0.0437	0.00029	mg/dm ² .day	20-AUG-19	20-AUG-19	R4761228	
Chromium (Cr)-Total	<0.0000073	0.0000073	mg/dm ² .day	20-AUG-19	20-AUG-19	R4761228	
Cobalt (Co)-Total	0.0000033	0.0000015	mg/dm ² .day	20-AUG-19	20-AUG-19	R4761228	
Copper (Cu)-Total	0.000227	0.0000073	mg/dm ² .day	20-AUG-19	20-AUG-19	R4761228	
Lead (Pb)-Total	0.00000630	0.00000073	mg/dm ² .day	20-AUG-19	20-AUG-19	R4761228	
Iron (Fe)-Total	0.00340	0.00044	mg/dm ² .day	20-AUG-19	20-AUG-19	R4761228	
Lithium (Li)-Total	<0.0000073	0.000073	mg/dm ² .day	20-AUG-19	20-AUG-19	R4761228	
Magnesium (Mg)-Total	0.0163	0.000073	mg/dm ² .day	20-AUG-19	20-AUG-19	R4761228	
Manganese (Mn)-Total	0.000707	0.0000015	mg/dm ² .day	20-AUG-19	20-AUG-19	R4761228	
Molybdenum (Mo)-Total	0.0000230	0.00000073	mg/dm ² .day	20-AUG-19	20-AUG-19	R4761228	
Nickel (Ni)-Total	0.0000367	0.0000073	mg/dm ² .day	20-AUG-19	20-AUG-19	R4761228	
Phosphorus (P)-Total	0.0724	0.00073	mg/dm ² .day	20-AUG-19	20-AUG-19	R4761228	
Potassium (K)-Total	0.115	0.00073	mg/dm ² .day	20-AUG-19	20-AUG-19	R4761228	
Selenium (Se)-Total	<0.0000015	0.0000015	mg/dm ² .day	20-AUG-19	20-AUG-19	R4761228	
Silicon (Si)-Total	0.00567	0.00073	mg/dm ² .day	20-AUG-19	20-AUG-19	R4761228	
Silver (Ag)-Total	0.00000038	0.00000015	mg/dm ² .day	20-AUG-19	20-AUG-19	R4761228	
Sodium (Na)-Total	0.00375	0.00073	mg/dm ² .day	20-AUG-19	20-AUG-19	R4761228	
Strontium (Sr)-Total	0.0000638	0.0000015	mg/dm ² .day	20-AUG-19	20-AUG-19	R4761228	
Thallium (Tl)-Total	<0.0000015	0.0000015	mg/dm ² .day	20-AUG-19	20-AUG-19	R4761228	
Tin (Sn)-Total	<0.0000015	0.0000015	mg/dm ² .day	20-AUG-19	20-AUG-19	R4761228	
Titanium (Ti)-Total	<0.00015	0.00015	mg/dm ² .day	20-AUG-19	20-AUG-19	R4761228	
Uranium (U)-Total	<0.00000015	0.00000015	mg/dm ² .day	20-AUG-19	20-AUG-19	R4761228	
Vanadium (V)-Total	<0.000015	0.000015	mg/dm ² .day	20-AUG-19	20-AUG-19	R4761228	
Zinc (Zn)-Total	0.00139	0.000044	mg/dm ² .day	20-AUG-19	20-AUG-19	R4761228	
L2328815-28 SOUTH-DUSTFALL							
Sampled By:	Client on 02-AUG-19						
Matrix:	Dustfall						
Dustfalls-Total, Soluble, Insoluble +FV							
Total Dustfall	1.28	0.10	mg/dm ² .day		20-AUG-19	R4764090	
Total Insoluble Dustfall	0.77	0.10	mg/dm ² .day		20-AUG-19	R4764090	
Total Soluble Dustfall	0.51	0.10	mg/dm ² .day		20-AUG-19	R4764090	
Fixed Dustfall	0.68	0.10	mg/dm ² .day		20-AUG-19	R4764090	
Fixed Insoluble Dustfall	0.56	0.10	mg/dm ² .day		20-AUG-19	R4764090	
Fixed Soluble Dustfall	0.12	0.10	mg/dm ² .day		20-AUG-19	R4764090	
Volatile Dustfall	0.60	0.10	mg/dm ² .day		20-AUG-19	R4764090	
Volatile Insoluble Dustfall	0.21	0.10	mg/dm ² .day		20-AUG-19	R4764090	
Volatile Soluble Dustfall	0.39	0.10	mg/dm ² .day		20-AUG-19	R4764090	
Total Metals in Dustfalls by ICPMS							
Aluminum (Al)-Total	0.00568	0.000032	mg/dm ² .day	20-AUG-19	20-AUG-19	R4761228	
Interval		1	days		20-AUG-19	R4759937	

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2328815-28 SOUTH-DUSTFALL							
Sampled By:	Client on 02-AUG-19						
Matrix:	Dustfall						
Total Metals in Dustfalls by ICPMS							
Antimony (Sb)-Total	0.0000014		0.0000011	mg/dm ² .day	20-AUG-19	20-AUG-19	R4761228
Arsenic (As)-Total	0.0000040		0.0000011	mg/dm ² .day	20-AUG-19	20-AUG-19	R4761228
Barium (Ba)-Total	0.0000904		0.0000005	mg/dm ² .day	20-AUG-19	20-AUG-19	R4761228
Beryllium (Be)-Total	<0.0000054		0.0000054	mg/dm ² .day	20-AUG-19	20-AUG-19	R4761228
Bismuth (Bi)-Total	<0.0000054		0.0000054	mg/dm ² .day	20-AUG-19	20-AUG-19	R4761228
Boron (B)-Total	<0.00011		0.00011	mg/dm ² .day	20-AUG-19	20-AUG-19	R4761228
Cadmium (Cd)-Total	0.00000063		0.0000005	mg/dm ² .day	20-AUG-19	20-AUG-19	R4761228
Calcium (Ca)-Total	0.0275		0.00022	mg/dm ² .day	20-AUG-19	20-AUG-19	R4761228
Chromium (Cr)-Total	0.0000113		0.0000054	mg/dm ² .day	20-AUG-19	20-AUG-19	R4761228
Cobalt (Co)-Total	0.0000043		0.0000011	mg/dm ² .day	20-AUG-19	20-AUG-19	R4761228
Copper (Cu)-Total	0.0000655		0.0000054	mg/dm ² .day	20-AUG-19	20-AUG-19	R4761228
Lead (Pb)-Total	0.00000842		0.0000005	mg/dm ² .day	20-AUG-19	20-AUG-19	R4761228
Iron (Fe)-Total	0.00728		0.00032	mg/dm ² .day	20-AUG-19	20-AUG-19	R4761228
Lithium (Li)-Total	<0.000054		0.000054	mg/dm ² .day	20-AUG-19	20-AUG-19	R4761228
Magnesium (Mg)-Total	0.00901		0.000054	mg/dm ² .day	20-AUG-19	20-AUG-19	R4761228
Manganese (Mn)-Total	0.000478		0.0000011	mg/dm ² .day	20-AUG-19	20-AUG-19	R4761228
Molybdenum (Mo)-Total	0.00000117		0.0000005	mg/dm ² .day	20-AUG-19	20-AUG-19	R4761228
Nickel (Ni)-Total	0.0000232		0.0000054	mg/dm ² .day	20-AUG-19	20-AUG-19	R4761228
Phosphorus (P)-Total	0.00593		0.00054	mg/dm ² .day	20-AUG-19	20-AUG-19	R4761228
Potassium (K)-Total	0.0102		0.00054	mg/dm ² .day	20-AUG-19	20-AUG-19	R4761228
Selenium (Se)-Total	<0.000011		0.000011	mg/dm ² .day	20-AUG-19	20-AUG-19	R4761228
Silicon (Si)-Total	0.00854		0.00054	mg/dm ² .day	20-AUG-19	20-AUG-19	R4761228
Silver (Ag)-Total	0.00000015		0.0000001	mg/dm ² .day	20-AUG-19	20-AUG-19	R4761228
Sodium (Na)-Total	0.00257		0.00054	mg/dm ² .day	20-AUG-19	20-AUG-19	R4761228
Strontium (Sr)-Total	0.0000744		0.0000011	mg/dm ² .day	20-AUG-19	20-AUG-19	R4761228
Thallium (Tl)-Total	<0.0000011		0.0000011	mg/dm ² .day	20-AUG-19	20-AUG-19	R4761228
Tin (Sn)-Total	<0.0000011		0.0000011	mg/dm ² .day	20-AUG-19	20-AUG-19	R4761228
Titanium (Ti)-Total	0.000019		0.00011	mg/dm ² .day	20-AUG-19	20-AUG-19	R4761228
Uranium (U)-Total	0.00000034		0.0000001	mg/dm ² .day	20-AUG-19	20-AUG-19	R4761228
Vanadium (V)-Total	0.000014		0.000011	mg/dm ² .day	20-AUG-19	20-AUG-19	R4761228
Zinc (Zn)-Total	<0.00029	DLB	0.00029	mg/dm ² .day	20-AUG-19	20-AUG-19	R4761228

Reference Information

Sample Parameter Qualifier Key:

Qualifier	Description
A	Method Blank exceeds ALS DQO. Refer to narrative comments for further information.
B	Method Blank exceeds ALS DQO. Associated sample results which are < Limit of Reporting or > 5 times blank level are considered reliable.
DLB	Detection Limit Raised. Analyte detected at comparable level in Method Blank.
MB-LOR	Method Blank exceeds ALS DQO. Limits of Reporting have been adjusted for samples with positive hits below 5x blank level.
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
AIR VOLUME-HIVOL-BU	Filter	Air volume (m3)	USEPA IO3.1
DUSTFALLS-ALL-DM2-VA	Dustfall	Dustfalls-Total, Soluble, Insoluble +FV	BC LAB MANUAL - PARTICULATE
This analysis is carried out using procedures modified from British Columbia Environmental Manual "Particulate." Particulates or "Dustfalls" are determined gravimetrically. Total Insoluble and Soluble Dustfalls are determined by filtering a sample through a 0.45 um membrane filter and drying the filter and filtrate at 104 C, followed by ignition at 550 C. The remaining residue after 550 C represents the fixed portion and the weight lost on ignition represents the volatile portion. The sum of all fixed and volatile portions on both Insoluble and Soluble portions represents Total Dustfalls.			
MET+IC/SOLID-CALC-BU	Filter	Metals + Anions + Cations / Solids Ratio	Calculation
MET-DUST(DM2)-MS-VA	Dustfall	Total Metals in Dustfalls by ICPMS	EPA 6020A
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). Instrumental analysis is by inductively coupled plasma - mass spectrometry (EPA Method 6020A).			
MET-IO3.5-MS-BU	Filter	Metals on High Volume Filter by ICPMS	IO3.5
After weighing (if required), hivol filters are sub-sampled and leached with nitric acid to extract available metal analytes. After dilution, the extracts are submitted to the ICPMS instrument for analysis.			
PART-EC6.08-GRAV-BU	Filter	Particulate ENV Canada 6.08 microbalance	ENV CAN 6.08
The particulate matter collected onto tare-weighed 47mm Teflon Disc filter media is desiccated then brought to a constant weight on an analytical balance. Results are presented in ug (per filter). An air volume can be included to allow for reporting in ug/m3.			
PART-HIVOL-GRAV-BU	Filter	Particulate on High Volume Filter	USEPA IO3.1

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
BU	ALS ENVIRONMENTAL - BURLINGTON, ONTARIO, CANADA
VA	ALS ENVIRONMENTAL - VANCOUVER, BRITISH COLUMBIA, CANADA

Chain of Custody Numbers:
GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.

mg/kg - milligrams per kilogram based on dry weight of sample

mg/kg wwt - milligrams per kilogram based on wet weight of sample

mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight

mg/L - unit of concentration based on volume, parts per million.

< - Less than.

D.L. - The reporting limit.

N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.

Quality Control Report

Workorder: L2328815

Report Date: 30-AUG-19

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Client: New Gold Inc. Rainy River Project
 5967 Highway 11/71 P.O. Box 5
 Emo ON P0W 1E0

Contact: Kelsea Hunsperger

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-IO3.5-MS-BU	Filter							
Batch	R4777288							
WG3143626-3 DUP		L2328815-1						
Arsenic (As)		<3.0	<3.0	RPD-NA	ug	N/A	20	26-AUG-19
Cadmium (Cd)		<2.0	<2.0	RPD-NA	ug	N/A	20	26-AUG-19
Cobalt (Co)		<2.0	<2.0	RPD-NA	ug	N/A	20	26-AUG-19
Chromium (Cr)		5.7	<5.0	RPD-NA	ug	N/A	20	26-AUG-19
Copper (Cu)		801	693		ug	14	20	26-AUG-19
Iron (Fe)		422	379		ug	11	25	26-AUG-19
Manganese (Mn)		29.0	24.8		ug	15	20	26-AUG-19
Nickel (Ni)		<3.0	<3.0	RPD-NA	ug	N/A	20	26-AUG-19
Lead (Pb)		<3.0	<3.0	RPD-NA	ug	N/A	20	26-AUG-19
Selenium (Se)		<10	<10	RPD-NA	ug	N/A	20	26-AUG-19
Vanadium (V)		<5.0	<5.0	RPD-NA	ug	N/A	20	26-AUG-19
Zinc (Zn)		31.0	23.3	J	ug	7.7	10	26-AUG-19
WG3143626-2 LCS								
Arsenic (As)		94.6		%		80-120	26-AUG-19	
Cadmium (Cd)		94.2		%		80-120	26-AUG-19	
Cobalt (Co)		99.0		%		80-120	26-AUG-19	
Chromium (Cr)		94.9		%		80-120	26-AUG-19	
Copper (Cu)		104.0		%		80-120	26-AUG-19	
Iron (Fe)		98.4		%		80-120	26-AUG-19	
Manganese (Mn)		96.3		%		80-120	26-AUG-19	
Nickel (Ni)		94.9		%		80-120	26-AUG-19	
Lead (Pb)		96.4		%		80-120	26-AUG-19	
Selenium (Se)		98.9		%		80-120	26-AUG-19	
Vanadium (V)		95.1		%		80-120	26-AUG-19	
Zinc (Zn)		97.5		%		80-120	26-AUG-19	
WG3143626-1 MB								
Arsenic (As)		<3.0		ug		3	26-AUG-19	
Cadmium (Cd)		<2.0		ug		2	26-AUG-19	
Cobalt (Co)		<2.0		ug		2	26-AUG-19	
Chromium (Cr)		<5.0		ug		5	26-AUG-19	
Copper (Cu)		6.1	A	ug		4	26-AUG-19	
Iron (Fe)		<20		ug		20	26-AUG-19	
Manganese (Mn)		<1.0		ug		1	26-AUG-19	
Nickel (Ni)		<3.0		ug		3	26-AUG-19	
Lead (Pb)		<3.0		ug		3	26-AUG-19	

Quality Control Report

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-IO3.5-MS-BU Filter								
Batch R4777288								
WG3143626-1 MB								
Selenium (Se)			<10		ug		10	26-AUG-19
Vanadium (V)			<5.0		ug		10	26-AUG-19
Zinc (Zn)			<5.0		ug		5	26-AUG-19
COMMENTS: Cu observed in the method blank above the LOR. Data for this analyte may be biased slightly high as a result of this background contribution. PE 29-Aug-19								
WG3143626-4 MS L2328815-1								
Arsenic (As)			96.0		%		75-125	26-AUG-19
Cadmium (Cd)			95.5		%		75-125	26-AUG-19
Cobalt (Co)			100.3		%		75-125	26-AUG-19
Chromium (Cr)			95.4		%		75-125	26-AUG-19
Copper (Cu)			N/A	MS-B	%		-	26-AUG-19
Iron (Fe)			N/A	MS-B	%		-	26-AUG-19
Manganese (Mn)			88.6		%		75-125	26-AUG-19
Nickel (Ni)			95.4		%		75-125	26-AUG-19
Lead (Pb)			92.3		%		75-125	26-AUG-19
Selenium (Se)			99.3		%		75-125	26-AUG-19
Vanadium (V)			97.5		%		75-125	26-AUG-19
Zinc (Zn)			89.6		%		75-125	26-AUG-19
PART-EC6.08-GRAV-BU Filter								
Batch R4764888								
WG3140663-2 DUP L2328815-14								
Total particulate			101		ug		5.1	25
WG3140663-1 MB								
Total particulate			<15		ug		15	21-AUG-19
PART-HIVOL-GRAV-BU Filter								
Batch R4764910								
WG3140675-3 DUP L2328815-1								
Total particulate			75800		ug		0.4	25
WG3140675-1 MB								
Total particulate			<100		ug		100	22-AUG-19
DUSTFALLS-ALL-DM2-VA Dustfall								
Batch R4764090								
WG3137627-1 MB								
Total Dustfall			<0.10		mg/dm ² .day		0.1	20-AUG-19
Total Insoluble Dustfall			<0.10		mg/dm ² .day		0.1	20-AUG-19
Total Soluble Dustfall			<0.10		mg/dm ² .day		0.1	20-AUG-19

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Workorder: L2328815

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
DUSTFALLS-ALL-DM2-VA Dustfall								
Batch R4764090								
WG3137627-1 MB								
Fixed Dustfall			<0.10		mg/dm ² .day		0.1	20-AUG-19
Fixed Insoluble Dustfall			<0.10		mg/dm ² .day		0.1	20-AUG-19
Fixed Soluble Dustfall			<0.10		mg/dm ² .day		0.1	20-AUG-19
Volatile Dustfall			<0.10		mg/dm ² .day		0.1	20-AUG-19
Volatile Insoluble Dustfall			<0.10		mg/dm ² .day		0.1	20-AUG-19
Volatile Soluble Dustfall			<0.10		mg/dm ² .day		0.1	20-AUG-19
MET-DUST(DM2)-MS-VA Dustfall								
Batch R4761228								
WG3136891-2 LCS								
Aluminum (Al)-Total			92.6		%		80-120	20-AUG-19
Antimony (Sb)-Total			93.2		%		80-120	20-AUG-19
Arsenic (As)-Total			99.7		%		80-120	20-AUG-19
Barium (Ba)-Total			96.2		%		80-120	20-AUG-19
Beryllium (Be)-Total			85.8		%		80-120	20-AUG-19
Bismuth (Bi)-Total			90.1		%		80-120	20-AUG-19
Boron (B)-Total			94.5		%		80-120	20-AUG-19
Cadmium (Cd)-Total			94.9		%		80-120	20-AUG-19
Calcium (Ca)-Total			85.3		%		80-120	20-AUG-19
Chromium (Cr)-Total			94.3		%		80-120	20-AUG-19
Cobalt (Co)-Total			91.6		%		80-120	20-AUG-19
Copper (Cu)-Total			92.5		%		80-120	20-AUG-19
Lead (Pb)-Total			84.4		%		80-120	20-AUG-19
Iron (Fe)-Total			88.2		%		80-120	20-AUG-19
Lithium (Li)-Total			85.5		%		80-120	20-AUG-19
Magnesium (Mg)-Total			91.8		%		80-120	20-AUG-19
Manganese (Mn)-Total			95.5		%		80-120	20-AUG-19
Molybdenum (Mo)-Total			92.1		%		80-120	20-AUG-19
Nickel (Ni)-Total			92.2		%		80-120	20-AUG-19
Phosphorus (P)-Total			101.7		%		80-120	20-AUG-19
Potassium (K)-Total			91.6		%		80-120	20-AUG-19
Selenium (Se)-Total			95.5		%		80-120	20-AUG-19
Silicon (Si)-Total			98.4		%		80-120	20-AUG-19
Silver (Ag)-Total			85.4		%		80-120	20-AUG-19
Sodium (Na)-Total			98.0		%		80-120	20-AUG-19

Quality Control Report

Workorder: L2328815

Report Date: 30-AUG-19

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-DUST(DM2)-MS-VA		Dustfall						
Batch R4761228								
WG3136891-2	LCS							
Strontium (Sr)-Total			86.1		%		80-120	20-AUG-19
Thallium (Tl)-Total			82.7		%		80-120	20-AUG-19
Tin (Sn)-Total			92.5		%		80-120	20-AUG-19
Titanium (Ti)-Total			94.3		%		80-120	20-AUG-19
Uranium (U)-Total			84.6		%		80-120	20-AUG-19
Vanadium (V)-Total			94.3		%		80-120	20-AUG-19
Zinc (Zn)-Total			101.3		%		80-120	20-AUG-19
WG3136891-1	MB							
Aluminum (Al)-Total			<0.000079		mg/dm2.day		0.000079	20-AUG-19
Antimony (Sb)-Total			<0.0000026		mg/dm2.day		0.0000026	20-AUG-19
Arsenic (As)-Total			<0.0000026		mg/dm2.day		0.0000026	20-AUG-19
Barium (Ba)-Total			0.0000013	B	mg/dm2.day		0.0000013	20-AUG-19
Beryllium (Be)-Total			<0.000013		mg/dm2.day		0.000013	20-AUG-19
Bismuth (Bi)-Total			<0.000013		mg/dm2.day		0.000013	20-AUG-19
Boron (B)-Total			<0.00026		mg/dm2.day		0.00026	20-AUG-19
Cadmium (Cd)-Total			<0.0000013		mg/dm2.day		0.0000013	20-AUG-19
Calcium (Ca)-Total			0.00150	B	mg/dm2.day		0.00052	20-AUG-19
Chromium (Cr)-Total			<0.000013		mg/dm2.day		0.000013	20-AUG-19
Cobalt (Co)-Total			<0.0000026		mg/dm2.day		0.0000026	20-AUG-19
Copper (Cu)-Total			<0.000013		mg/dm2.day		0.000013	20-AUG-19
Lead (Pb)-Total			<0.0000013		mg/dm2.day		0.0000013	20-AUG-19
Iron (Fe)-Total			<0.00079		mg/dm2.day		0.00079	20-AUG-19
Lithium (Li)-Total			<0.00013		mg/dm2.day		0.00013	20-AUG-19
Magnesium (Mg)-Total			<0.00013		mg/dm2.day		0.00013	20-AUG-19
Manganese (Mn)-Total			<0.0000026		mg/dm2.day		0.0000026	20-AUG-19
Molybdenum (Mo)-Total			<0.0000013		mg/dm2.day		0.0000013	20-AUG-19
Nickel (Ni)-Total			<0.000013		mg/dm2.day		0.000013	20-AUG-19
Phosphorus (P)-Total			<0.0013		mg/dm2.day		0.0013	20-AUG-19
Potassium (K)-Total			<0.0013		mg/dm2.day		0.0013	20-AUG-19
Selenium (Se)-Total			<0.000026		mg/dm2.day		0.000026	20-AUG-19
Silicon (Si)-Total			<0.0013		mg/dm2.day		0.0013	20-AUG-19
Silver (Ag)-Total			<0.0000002		mg/dm2.day		0.00000026	20-AUG-19
Sodium (Na)-Total			<0.0013		mg/dm2.day		0.0013	20-AUG-19
Strontium (Sr)-Total			<0.0000026		mg/dm2.day		0.0000026	20-AUG-19

Quality Control Report

Workorder: L2328815

Report Date: 30-AUG-19

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-DUST(DM2)-MS-VA Dustfall								
Batch R4761228								
WG3136891-1 MB								
Thallium (Tl)-Total			<0.0000026		mg/dm ² .day		0.0000026	20-AUG-19
Tin (Sn)-Total			<0.0000026		mg/dm ² .day		0.0000026	20-AUG-19
Titanium (Ti)-Total			<0.00026		mg/dm ² .day		0.00026	20-AUG-19
Uranium (U)-Total			<0.0000002		mg/dm ² .day		0.00000026	20-AUG-19
Vanadium (V)-Total			<0.000026		mg/dm ² .day		0.000026	20-AUG-19
Zinc (Zn)-Total			0.000176	MB-LOR	mg/dm ² .day		0.000079	20-AUG-19

Quality Control Report

Workorder: L2328815

Report Date: 30-AUG-19

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Legend:

Limit	ALS Control Limit (Data Quality Objectives)
DUP	Duplicate
RPD	Relative Percent Difference
N/A	Not Available
LCS	Laboratory Control Sample
SRM	Standard Reference Material
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ADE	Average Desorption Efficiency
MB	Method Blank
IRM	Internal Reference Material
CRM	Certified Reference Material
CCV	Continuing Calibration Verification
CVS	Calibration Verification Standard
LCSD	Laboratory Control Sample Duplicate

Sample Parameter Qualifier Definitions:

Qualifier	Description
A	Method Blank exceeds ALS DQO. Refer to narrative comments for further information.
B	Method Blank exceeds ALS DQO. Associated sample results which are < Limit of Reporting or > 5 times blank level are considered reliable.
J	Duplicate results and limits are expressed in terms of absolute difference.
MB-LOR	Method Blank exceeds ALS DQO. Limits of Reporting have been adjusted for samples with positive hits below 5x blank level.
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Hold Time Exceedances:

All test results reported with this submission were conducted within ALS recommended hold times.

ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where available). For more information, please contact ALS.

The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide confidence in the accuracy of associated test results.

Please note that this report may contain QC results from anonymous Sample Duplicates and Matrix Spikes that do not originate from this Work Order.

L2328815

Report To				Report Format / Distribution			Select Service Level Below (Rush Turnaround Time (TAT) is not available for all tests)										
Company:	New Gold Inc. Rainy River Project			Report Format:	<input checked="" type="checkbox"/> PDF	<input type="checkbox"/> Excel	<input checked="" type="checkbox"/> EDD (Digital)	R	<input checked="" type="checkbox"/> Regular (Standard TAT if received by 3pm - business days)								
Contact:	Kelsea Hunsperger			Quality Control (QC) Report with Report	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		P	<input type="checkbox"/> Priority (2-4 bus. days if received by 3pm) 50% surcharge - contact ALS to confirm TAT								
Address:	24 Marr Rd.			<input type="checkbox"/> Criteria on Report - provide details below if box checked			E	<input type="checkbox"/> Emergency (1-2 bus. days if received by 3pm) 100% surcharge - contact ALS to confirm TAT									
City/Province:	Barwick ON			Select Distribution:	<input checked="" type="checkbox"/> Email	<input type="checkbox"/> Mail	<input type="checkbox"/> Fax	E2	<input type="checkbox"/> Emergency (1-2 bus. days if received by 3pm) 100% surcharge - contact ALS to confirm TAT								
Postal Code:	P0W 1A0			Email 1 or Fax:	rainyriver.labresults@newgold.com			Date and Time Required for all E&P TATs:									
Phone:	807-482-0900 x8328						For tests that can not be performed according to the service level selected, you will be contacted.										
				Email 2	yag.inviron@newgold.com			Analysis Request									
Invoice To	Same as Report?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Invoice Distribution			Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below										
Copy of Invoice with Report?		<input type="checkbox"/> Yes	<input type="checkbox"/> No	Select Invoice Distribution:			<input checked="" type="checkbox"/> Email	<input type="checkbox"/> Mail	<input type="checkbox"/> Fax								
Company:			Email 1 or Fax:			rainyriver.labresults@newgold.com											
Contact:			Email 2:			Kelsea hunsperger@newgold.com											
Project Information				Oil and Gas Required Fields (client use)													
ALS Quote #:				Approver ID:		Cost Center:											
Job #:	Air Quality			GL Account:		Routing Code:											
PO / AFE:	4500018623			Activity Code:													
LSD:				Location:													
ALS Lab Work Order # (lab use only)				ALS Contact:	Claire Kockarakkal	Sampler:											
Sample Ref (upload EDD)	Sample Identification and/or Coordinates (Description will appear on the report)	Filter ID		Date (dd-MMM-yy)	Time (hh:mm)	Sample Type	TSP and Metals	PM2.5	Dustfall and volatile								
122716	TSP		North-TSP-249	02-Jul-19	12:00	Air	x										
122717	TSP		South-TSP-249	02-Jul-19	12:00	Air	x										
122718	PM 2.5		North-PM2.5-249	02-Jul-19	12:00	Air	x										
122719	PM 2.5		South-PM2.5-249	02-Jul-19	12:00	Air	x										
122720	TSP		North-TSP-250	08-Jul-19	12:00	Air	x										
122721	TSP		South-TSP-250	08-Jul-19	12:00	Air	x										
122726	PM 2.5		North-PM2.5-250	08-Jul-19	12:00	Air	x										
122728	PM 2.5		South-PM2.5-250	08-Jul-19	12:00	Air	x										
122727	TSP		North-TSP-251	14-Jul-19	12:00	Air	x										
122734	TSP		South-TSP-251	14-Jul-19	12:00	Air	x										
122737	PM 2.5		North-PM2.5-251	14-Jul-19	12:00	Air	x										
122738	PM 2.5		South-PM2.5-251	14-Jul-19	12:00	Air	x										
122739	TSP		North-TSP-252	20-Jul-19	12:00	Air	x										
122740	TSP		South-TSP-252	20-Jul-19	12:00	Air	x										
122741	PM 2.5		North-PM2.5-252	20-Jul-19	12:00	Air	x										
122742	PM 2.5		South-PM2.5-252	20-Jul-19	12:00	Air	x										
122743	TSP		North-TSP-253	26-Jul-19	12:00	Air	x										
122744	TSP		South-TSP-253	26-Jul-19	12:00	Air	x										
122746	PM 2.5		North-PM2.5-253	26-Jul-19	12:00	Air	x										
122748	PM 2.5		South-PM2.5-253	26-Jul-19	12:00	Air	x										
122749	TSP		North-TSP-254	01-Aug-19	12:00	Air	x										
122750	TSP		South-TSP-254	01-Aug-19	12:00	Air	x										
122751	PM 2.5		North-PM2.5-254	01-Aug-19	12:00	Air	x										
122752	PM 2.5		South-PM2.5-254	01-Aug-19	12:00	Air	x										
122753	Dustfall - Tait Road (South)			02-Aug-19	12:00	Air		x									
122754	Dustfall - Gallinger Road			02-Aug-19	12:00	Air		x									
122755	TSP Travel Blank			01-Aug-19	12:00	Air	x										
122756	PM2.5 Travel Blank			01-Aug-19	12:00	Air	x										
Drinking Water (DW) Samples' (client use)				Special Instructions / Specify Criteria to add on report (client Use)				SAMPLE CONDITION AS RECEIVED (lab use only)									
Are samples taken from a Regulated DW System?				MISA [Template NGSWMISA]				Frozen	<input type="checkbox"/>	SIF Observations	<input type="checkbox"/> Yes	<input type="checkbox"/> No					
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No								Ice packs	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Custody seal intact	<input type="checkbox"/> Yes	<input type="checkbox"/> No				
Are samples for human drinking water use?								Cooling Initiated	<input type="checkbox"/>								
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No								INITIAL COOLER TEMPERATURES °C FINAL COOLER TEMPERATURES °C									
SHIPMENT RELEASE (client use)				INITIAL SHIPMENT RECEPTION (lab use only)				FINAL SHIPMENT RECEPTION (lab use only)									
Released by: Kelsea Hunsperger	Date: 2019-08-15	Time: 9:15	Received by: AARav Burton	Date: 14-Aug-2019	Time: 8:50	Received by:	Date:	Time:									



New Gold Inc. Rainy River Project
ATTN: Kelsea Hunsperger
5967 Highway 11/71
P.O. Box 5
Emo ON POW 1E0

Date Received: 13-SEP-19
Report Date: 11-OCT-19 13:24 (MT)
Version: FINAL

Client Phone: 807-482-0900

Certificate of Analysis

Lab Work Order #: L2346695

Project P.O. #: 4500018623

Job Reference: AIR QUALITY MONITORING

C of C Numbers:

Legal Site Desc:

A handwritten signature in black ink, appearing to read "wirek".

Claire Kocharakkal, B.Sc.
Account Manager

[This report shall not be reproduced except in full without the written authority of the Laboratory.]

ADDRESS: 1435 Norjohn Court, Unit 1, Burlington, ON, L7L 0E6 Canada | Phone: +1 905 331 3111 | Fax: +1 905 331 4567
ALS CANADA LTD Part of the ALS Group An ALS Limited Company

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2346695-1 NORTH-TSP-255 Sampled By: Kelsea Hunsperger on 07-AUG-19 Matrix: Hi Vol Filter Miscellaneous Parameters Total particulate	77500		2300	ug		08-OCT-19	R4861840
Metals on High Volume Filter by ICPMS Arsenic (As) Cadmium (Cd) Cobalt (Co) Chromium (Cr) Copper (Cu) Iron (Fe) Manganese (Mn) Nickel (Ni) Lead (Pb) Selenium (Se) Vanadium (V) Zinc (Zn)	<3.0 <2.0 <2.0 5.4 720 680 21.9 <3.0 <3.0 <10 <5.0 27.0		3.0 2.0 2.0 5.0 4.0 20 1.0 3.0 3.0 10 5.0 5.0	ug	08-OCT-19 08-OCT-19 08-OCT-19 08-OCT-19 08-OCT-19 08-OCT-19 08-OCT-19 08-OCT-19 08-OCT-19 08-OCT-19 08-OCT-19	09-OCT-19 09-OCT-19 09-OCT-19 09-OCT-19 09-OCT-19 09-OCT-19 09-OCT-19 09-OCT-19 09-OCT-19 09-OCT-19 09-OCT-19	R4863671 R4863671 R4863671 R4863671 R4863671 R4863671 R4863671 R4863671 R4863671 R4863671 R4863671
L2346695-2 SOUTH-TSP-255 Sampled By: Kelsea Hunsperger on 07-AUG-19 Matrix: Hi Vol Filter Miscellaneous Parameters Total particulate	42800		2300	ug		08-OCT-19	R4861840
Metals on High Volume Filter by ICPMS Arsenic (As) Cadmium (Cd) Cobalt (Co) Chromium (Cr) Copper (Cu) Iron (Fe) Manganese (Mn) Nickel (Ni) Lead (Pb) Selenium (Se) Vanadium (V) Zinc (Zn)	<3.0 <2.0 <2.0 <5.0 46.4 374 9.3 <3.0 <3.0 <10 <5.0 8.9		3.0 2.0 2.0 5.0 4.0 20 1.0 3.0 3.0 10 5.0 5.0	ug	08-OCT-19 08-OCT-19 08-OCT-19 08-OCT-19 08-OCT-19 08-OCT-19 08-OCT-19 08-OCT-19 08-OCT-19 08-OCT-19 08-OCT-19	09-OCT-19 09-OCT-19 09-OCT-19 09-OCT-19 09-OCT-19 09-OCT-19 09-OCT-19 09-OCT-19 09-OCT-19 09-OCT-19 09-OCT-19	R4863671 R4863671 R4863671 R4863671 R4863671 R4863671 R4863671 R4863671 R4863671 R4863671 R4863671
L2346695-3 NORTH-TSP-256 Sampled By: Kelsea Hunsperger on 13-AUG-19 Matrix: Hi Vol Filter Miscellaneous Parameters Total particulate	29200		2300	ug		08-OCT-19	R4861840
Metals on High Volume Filter by ICPMS Arsenic (As) Cadmium (Cd) Cobalt (Co) Chromium (Cr) Copper (Cu) Iron (Fe) Manganese (Mn) Nickel (Ni) Lead (Pb) Selenium (Se) Vanadium (V) Zinc (Zn)	<3.0 <2.0 <2.0 <5.0 441 303 8.1 <3.0 <3.0 <10 <5.0 16.5		3.0 2.0 2.0 5.0 4.0 20 1.0 3.0 3.0 10 5.0 5.0	ug	08-OCT-19 08-OCT-19 08-OCT-19 08-OCT-19 08-OCT-19 08-OCT-19 08-OCT-19 08-OCT-19 08-OCT-19 08-OCT-19 08-OCT-19	09-OCT-19 09-OCT-19 09-OCT-19 09-OCT-19 09-OCT-19 09-OCT-19 09-OCT-19 09-OCT-19 09-OCT-19 09-OCT-19 09-OCT-19	R4863671 R4863671 R4863671 R4863671 R4863671 R4863671 R4863671 R4863671 R4863671 R4863671 R4863671

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2346695-4 SOUTH-TSP-256 Sampled By: Kelsea Hunsperger on 13-AUG-19 Matrix: Hi Vol Filter Miscellaneous Parameters Total particulate	99000		2300	ug		08-OCT-19	R4861840
Metals on High Volume Filter by ICPMS Arsenic (As) Cadmium (Cd) Cobalt (Co) Chromium (Cr) Copper (Cu) Iron (Fe) Manganese (Mn) Nickel (Ni) Lead (Pb) Selenium (Se) Vanadium (V) Zinc (Zn)	<3.0 <2.0 <2.0 6.5 48.6 1270 47.3 <3.0 <3.0 <10 <5.0 31.9		3.0 2.0 2.0 5.0 4.0 20 1.0 3.0 3.0 10 5.0 5.0	ug	08-OCT-19 08-OCT-19 08-OCT-19 08-OCT-19 08-OCT-19 08-OCT-19 08-OCT-19 08-OCT-19 08-OCT-19 08-OCT-19 08-OCT-19	09-OCT-19 09-OCT-19 09-OCT-19 09-OCT-19 09-OCT-19 09-OCT-19 09-OCT-19 09-OCT-19 09-OCT-19 09-OCT-19 09-OCT-19	R4863671 R4863671 R4863671 R4863671 R4863671 R4863671 R4863671 R4863671 R4863671 R4863671 R4863671
L2346695-5 NORTH-TSP-257 Sampled By: Kelsea Hunsperger on 19-AUG-19 Matrix: Hi Vol Filter Miscellaneous Parameters Total particulate	75700		2300	ug		08-OCT-19	R4861840
Metals on High Volume Filter by ICPMS Arsenic (As) Cadmium (Cd) Cobalt (Co) Chromium (Cr) Copper (Cu) Iron (Fe) Manganese (Mn) Nickel (Ni) Lead (Pb) Selenium (Se) Vanadium (V) Zinc (Zn)	<3.0 <2.0 <2.0 <5.0 369 684 24.8 <3.0 <3.0 <10 <5.0 22.3		3.0 2.0 2.0 5.0 4.0 20 1.0 3.0 3.0 10 5.0 5.0	ug	08-OCT-19 08-OCT-19 08-OCT-19 08-OCT-19 08-OCT-19 08-OCT-19 08-OCT-19 08-OCT-19 08-OCT-19 08-OCT-19 08-OCT-19	09-OCT-19 09-OCT-19 09-OCT-19 09-OCT-19 09-OCT-19 09-OCT-19 09-OCT-19 09-OCT-19 09-OCT-19 09-OCT-19 09-OCT-19	R4863671 R4863671 R4863671 R4863671 R4863671 R4863671 R4863671 R4863671 R4863671 R4863671 R4863671
L2346695-6 SOUTH-TSP-257 Sampled By: Kelsea Hunsperger on 19-AUG-19 Matrix: Hi Vol Filter Miscellaneous Parameters Total particulate	67400		2300	ug		08-OCT-19	R4861840
Metals on High Volume Filter by ICPMS Arsenic (As) Cadmium (Cd) Cobalt (Co) Chromium (Cr) Copper (Cu) Iron (Fe) Manganese (Mn) Nickel (Ni) Lead (Pb) Selenium (Se) Vanadium (V) Zinc (Zn)	<3.0 <2.0 <2.0 5.2 30.8 1180 28.8 <3.0 <3.0 <10 <5.0 10.1		3.0 2.0 2.0 5.0 4.0 20 1.0 3.0 3.0 10 5.0 5.0	ug	08-OCT-19 08-OCT-19 08-OCT-19 08-OCT-19 08-OCT-19 08-OCT-19 08-OCT-19 08-OCT-19 08-OCT-19 08-OCT-19 08-OCT-19	09-OCT-19 09-OCT-19 09-OCT-19 09-OCT-19 09-OCT-19 09-OCT-19 09-OCT-19 09-OCT-19 09-OCT-19 09-OCT-19 09-OCT-19	R4863671 R4863671 R4863671 R4863671 R4863671 R4863671 R4863671 R4863671 R4863671 R4863671 R4863671

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2346695-7	NORTH-TSP-258							
Sampled By:	Kelsea Hunsperger on 25-AUG-19							
Matrix:	Hi Vol Filter							
Miscellaneous Parameters								
Total particulate		38900		2300	ug		08-OCT-19	R4861840
Metals on High Volume Filter by ICPMS								
Arsenic (As)		<3.0		3.0	ug	08-OCT-19	09-OCT-19	R4863671
Cadmium (Cd)		<2.0		2.0	ug	08-OCT-19	09-OCT-19	R4863671
Cobalt (Co)		<2.0		2.0	ug	08-OCT-19	09-OCT-19	R4863671
Chromium (Cr)		5.3		5.0	ug	08-OCT-19	09-OCT-19	R4863671
Copper (Cu)		364		4.0	ug	08-OCT-19	09-OCT-19	R4863671
Iron (Fe)		324		20	ug	08-OCT-19	09-OCT-19	R4863671
Manganese (Mn)		10.4		1.0	ug	08-OCT-19	09-OCT-19	R4863671
Nickel (Ni)		<3.0		3.0	ug	08-OCT-19	09-OCT-19	R4863671
Lead (Pb)		4.1		3.0	ug	08-OCT-19	09-OCT-19	R4863671
Selenium (Se)		<10		10	ug	08-OCT-19	09-OCT-19	R4863671
Vanadium (V)		<5.0		5.0	ug	08-OCT-19	09-OCT-19	R4863671
Zinc (Zn)		21.9		5.0	ug	08-OCT-19	09-OCT-19	R4863671
L2346695-8	SOUTH-TSP-258							
Sampled By:	Kelsea Hunsperger on 25-AUG-19							
Matrix:	Hi Vol Filter							
Miscellaneous Parameters								
Total particulate		22900		2300	ug		08-OCT-19	R4861840
Metals on High Volume Filter by ICPMS								
Arsenic (As)		<3.0		3.0	ug	08-OCT-19	09-OCT-19	R4863671
Cadmium (Cd)		<2.0		2.0	ug	08-OCT-19	09-OCT-19	R4863671
Cobalt (Co)		<2.0		2.0	ug	08-OCT-19	09-OCT-19	R4863671
Chromium (Cr)		5.4		5.0	ug	08-OCT-19	09-OCT-19	R4863671
Copper (Cu)		35.7		4.0	ug	08-OCT-19	09-OCT-19	R4863671
Iron (Fe)		415		20	ug	08-OCT-19	09-OCT-19	R4863671
Manganese (Mn)		11.2		1.0	ug	08-OCT-19	09-OCT-19	R4863671
Nickel (Ni)		<3.0		3.0	ug	08-OCT-19	09-OCT-19	R4863671
Lead (Pb)		<3.0		3.0	ug	08-OCT-19	09-OCT-19	R4863671
Selenium (Se)		<10		10	ug	08-OCT-19	09-OCT-19	R4863671
Vanadium (V)		<5.0		5.0	ug	08-OCT-19	09-OCT-19	R4863671
Zinc (Zn)		13.2		5.0	ug	08-OCT-19	09-OCT-19	R4863671
L2346695-9	NORTH-TSP-259							
Sampled By:	Kelsea Hunsperger on 31-AUG-19							
Matrix:	Hi Vol Filter							
Miscellaneous Parameters								
Total particulate		16200		2300	ug		08-OCT-19	R4861840
Metals on High Volume Filter by ICPMS								
Arsenic (As)		<3.0		3.0	ug	08-OCT-19	09-OCT-19	R4863671
Cadmium (Cd)		<2.0		2.0	ug	08-OCT-19	09-OCT-19	R4863671
Cobalt (Co)		<2.0		2.0	ug	08-OCT-19	09-OCT-19	R4863671
Chromium (Cr)		<5.0		5.0	ug	08-OCT-19	09-OCT-19	R4863671
Copper (Cu)		429		4.0	ug	08-OCT-19	09-OCT-19	R4863671
Iron (Fe)		235		20	ug	08-OCT-19	09-OCT-19	R4863671
Manganese (Mn)		10.6		1.0	ug	08-OCT-19	09-OCT-19	R4863671
Nickel (Ni)		<3.0		3.0	ug	08-OCT-19	09-OCT-19	R4863671
Lead (Pb)		<3.0		3.0	ug	08-OCT-19	09-OCT-19	R4863671
Selenium (Se)		<10		10	ug	08-OCT-19	09-OCT-19	R4863671
Vanadium (V)		<5.0		5.0	ug	08-OCT-19	09-OCT-19	R4863671
Zinc (Zn)		16.3		5.0	ug	08-OCT-19	09-OCT-19	R4863671

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2346695-10 SOUTH-TSP-259 Sampled By: Kelsea Hunsperger on 31-AUG-19 Matrix: Hi Vol Filter Miscellaneous Parameters Total particulate	53100		2300	ug		08-OCT-19	R4861840
Metals on High Volume Filter by ICPMS Arsenic (As) Cadmium (Cd) Cobalt (Co) Chromium (Cr) Copper (Cu) Iron (Fe) Manganese (Mn) Nickel (Ni) Lead (Pb) Selenium (Se) Vanadium (V) Zinc (Zn)	<3.0 <2.0 <2.0 5.5 35.8 914 23.6 <3.0 <3.0 <10 <5.0 11.9		3.0 2.0 2.0 5.0 4.0 20 1.0 3.0 3.0 10 5.0 5.0	ug	08-OCT-19 08-OCT-19 08-OCT-19 08-OCT-19 08-OCT-19 08-OCT-19 08-OCT-19 08-OCT-19 08-OCT-19 08-OCT-19 08-OCT-19	09-OCT-19 09-OCT-19 09-OCT-19 09-OCT-19 09-OCT-19 09-OCT-19 09-OCT-19 09-OCT-19 09-OCT-19 09-OCT-19 09-OCT-19	R4863671 R4863671 R4863671 R4863671 R4863671 R4863671 R4863671 R4863671 R4863671 R4863671 R4863671
L2346695-11 TSP-TRAVEL BLANK Sampled By: Kelsea Hunsperger on 31-AUG-19 Matrix: Hi Vol Filter Miscellaneous Parameters Total particulate	<2300		2300	ug		08-OCT-19	R4861840
Metals on High Volume Filter by ICPMS Arsenic (As) Cadmium (Cd) Cobalt (Co) Chromium (Cr) Copper (Cu) Iron (Fe) Manganese (Mn) Nickel (Ni) Lead (Pb) Selenium (Se) Vanadium (V) Zinc (Zn)	<3.0 <2.0 <2.0 <5.0 7.3 25 <1.0 <3.0 <3.0 <10 <5.0 <5.0		3.0 2.0 2.0 5.0 4.0 20 1.0 3.0 3.0 10 5.0 5.0	ug	08-OCT-19 08-OCT-19 08-OCT-19 08-OCT-19 08-OCT-19 08-OCT-19 08-OCT-19 08-OCT-19 08-OCT-19 08-OCT-19 08-OCT-19	09-OCT-19 09-OCT-19 09-OCT-19 09-OCT-19 09-OCT-19 09-OCT-19 09-OCT-19 09-OCT-19 09-OCT-19 09-OCT-19 09-OCT-19	R4863671 R4863671 R4863671 R4863671 R4863671 R4863671 R4863671 R4863671 R4863671 R4863671 R4863671
L2346695-12 NORTH-PM2.5-255 Sampled By: Kelsea Hunsperger on 07-AUG-19 Matrix: 47mm Filter Miscellaneous Parameters Total particulate	<15		15	ug		08-OCT-19	R4861840
L2346695-13 SOUTH-PM2.5-255 Sampled By: Kelsea Hunsperger on 07-AUG-19 Matrix: 47mm Filter Miscellaneous Parameters Total particulate	57		15	ug		08-OCT-19	R4861840
L2346695-14 NORTH-PM2.5-256 Sampled By: Kelsea Hunsperger on 13-AUG-19 Matrix: 47mm Filter Miscellaneous Parameters Total particulate	19		15	ug		08-OCT-19	R4861840

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2346695-15 SOUTH-PM2.5-256 Sampled By: Kelsea Hunsperger on 13-AUG-19 Matrix: 47mm Filter Miscellaneous Parameters Total particulate	159		15	ug		08-OCT-19	R4861840
L2346695-16 NORTH-PM2.5-257 Sampled By: Kelsea Hunsperger on 19-AUG-19 Matrix: 47mm Filter Miscellaneous Parameters Total particulate	173		15	ug		08-OCT-19	R4861840
L2346695-17 SOUTH-PM2.5-257 Sampled By: Kelsea Hunsperger on 19-AUG-19 Matrix: 47mm Filter Miscellaneous Parameters Total particulate	174		15	ug		08-OCT-19	R4861840
L2346695-18 NORTH-PM2.5-258 Sampled By: Kelsea Hunsperger on 25-AUG-19 Matrix: 47mm Filter Miscellaneous Parameters Total particulate	138		15	ug		08-OCT-19	R4861840
L2346695-19 SOUTH-PM2.5-258 Sampled By: Kelsea Hunsperger on 25-AUG-19 Matrix: 47mm Filter Miscellaneous Parameters Total particulate	107		15	ug		08-OCT-19	R4861840
L2346695-20 NORTH-PM2.5-259 Sampled By: Kelsea Hunsperger on 31-AUG-19 Matrix: 47mm Filter Miscellaneous Parameters Total particulate	54		15	ug		08-OCT-19	R4861840
L2346695-21 SOUTH-PM2.5-259 Sampled By: Kelsea Hunsperger on 31-AUG-19 Matrix: 47mm Filter Miscellaneous Parameters Total particulate	77		15	ug		08-OCT-19	R4861840
L2346695-22 PM2.5-TRAVEL BLANK Sampled By: Kelsea Hunsperger on 31-AUG-19 Matrix: 47mm Filter Miscellaneous Parameters Total particulate	72		15	ug		08-OCT-19	R4861840
L2346695-23 NORTH-DUSTFALL Sampled By: Kelsea Hunsperger on 04-SEP-19 Matrix: Dustfall Dustfalls-Total, Soluble, Insoluble +FV Total Dustfall Total Insoluble Dustfall Total Soluble Dustfall Fixed Dustfall Fixed Insoluble Dustfall Fixed Soluble Dustfall Volatile Dustfall	0.67 0.42 0.25 0.27 0.23 <0.10 0.40		0.10	mg/dm ² .day		24-SEP-19 24-SEP-19 24-SEP-19 24-SEP-19 24-SEP-19 24-SEP-19 24-SEP-19	R4841351 R4841351 R4841351 R4841351 R4841351 R4841351 R4841351

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2346695-23 NORTH-DUSTFALL							
Sampled By:	Kelsea Hunsperger on 04-SEP-19						
Matrix:	Dustfall						
Dustfalls-Total, Soluble, Insoluble +FV							
Volatile Insoluble Dustfall	0.19		0.10	mg/dm ² .day		24-SEP-19	R4841351
Volatile Soluble Dustfall	0.21		0.10	mg/dm ² .day		24-SEP-19	R4841351
Total Metals in Dustfalls by ICPMS							
Aluminum (Al)-Total	0.00507		0.000063	mg/dm ² .day	19-SEP-19	19-SEP-19	R4824668
Interval			1	days		19-SEP-19	R4825091
Antimony (Sb)-Total	0.0000027		0.0000021	mg/dm ² .day	19-SEP-19	19-SEP-19	R4824668
Arsenic (As)-Total	0.0000030		0.0000021	mg/dm ² .day	19-SEP-19	19-SEP-19	R4824668
Barium (Ba)-Total	0.0000596		0.0000010	mg/dm ² .day	19-SEP-19	19-SEP-19	R4824668
Beryllium (Be)-Total	<0.000010		0.000010	mg/dm ² .day	19-SEP-19	19-SEP-19	R4824668
Bismuth (Bi)-Total	<0.000010		0.000010	mg/dm ² .day	19-SEP-19	19-SEP-19	R4824668
Boron (B)-Total	<0.00021		0.00021	mg/dm ² .day	19-SEP-19	19-SEP-19	R4824668
Cadmium (Cd)-Total	<0.0000010		0.0000010	mg/dm ² .day	19-SEP-19	19-SEP-19	R4824668
Calcium (Ca)-Total	0.0233		0.00042	mg/dm ² .day	19-SEP-19	19-SEP-19	R4824668
Chromium (Cr)-Total	0.000013		0.000010	mg/dm ² .day	19-SEP-19	19-SEP-19	R4824668
Cobalt (Co)-Total	0.0000022		0.0000021	mg/dm ² .day	19-SEP-19	19-SEP-19	R4824668
Copper (Cu)-Total	<0.000052	DLB	0.000052	mg/dm ² .day	19-SEP-19	19-SEP-19	R4824668
Lead (Pb)-Total	<0.0000073		0.0000073	mg/dm ² .day	19-SEP-19	19-SEP-19	R4824668
Iron (Fe)-Total	0.00484		0.00063	mg/dm ² .day	19-SEP-19	19-SEP-19	R4824668
Lithium (Li)-Total	<0.00010		0.00010	mg/dm ² .day	19-SEP-19	19-SEP-19	R4824668
Magnesium (Mg)-Total	0.00857		0.00010	mg/dm ² .day	19-SEP-19	19-SEP-19	R4824668
Manganese (Mn)-Total	0.000330		0.0000021	mg/dm ² .day	19-SEP-19	19-SEP-19	R4824668
Molybdenum (Mo)-Total	0.0000021		0.0000010	mg/dm ² .day	19-SEP-19	19-SEP-19	R4824668
Nickel (Ni)-Total	0.000028		0.000010	mg/dm ² .day	19-SEP-19	19-SEP-19	R4824668
Phosphorus (P)-Total	0.0078		0.0010	mg/dm ² .day	19-SEP-19	19-SEP-19	R4824668
Potassium (K)-Total	0.0129		0.0010	mg/dm ² .day	19-SEP-19	19-SEP-19	R4824668
Selenium (Se)-Total	<0.000021		0.000021	mg/dm ² .day	19-SEP-19	19-SEP-19	R4824668
Silicon (Si)-Total	0.0076		0.0010	mg/dm ² .day	19-SEP-19	19-SEP-19	R4824668
Silver (Ag)-Total	0.00000022		0.0000002	mg/dm ² .day	19-SEP-19	19-SEP-19	R4824668
Sodium (Na)-Total	0.0027		0.0010	mg/dm ² .day	19-SEP-19	19-SEP-19	R4824668
Strontium (Sr)-Total	0.0000458		0.0000021	mg/dm ² .day	19-SEP-19	19-SEP-19	R4824668
Thallium (Tl)-Total	<0.0000021		0.0000021	mg/dm ² .day	19-SEP-19	19-SEP-19	R4824668
Tin (Sn)-Total	<0.0000021		0.0000021	mg/dm ² .day	19-SEP-19	19-SEP-19	R4824668
Titanium (Ti)-Total	<0.00021		0.00021	mg/dm ² .day	19-SEP-19	19-SEP-19	R4824668
Uranium (U)-Total	0.00000024		0.0000002	mg/dm ² .day	19-SEP-19	19-SEP-19	R4824668
			1				
Vanadium (V)-Total	<0.000021		0.000021	mg/dm ² .day	19-SEP-19	19-SEP-19	R4824668
Zinc (Zn)-Total	0.000281		0.000063	mg/dm ² .day	19-SEP-19	19-SEP-19	R4824668
L2346695-24 SOUTH-DUSTFALL							
Sampled By:	Kelsea Hunsperger on 04-SEP-19						
Matrix:	Dustfall						
Dustfalls-Total, Soluble, Insoluble +FV							
Total Dustfall	1.55		0.10	mg/dm ² .day		24-SEP-19	R4841351
Total Insoluble Dustfall	1.01		0.10	mg/dm ² .day		24-SEP-19	R4841351
Total Soluble Dustfall	0.54		0.10	mg/dm ² .day		24-SEP-19	R4841351
Fixed Dustfall	0.67		0.10	mg/dm ² .day		24-SEP-19	R4841351
Fixed Insoluble Dustfall	0.54		0.10	mg/dm ² .day		24-SEP-19	R4841351
Fixed Soluble Dustfall	0.12		0.10	mg/dm ² .day		24-SEP-19	R4841351
Volatile Dustfall	0.88		0.10	mg/dm ² .day		24-SEP-19	R4841351
Volatile Insoluble Dustfall	0.46		0.10	mg/dm ² .day		24-SEP-19	R4841351
Volatile Soluble Dustfall	0.42		0.10	mg/dm ² .day		24-SEP-19	R4841351

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2346695-24 SOUTH-DUSTFALL							
Sampled By:	Kelsea Hunsperger on 04-SEP-19						
Matrix:	Dustfall						
Total Metals in Dustfalls by ICPMS							
Aluminum (Al)-Total	0.00455		0.000050	mg/dm ² .day	19-SEP-19	19-SEP-19	R4824668
Interval		1	days			19-SEP-19	R4825091
Antimony (Sb)-Total	<0.0000017		0.0000017	mg/dm ² .day	19-SEP-19	19-SEP-19	R4824668
Arsenic (As)-Total	0.0000026		0.0000017	mg/dm ² .day	19-SEP-19	19-SEP-19	R4824668
Barium (Ba)-Total	0.0000575		0.0000008	mg/dm ² .day	19-SEP-19	19-SEP-19	R4824668
Beryllium (Be)-Total	<0.0000084		0.0000084	mg/dm ² .day	19-SEP-19	19-SEP-19	R4824668
Bismuth (Bi)-Total	<0.0000084		0.0000084	mg/dm ² .day	19-SEP-19	19-SEP-19	R4824668
Boron (B)-Total	<0.00017		0.00017	mg/dm ² .day	19-SEP-19	19-SEP-19	R4824668
Cadmium (Cd)-Total	<0.00000084		0.0000008	mg/dm ² .day	19-SEP-19	19-SEP-19	R4824668
Calcium (Ca)-Total	0.0266		0.00033	mg/dm ² .day	19-SEP-19	19-SEP-19	R4824668
Chromium (Cr)-Total	0.0000128		0.0000084	mg/dm ² .day	19-SEP-19	19-SEP-19	R4824668
Cobalt (Co)-Total	0.0000051		0.0000017	mg/dm ² .day	19-SEP-19	19-SEP-19	R4824668
Copper (Cu)-Total	<0.000059	DLB	0.000059	mg/dm ² .day	19-SEP-19	19-SEP-19	R4824668
Lead (Pb)-Total	<0.0000050		0.0000050	mg/dm ² .day	19-SEP-19	19-SEP-19	R4824668
Iron (Fe)-Total	0.00599		0.00050	mg/dm ² .day	19-SEP-19	19-SEP-19	R4824668
Lithium (Li)-Total	<0.000084		0.000084	mg/dm ² .day	19-SEP-19	19-SEP-19	R4824668
Magnesium (Mg)-Total	0.00945		0.000084	mg/dm ² .day	19-SEP-19	19-SEP-19	R4824668
Manganese (Mn)-Total	0.000355		0.0000017	mg/dm ² .day	19-SEP-19	19-SEP-19	R4824668
Molybdenum (Mo)-Total	0.000000180		0.0000008	mg/dm ² .day	19-SEP-19	19-SEP-19	R4824668
Nickel (Ni)-Total	0.0000232		0.0000084	mg/dm ² .day	19-SEP-19	19-SEP-19	R4824668
Phosphorus (P)-Total	0.0243		0.00084	mg/dm ² .day	19-SEP-19	19-SEP-19	R4824668
Potassium (K)-Total	0.0373		0.00084	mg/dm ² .day	19-SEP-19	19-SEP-19	R4824668
Selenium (Se)-Total	<0.000017		0.000017	mg/dm ² .day	19-SEP-19	19-SEP-19	R4824668
Silicon (Si)-Total	0.00717		0.00084	mg/dm ² .day	19-SEP-19	19-SEP-19	R4824668
Silver (Ag)-Total	<0.00000017		0.0000001	mg/dm ² .day	19-SEP-19	19-SEP-19	R4824668
Sodium (Na)-Total	0.0105		0.00084	mg/dm ² .day	19-SEP-19	19-SEP-19	R4824668
Strontium (Sr)-Total	0.000103		0.0000017	mg/dm ² .day	19-SEP-19	19-SEP-19	R4824668
Thallium (Tl)-Total	<0.0000017		0.0000017	mg/dm ² .day	19-SEP-19	19-SEP-19	R4824668
Tin (Sn)-Total	<0.0000017		0.0000017	mg/dm ² .day	19-SEP-19	19-SEP-19	R4824668
Titanium (Ti)-Total	<0.00017		0.00017	mg/dm ² .day	19-SEP-19	19-SEP-19	R4824668
Uranium (U)-Total	0.00000022		0.0000001	mg/dm ² .day	19-SEP-19	19-SEP-19	R4824668
Vanadium (V)-Total	<0.000017		0.000017	mg/dm ² .day	19-SEP-19	19-SEP-19	R4824668
Zinc (Zn)-Total	0.000216		0.000050	mg/dm ² .day	19-SEP-19	19-SEP-19	R4824668

Reference Information

Sample Parameter Qualifier Key:

Qualifier	Description
DLB	Detection Limit Raised. Analyte detected at comparable level in Method Blank.
MB-LOR	Method Blank exceeds ALS DQO. Limits of Reporting have been adjusted for samples with positive hits below 5x blank level.
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
AIR VOLUME-HIVOL-BU	Filter	Air volume (m3)	USEPA IO3.1
DUSTFALLS-ALL-DM2-VA	Dustfall	Dustfalls-Total, Soluble, Insoluble +FV	BC LAB MANUAL - PARTICULATE
This analysis is carried out using procedures modified from British Columbia Environmental Manual "Particulate." Particulates or "Dustfalls" are determined gravimetrically. Total Insoluble and Soluble Dustfalls are determined by filtering a sample through a 0.45 um membrane filter and drying the filter and filtrate at 104 C, followed by ignition at 550 C. The remaining residue after 550 C represents the fixed portion and the weight lost on ignition represents the volatile portion. The sum of all fixed and volatile portions on both Insoluble and Soluble portions represents Total Dustfalls.			
MET-DUST(DM2)-MS-VA	Dustfall	Total Metals in Dustfalls by ICPMS	EPA 6020A
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). Instrumental analysis is by inductively coupled plasma - mass spectrometry (EPA Method 6020A).			
MET-IO3.5-MS-BU	Filter	Metals on High Volume Filter by ICPMS	IO3.5
After weighing (if required), hivol filters are sub-sampled and leached with nitric acid to extract available metal analytes. After dilution, the extracts are submitted to the ICPMS instrument for analysis.			
PART-EC6.08-GRAV-BU	Filter	Particulate ENV Canada 6.08 microbalance	ENV CAN 6.08
The particulate matter collected onto tare-weighted 47mm Teflon Disc filter media is desiccated then brought to a constant weight on an analytical balance. Results are presented in ug (per filter). An air volume can be included to allow for reporting in ug/m3.			
PART-HIVOL-GRAV-BU	Filter	Particulate on High Volume Filter	USEPA IO3.1

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
BU	ALS ENVIRONMENTAL - BURLINGTON, ONTARIO, CANADA
VA	ALS ENVIRONMENTAL - VANCOUVER, BRITISH COLUMBIA, CANADA

Chain of Custody Numbers:
GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.

mg/kg - milligrams per kilogram based on dry weight of sample

mg/kg wwt - milligrams per kilogram based on wet weight of sample

mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight

mg/L - unit of concentration based on volume, parts per million.

< - Less than.

D.L. - The reporting limit.

N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.

Quality Control Report

Workorder: L2346695

Report Date: 11-OCT-19

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PART-HIVOL-GRAV-BU Filter								
Batch	R4861840							
WG3185116-2 DUP		L2346695-1						
Total particulate		77500	77400		ug	0.1	25	08-OCT-19
WG3185116-1 MB								
Total particulate			<100		ug		100	08-OCT-19
DUSTFALLS-ALL-DM2-VA Dustfall								
Batch	R4841351							
WG3171541-1 MB								
Total Dustfall			<0.10		mg/dm ² .day	0.1	24-SEP-19	
Total Insoluble Dustfall			<0.10		mg/dm ² .day	0.1	24-SEP-19	
Total Soluble Dustfall			<0.10		mg/dm ² .day	0.1	24-SEP-19	
Fixed Dustfall			<0.10		mg/dm ² .day	0.1	24-SEP-19	
Fixed Insoluble Dustfall			<0.10		mg/dm ² .day	0.1	24-SEP-19	
Fixed Soluble Dustfall			<0.10		mg/dm ² .day	0.1	24-SEP-19	
Volatile Dustfall			<0.10		mg/dm ² .day	0.1	24-SEP-19	
Volatile Insoluble Dustfall			<0.10		mg/dm ² .day	0.1	24-SEP-19	
Volatile Soluble Dustfall			<0.10		mg/dm ² .day	0.1	24-SEP-19	
MET-DUST(DM2)-MS-VA Dustfall								
Batch	R4824668							
WG3166362-3 DUP		L2346695-23						
Aluminum (Al)-Total		0.00507	0.00463		mg/dm ² .day	9.1	20	19-SEP-19
Antimony (Sb)-Total		0.0000027	0.0000025		mg/dm ² .day	8.7	20	19-SEP-19
Arsenic (As)-Total		0.0000030	0.0000030		mg/dm ² .day	1.4	20	19-SEP-19
Barium (Ba)-Total		0.0000596	0.0000563		mg/dm ² .day	5.8	20	19-SEP-19
Beryllium (Be)-Total		<0.000010	<0.000010	RPD-NA	mg/dm ² .day	N/A	20	19-SEP-19
Bismuth (Bi)-Total		<0.000010	<0.000010	RPD-NA	mg/dm ² .day	N/A	20	19-SEP-19
Boron (B)-Total		<0.00021	<0.00021	RPD-NA	mg/dm ² .day	N/A	20	19-SEP-19
Cadmium (Cd)-Total		<0.0000010	<0.0000010	RPD-NA	mg/dm ² .day	N/A	20	19-SEP-19
Calcium (Ca)-Total		0.0233	0.0222		mg/dm ² .day	4.6	20	19-SEP-19
Chromium (Cr)-Total		0.000013	0.000010	J	mg/dm ² .day	0.000003	0.00002	19-SEP-19
Cobalt (Co)-Total		0.0000022	0.0000021		mg/dm ² .day	4.8	20	19-SEP-19
Copper (Cu)-Total		<0.000052	<0.000052	RPD-NA	mg/dm ² .day	N/A	20	19-SEP-19
Lead (Pb)-Total		<0.0000073	<0.0000073	RPD-NA	mg/dm ² .day	N/A	20	19-SEP-19
Iron (Fe)-Total		0.00484	0.00438		mg/dm ² .day	10	20	19-SEP-19
Lithium (Li)-Total		<0.00010	<0.00010	RPD-NA	mg/dm ² .day	N/A	20	19-SEP-19
Magnesium (Mg)-Total		0.00857	0.00793		mg/dm ² .day	7.8	20	19-SEP-19
Manganese (Mn)-Total		0.000330	0.000300		mg/dm ² .day	9.5	20	19-SEP-19

Quality Control Report

Workorder: L2346695

Report Date: 11-OCT-19

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-DUST(DM2)-MS-VA		Dustfall						
Batch	R4824668							
WG3166362-3 DUP	L2346695-23							
Molybdenum (Mo)-Total	0.0000021	0.0000014	J	mg/dm ² .day	0.000000	0.000002	19-SEP-19	
Nickel (Ni)-Total	0.000028	0.000021	J	mg/dm ² .day	0.000007	0.00002	19-SEP-19	
Phosphorus (P)-Total	0.0078	0.0085		mg/dm ² .day	9.0	20	19-SEP-19	
Potassium (K)-Total	0.0129	0.0124		mg/dm ² .day	4.0	20	19-SEP-19	
Selenium (Se)-Total	<0.000021	<0.000021	RPD-NA	mg/dm ² .day	N/A	20	19-SEP-19	
Silicon (Si)-Total	0.0076	0.0068		mg/dm ² .day	11	20	19-SEP-19	
Silver (Ag)-Total	0.00000022	<0.0000002	RPD-NA	mg/dm ² .day	N/A	20	19-SEP-19	
Sodium (Na)-Total	0.0027	0.0026		mg/dm ² .day	4.8	20	19-SEP-19	
Strontium (Sr)-Total	0.0000458	0.0000425		mg/dm ² .day	7.4	20	19-SEP-19	
Thallium (Tl)-Total	<0.0000021	<0.0000021	RPD-NA	mg/dm ² .day	N/A	20	19-SEP-19	
Tin (Sn)-Total	<0.0000021	<0.0000021	RPD-NA	mg/dm ² .day	N/A	20	19-SEP-19	
Titanium (Ti)-Total	<0.00021	<0.00021	RPD-NA	mg/dm ² .day	N/A	20	19-SEP-19	
Uranium (U)-Total	0.00000024	<0.0000002	RPD-NA	mg/dm ² .day	N/A	20	19-SEP-19	
Vanadium (V)-Total	<0.000021	<0.000021	RPD-NA	mg/dm ² .day	N/A	20	19-SEP-19	
Zinc (Zn)-Total	0.000281	0.000239		mg/dm ² .day	16	20	19-SEP-19	
WG3166362-2 LCS								
Aluminum (Al)-Total	102.1		%		80-120	19-SEP-19		
Antimony (Sb)-Total	103.1		%		80-120	19-SEP-19		
Arsenic (As)-Total	98.0		%		80-120	19-SEP-19		
Barium (Ba)-Total	100.8		%		80-120	19-SEP-19		
Beryllium (Be)-Total	103.4		%		80-120	19-SEP-19		
Bismuth (Bi)-Total	100.1		%		80-120	19-SEP-19		
Boron (B)-Total	100.3		%		80-120	19-SEP-19		
Cadmium (Cd)-Total	100.3		%		80-120	19-SEP-19		
Calcium (Ca)-Total	98.8		%		80-120	19-SEP-19		
Chromium (Cr)-Total	102.9		%		80-120	19-SEP-19		
Cobalt (Co)-Total	99.0		%		80-120	19-SEP-19		
Copper (Cu)-Total	101.1		%		80-120	19-SEP-19		
Lead (Pb)-Total	96.4		%		80-120	19-SEP-19		
Iron (Fe)-Total	93.0		%		80-120	19-SEP-19		
Lithium (Li)-Total	101.1		%		80-120	19-SEP-19		
Magnesium (Mg)-Total	103.5		%		80-120	19-SEP-19		
Manganese (Mn)-Total	101.2		%		80-120	19-SEP-19		
Molybdenum (Mo)-Total	98.9		%		80-120	19-SEP-19		

Quality Control Report

Workorder: L2346695

Report Date: 11-OCT-19

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-DUST(DM2)-MS-VA		Dustfall						
Batch R4824668								
WG3166362-2	LCS							
Nickel (Ni)-Total			100.6		%		80-120	19-SEP-19
Phosphorus (P)-Total			110.6		%		80-120	19-SEP-19
Potassium (K)-Total			103.8		%		80-120	19-SEP-19
Selenium (Se)-Total			99.1		%		80-120	19-SEP-19
Silicon (Si)-Total			101.0		%		80-120	19-SEP-19
Silver (Ag)-Total			94.5		%		80-120	19-SEP-19
Sodium (Na)-Total			101.8		%		80-120	19-SEP-19
Strontium (Sr)-Total			97.1		%		80-120	19-SEP-19
Thallium (Tl)-Total			91.9		%		80-120	19-SEP-19
Tin (Sn)-Total			99.0		%		80-120	19-SEP-19
Titanium (Ti)-Total			92.6		%		80-120	19-SEP-19
Uranium (U)-Total			100.6		%		80-120	19-SEP-19
Vanadium (V)-Total			100.6		%		80-120	19-SEP-19
Zinc (Zn)-Total			103.5		%		80-120	19-SEP-19
WG3166362-1	MB							
Aluminum (Al)-Total			0.000106	MB-LOR	mg/dm2.day		0.000079	19-SEP-19
Antimony (Sb)-Total			<0.0000026		mg/dm2.day		0.0000026	19-SEP-19
Arsenic (As)-Total			<0.0000026		mg/dm2.day		0.0000026	19-SEP-19
Barium (Ba)-Total			0.0000035	MB-LOR	mg/dm2.day		0.0000013	19-SEP-19
Beryllium (Be)-Total			<0.000013		mg/dm2.day		0.000013	19-SEP-19
Bismuth (Bi)-Total			<0.000013		mg/dm2.day		0.000013	19-SEP-19
Boron (B)-Total			<0.00026		mg/dm2.day		0.00026	19-SEP-19
Cadmium (Cd)-Total			<0.0000013		mg/dm2.day		0.0000013	19-SEP-19
Calcium (Ca)-Total			<0.00052		mg/dm2.day		0.00052	19-SEP-19
Chromium (Cr)-Total			<0.000013		mg/dm2.day		0.000013	19-SEP-19
Cobalt (Co)-Total			<0.0000026		mg/dm2.day		0.0000026	19-SEP-19
Copper (Cu)-Total			0.000076	MB-LOR	mg/dm2.day		0.000013	19-SEP-19
Lead (Pb)-Total			0.0000038	MB-LOR	mg/dm2.day		0.0000013	19-SEP-19
Iron (Fe)-Total			<0.00079		mg/dm2.day		0.00079	19-SEP-19
Lithium (Li)-Total			<0.00013		mg/dm2.day		0.00013	19-SEP-19
Magnesium (Mg)-Total			<0.00013		mg/dm2.day		0.00013	19-SEP-19
Manganese (Mn)-Total			<0.0000026		mg/dm2.day		0.0000026	19-SEP-19
Molybdenum (Mo)-Total			<0.0000013		mg/dm2.day		0.0000013	19-SEP-19
Nickel (Ni)-Total			<0.000013		mg/dm2.day		0.000013	19-SEP-19

Quality Control Report

Workorder: L2346695

Report Date: 11-OCT-19

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-DUST(DM2)-MS-VA	Dustfall							
Batch	R4824668							
WG3166362-1 MB								
Phosphorus (P)-Total			<0.0013		mg/dm ² .day		0.0013	19-SEP-19
Potassium (K)-Total			<0.0013		mg/dm ² .day		0.0013	19-SEP-19
Selenium (Se)-Total			<0.000026		mg/dm ² .day		0.000026	19-SEP-19
Silicon (Si)-Total			<0.0013		mg/dm ² .day		0.0013	19-SEP-19
Silver (Ag)-Total			<0.0000002		mg/dm ² .day		0.00000026	19-SEP-19
Sodium (Na)-Total			<0.0013		mg/dm ² .day		0.0013	19-SEP-19
Strontium (Sr)-Total			<0.0000026		mg/dm ² .day		0.0000026	19-SEP-19
Thallium (Tl)-Total			<0.0000026		mg/dm ² .day		0.0000026	19-SEP-19
Tin (Sn)-Total			<0.0000026		mg/dm ² .day		0.0000026	19-SEP-19
Titanium (Ti)-Total			<0.00026		mg/dm ² .day		0.00026	19-SEP-19
Uranium (U)-Total			<0.0000002		mg/dm ² .day		0.00000026	19-SEP-19
Vanadium (V)-Total			<0.000026		mg/dm ² .day		0.000026	19-SEP-19
Zinc (Zn)-Total			<0.000079		mg/dm ² .day		0.000079	19-SEP-19

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Legend:

Limit	ALS Control Limit (Data Quality Objectives)
DUP	Duplicate
RPD	Relative Percent Difference
N/A	Not Available
LCS	Laboratory Control Sample
SRM	Standard Reference Material
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ADE	Average Desorption Efficiency
MB	Method Blank
IRM	Internal Reference Material
CRM	Certified Reference Material
CCV	Continuing Calibration Verification
CVS	Calibration Verification Standard
LCSD	Laboratory Control Sample Duplicate

Sample Parameter Qualifier Definitions:

Qualifier	Description
J	Duplicate results and limits are expressed in terms of absolute difference.
MB-LOR	Method Blank exceeds ALS DQO. Limits of Reporting have been adjusted for samples with positive hits below 5x blank level.
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Hold Time Exceedances:

All test results reported with this submission were conducted within ALS recommended hold times.

ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where available). For more information, please contact ALS.

The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide confidence in the accuracy of associated test results.

Please note that this report may contain QC results from anonymous Sample Duplicates and Matrix Spikes that do not originate from this Work Order.

Report To			Report Format / Distribution			Select Service Level Below (Rush Turnaround Time (TAT) is not available for all tests)		
Company:	New Gold Inc. Rainy River Project		Report Format:	<input checked="" type="checkbox"/> PDF <input type="checkbox"/> Excel <input checked="" type="checkbox"/> EDD (Digital)	R <input type="checkbox"/> Regular (Standard TAT if received by 3pm - business days)			
Contact:	Kelsea Hunsperger		Quality Control (QC) Report with Report	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	P <input type="checkbox"/> Priority (2-4 bus. days if received by 3pm) 50% surcharge - contact ALS to confirm TAT			
Address:	24 Marr Rd.		<input type="checkbox"/> Criteria on Report - provide details below if box checked		E <input type="checkbox"/> Emergency (1-2 bus. days if received by 3pm) 100% surcharge - contact ALS to confirm TAT			
City/Province:	Bawack ON		Select Distribution:	<input checked="" type="checkbox"/> Email <input type="checkbox"/> Mail <input type="checkbox"/> Fax	E2 <input type="checkbox"/> Emergency (1-2 bus. days if received by 3pm) 100% surcharge - contact ALS to confirm TAT			
Postal Code:	POW 1AD		Email 1 or Fax: rainyriver.labresults@newgold.com			Date and Time Required for all E&P TATs:		
Phone:	807-482-0900 x8328					For tests that can not be performed according to the service level selected, you will be contacted.		
			Email 2	yag.inviron@newgold.com		Analysis Request		
Invoice To	Same as Report? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Invoice Distribution			Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below		
Copy of Invoice with Report?	<input type="checkbox"/> Yes <input type="checkbox"/> No		Select Invoice Distribution:	<input checked="" type="checkbox"/> Email <input type="checkbox"/> Mail <input type="checkbox"/> Fax				
Company:			Email 1 or Fax: rainyriver.labresults@newgold.com					
Contact:			Email 2: Caleb.Vandenburg@amecfrw.com					
Project Information			Oil and Gas Required Fields (client use)					
ALS Quote #:	L2346695		Approver ID:	Cost Center:				
Job #:	Air Quality		GL Account:	Routing Code:				
PO / AFE:	4500019823		Activity Code:					
LSD:			Location:					
ALS Lab Work Order # (lab use only)	ALS Contact:	Claire Kocharakkal	Sampler:	Kelsea Hunsperger	TSP and Blends	PM2.5	Dustfall inc.	Oil and Gas
Sample Ref (uploaded EDD)	Sample Identification and/or Coordinates (Description will appear on the report)	Filter ID	Date (dd-MMM-yy)	Time (hh:mm)	Sample Type			
122032	TSP	North-TSP-255	07-Aug-19	12:00	Air	x		
122033	TSP	South-TSP-255	07-Aug-19	12:00	Air	x		
122034	PM 2.5	North-PM2.5-255	07-Aug-19	12:00	Air	x		
		255						
122035	PM 2.5	South-PM2.5-255	07-Aug-19	12:00	Air	x		
122036	TSP	North-TSP-256	13-Aug-19	12:00	Air	x		
122037	TSP	South-TSP-256	13-Aug-19	12:00	Air	x		
122038	PM 2.5	North-PM2.5-256	13-Aug-19	12:00	Air	x		
122039	PM 2.5	South-PM2.5-256	13-Aug-19	12:00	Air	x		
122040	TSP	North-TSP-257	19-Aug-19	12:00	Air	x		
122041	TSP	South-TSP-257	19-Aug-19	12:00	Air	x		
122042	PM 2.5	North-PM2.5-257	19-Aug-19	12:00	Air	x		
122043	PM 2.5	South-PM2.5-257	19-Aug-19	12:00	Air	x		
122044	TSP	North-TSP-258	25-Aug-19	12:00	Air	x		
122045	TSP	South-TSP-258	25-Aug-19	12:00	Air	x		
122046	PM 2.5	North-PM2.5-258	25-Aug-19	12:00	Air	x		
122047	PM 2.5	South-PM2.5-258	25-Aug-19	12:00	Air	x		
122048	TSP	North-TSP-259	31-Aug-19	12:00	Air	x		
122049	TSP	South-TSP-259	31-Aug-19	12:00	Air	x		
122050	PM 2.5	North-PM2.5-259	31-Aug-19	12:00	Air	x		
122051	PM 2.5	South-PM2.5-259	31-Aug-19	12:00	Air	x		
122052	TSP Travel Blank		31-Aug-19	12:00	Air	x		
122053	PM 2.5 Travel Blank		31-Aug-19	12:00	Air	x		
122054	Dustfall - Galling Road		04-Sep-19	12:00	Air	x		
122055	Dustfall - Taft Road (South)		04-Sep-19	12:00	Air	x		
Drinking Water (DW) Samples* (client use)			Special Instructions / Specify Criteria to add on report (client use)			SAMPLE CONDITION AS RECEIVED (lab use only)		
Are samples taken from a Regulated DW System? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			MISA [Template NGSWMISA]			Frozen <input type="checkbox"/>	SIF Observations <input type="checkbox"/> Yes <input type="checkbox"/> No	
Are samples for human drinking water use? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No						Ice packs <input type="checkbox"/> Yes <input type="checkbox"/> No	Custody seal intact <input type="checkbox"/> Yes <input type="checkbox"/> No	
						Cooling Initiated <input type="checkbox"/>		
						INITIAL COOLER TEMPERATURES °C	FINAL COOLER TEMPERATURES °C	
						20.2°C		
SHIPMENT RELEASE (client use)			INITIAL SHIPMENT RECEIPTION (lab use only)			FINAL SHIPMENT RECEIPTION (lab use only)		
Released by: Kelsea Hunsperger	Date: 2019-09-10	Time: 10:00	Received by: MARROW BURTON	Date: 13-Sept-2019	Time: 9:00	Received by:	Date:	Time:



New Gold Inc. Rainy River Project
ATTN: Kelsea Hunsperger
5967 Highway 11/71
P.O. Box 5
Emo ON POW 1E0

Date Received: 08-OCT-19
Report Date: 31-OCT-19 11:02 (MT)
Version: FINAL

Client Phone: 807-482-0900

Certificate of Analysis

Lab Work Order #: L2361505

Project P.O. #: 4500035097

Job Reference: AIR QUALITY MONITORING

C of C Numbers:

Legal Site Desc:

A handwritten signature in black ink, appearing to read "wirek", enclosed in a circular oval.

Claire Kocharakkal, B.Sc.
Account Manager

[This report shall not be reproduced except in full without the written authority of the Laboratory.]

ADDRESS: 1435 Norjohn Court, Unit 1, Burlington, ON, L7L 0E6 Canada | Phone: +1 905 331 3111 | Fax: +1 905 331 4567
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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2361505-1 NORTH-TSP-260 Sampled By: Kelsea Hunsperger on 06-SEP-19 Matrix: Hi Vol Filter Miscellaneous Parameters Total particulate	45200		2300	ug		11-OCT-19	R4871967
Metals on High Volume Filter by ICPMS Arsenic (As) Cadmium (Cd) Cobalt (Co) Chromium (Cr) Copper (Cu) Iron (Fe) Manganese (Mn) Nickel (Ni) Lead (Pb) Selenium (Se) Vanadium (V) Zinc (Zn)	<3.0 <2.0 <2.0 <5.0 459 184 5.3 <3.0 <3.0 <10 <5.0 12.2		3.0 2.0 2.0 5.0 4.0 20 1.0 3.0 3.0 10 5.0 5.0	ug	16-OCT-19 16-OCT-19 16-OCT-19 16-OCT-19 16-OCT-19 16-OCT-19 16-OCT-19 16-OCT-19 16-OCT-19 16-OCT-19 16-OCT-19	18-OCT-19 18-OCT-19 18-OCT-19 18-OCT-19 18-OCT-19 18-OCT-19 18-OCT-19 18-OCT-19 18-OCT-19 18-OCT-19 18-OCT-19	R4880370 R4880370 R4880370 R4880370 R4880370 R4880370 R4880370 R4880370 R4880370 R4880370 R4880370
L2361505-2 SOUTH-TSP-260 Sampled By: Kelsea Hunsperger on 06-SEP-19 Matrix: Hi Vol Filter Miscellaneous Parameters Total particulate	40300		2300	ug		11-OCT-19	R4871967
Metals on High Volume Filter by ICPMS Arsenic (As) Cadmium (Cd) Cobalt (Co) Chromium (Cr) Copper (Cu) Iron (Fe) Manganese (Mn) Nickel (Ni) Lead (Pb) Selenium (Se) Vanadium (V) Zinc (Zn)	<3.0 <2.0 <2.0 <5.0 24.1 289 6.6 <3.0 <3.0 <10 <5.0 7.2		3.0 2.0 2.0 5.0 4.0 20 1.0 3.0 3.0 10 5.0 5.0	ug	16-OCT-19 16-OCT-19 16-OCT-19 16-OCT-19 16-OCT-19 16-OCT-19 16-OCT-19 16-OCT-19 16-OCT-19 16-OCT-19 16-OCT-19	18-OCT-19 18-OCT-19 18-OCT-19 18-OCT-19 18-OCT-19 18-OCT-19 18-OCT-19 18-OCT-19 18-OCT-19 18-OCT-19 18-OCT-19	R4880370 R4880370 R4880370 R4880370 R4880370 R4880370 R4880370 R4880370 R4880370 R4880370 R4880370
L2361505-3 NORTH-TSP-261 Sampled By: Kelsea Hunsperger on 12-SEP-19 Matrix: Hi Vol Filter Miscellaneous Parameters Total particulate	6600		2300	ug		11-OCT-19	R4871967
Metals on High Volume Filter by ICPMS Arsenic (As) Cadmium (Cd) Cobalt (Co) Chromium (Cr) Copper (Cu) Iron (Fe) Manganese (Mn) Nickel (Ni) Lead (Pb) Selenium (Se) Vanadium (V) Zinc (Zn)	<3.0 <2.0 <2.0 <5.0 245 45 1.5 <3.0 <3.0 <10 <5.0 14.2		3.0 2.0 2.0 5.0 4.0 20 1.0 3.0 3.0 10 5.0 5.0	ug	16-OCT-19 16-OCT-19 16-OCT-19 16-OCT-19 16-OCT-19 16-OCT-19 16-OCT-19 16-OCT-19 16-OCT-19 16-OCT-19 16-OCT-19	18-OCT-19 18-OCT-19 18-OCT-19 18-OCT-19 18-OCT-19 18-OCT-19 18-OCT-19 18-OCT-19 18-OCT-19 18-OCT-19 18-OCT-19	R4880370 R4880370 R4880370 R4880370 R4880370 R4880370 R4880370 R4880370 R4880370 R4880370 R4880370

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2361505-4 SOUTH-TSP-261 Sampled By: Kelsea Hunsperger on 12-SEP-19 Matrix: Hi Vol Filter Miscellaneous Parameters Total particulate	41100		2300	ug		11-OCT-19	R4871967
Metals on High Volume Filter by ICPMS Arsenic (As) Cadmium (Cd) Cobalt (Co) Chromium (Cr) Copper (Cu) Iron (Fe) Manganese (Mn) Nickel (Ni) Lead (Pb) Selenium (Se) Vanadium (V) Zinc (Zn)	<3.0 <2.0 <2.0 <5.0 40.3 450 10.2 <3.0 <3.0 <10 <5.0 12.6		3.0 2.0 2.0 5.0 4.0 20 1.0 3.0 3.0 10 5.0 5.0	ug	16-OCT-19 16-OCT-19 16-OCT-19 16-OCT-19 16-OCT-19 16-OCT-19 16-OCT-19 16-OCT-19 16-OCT-19 16-OCT-19 16-OCT-19	18-OCT-19 18-OCT-19 18-OCT-19 18-OCT-19 18-OCT-19 18-OCT-19 18-OCT-19 18-OCT-19 18-OCT-19 18-OCT-19 18-OCT-19	R4880370 R4880370 R4880370 R4880370 R4880370 R4880370 R4880370 R4880370 R4880370 R4880370 R4880370
L2361505-5 NORTH-TSP-262 Sampled By: Kelsea Hunsperger on 18-SEP-19 Matrix: Hi Vol Filter Miscellaneous Parameters Total particulate	71800		2300	ug		11-OCT-19	R4871967
Metals on High Volume Filter by ICPMS Arsenic (As) Cadmium (Cd) Cobalt (Co) Chromium (Cr) Copper (Cu) Iron (Fe) Manganese (Mn) Nickel (Ni) Lead (Pb) Selenium (Se) Vanadium (V) Zinc (Zn)	<3.0 <2.0 <2.0 5.8 230 491 24.8 <3.0 <3.0 <10 <5.0 31.1		3.0 2.0 2.0 5.0 4.0 20 1.0 3.0 3.0 10 5.0 5.0	ug	16-OCT-19 16-OCT-19 16-OCT-19 16-OCT-19 16-OCT-19 16-OCT-19 16-OCT-19 16-OCT-19 16-OCT-19 16-OCT-19 16-OCT-19	18-OCT-19 18-OCT-19 18-OCT-19 18-OCT-19 18-OCT-19 18-OCT-19 18-OCT-19 18-OCT-19 18-OCT-19 18-OCT-19 18-OCT-19	R4880370 R4880370 R4880370 R4880370 R4880370 R4880370 R4880370 R4880370 R4880370 R4880370 R4880370
L2361505-6 SOUTH-TSP-262 Sampled By: Kelsea Hunsperger on 18-SEP-19 Matrix: Hi Vol Filter Miscellaneous Parameters Total particulate	81500		2300	ug		11-OCT-19	R4871967
Metals on High Volume Filter by ICPMS Arsenic (As) Cadmium (Cd) Cobalt (Co) Chromium (Cr) Copper (Cu) Iron (Fe) Manganese (Mn) Nickel (Ni) Lead (Pb) Selenium (Se) Vanadium (V) Zinc (Zn)	<3.0 <2.0 <2.0 7.0 57.6 527 25.7 <3.0 <3.0 <10 <5.0 29.1		3.0 2.0 2.0 5.0 4.0 20 1.0 3.0 3.0 10 5.0 5.0	ug	16-OCT-19 16-OCT-19 16-OCT-19 16-OCT-19 16-OCT-19 16-OCT-19 16-OCT-19 16-OCT-19 16-OCT-19 16-OCT-19 16-OCT-19	18-OCT-19 18-OCT-19 18-OCT-19 18-OCT-19 18-OCT-19 18-OCT-19 18-OCT-19 18-OCT-19 18-OCT-19 18-OCT-19 18-OCT-19	R4880370 R4880370 R4880370 R4880370 R4880370 R4880370 R4880370 R4880370 R4880370 R4880370 R4880370

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2361505-7 NORTH-TSP-263 Sampled By: Kelsea Hunsperger on 24-SEP-19 Matrix: Hi Vol Filter Miscellaneous Parameters Total particulate	42500		2300	ug		11-OCT-19	R4871967
Metals on High Volume Filter by ICPMS Arsenic (As) Cadmium (Cd) Cobalt (Co) Chromium (Cr) Copper (Cu) Iron (Fe) Manganese (Mn) Nickel (Ni) Lead (Pb) Selenium (Se) Vanadium (V) Zinc (Zn)	<3.0 <2.0 <2.0 <5.0 364 275 19.1 <3.0 <3.0 <10 <5.0 12.3		3.0 2.0 2.0 5.0 4.0 20 1.0 3.0 3.0 10 5.0 5.0	ug	16-OCT-19 16-OCT-19 16-OCT-19 16-OCT-19 ug 16-OCT-19 16-OCT-19 16-OCT-19 16-OCT-19 16-OCT-19 16-OCT-19	18-OCT-19 18-OCT-19 18-OCT-19 18-OCT-19 18-OCT-19 18-OCT-19 18-OCT-19 18-OCT-19 18-OCT-19 18-OCT-19 18-OCT-19	R4880370 R4880370 R4880370 R4880370 R4880370 R4880370 R4880370 R4880370 R4880370 R4880370 R4880370
L2361505-8 SOUTH-TSP-263 Sampled By: Kelsea Hunsperger on 24-SEP-19 Matrix: Hi Vol Filter Miscellaneous Parameters Total particulate	29800		2300	ug		11-OCT-19	R4871967
Metals on High Volume Filter by ICPMS Arsenic (As) Cadmium (Cd) Cobalt (Co) Chromium (Cr) Copper (Cu) Iron (Fe) Manganese (Mn) Nickel (Ni) Lead (Pb) Selenium (Se) Vanadium (V) Zinc (Zn)	<3.0 <2.0 <2.0 <5.0 63.0 302 20.3 <3.0 <3.0 <10 <5.0 8.6		3.0 2.0 2.0 5.0 4.0 20 1.0 3.0 3.0 10 5.0 5.0	ug	16-OCT-19 16-OCT-19 16-OCT-19 16-OCT-19 16-OCT-19 16-OCT-19 16-OCT-19 16-OCT-19 16-OCT-19 16-OCT-19 16-OCT-19	18-OCT-19 18-OCT-19 18-OCT-19 18-OCT-19 18-OCT-19 18-OCT-19 18-OCT-19 18-OCT-19 18-OCT-19 18-OCT-19 18-OCT-19	R4880370 R4880370 R4880370 R4880370 R4880370 R4880370 R4880370 R4880370 R4880370 R4880370 R4880370
L2361505-9 NORTH-TSP-264 Sampled By: Kelsea Hunsperger on 30-SEP-19 Matrix: Hi Vol Filter Miscellaneous Parameters Total particulate	5300		2300	ug		11-OCT-19	R4871967
Metals on High Volume Filter by ICPMS Arsenic (As) Cadmium (Cd) Cobalt (Co) Chromium (Cr) Copper (Cu) Iron (Fe) Manganese (Mn) Nickel (Ni) Lead (Pb) Selenium (Se) Vanadium (V) Zinc (Zn)	<3.0 <2.0 <2.0 <5.0 342 42 1.0 <3.0 <3.0 <10 <5.0 5.2		3.0 2.0 2.0 5.0 4.0 20 1.0 3.0 3.0 10 5.0 5.0	ug	16-OCT-19 16-OCT-19 16-OCT-19 16-OCT-19 16-OCT-19 16-OCT-19 16-OCT-19 16-OCT-19 16-OCT-19 16-OCT-19 16-OCT-19	18-OCT-19 18-OCT-19 18-OCT-19 18-OCT-19 18-OCT-19 18-OCT-19 18-OCT-19 18-OCT-19 18-OCT-19 18-OCT-19 18-OCT-19	R4880370 R4880370 R4880370 R4880370 R4880370 R4880370 R4880370 R4880370 R4880370 R4880370 R4880370

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2361505-10	SOUTH-TSP-264							
Sampled By:	Kelsea Hunsperger on 30-SEP-19							
Matrix:	Hi Vol Filter							
Miscellaneous Parameters								
Total particulate		5400		2300	ug		11-OCT-19	R4871967
Metals on High Volume Filter by ICPMS								
Arsenic (As)		<3.0		3.0	ug	16-OCT-19	18-OCT-19	R4880370
Cadmium (Cd)		<2.0		2.0	ug	16-OCT-19	18-OCT-19	R4880370
Cobalt (Co)		<2.0		2.0	ug	16-OCT-19	18-OCT-19	R4880370
Chromium (Cr)		<5.0		5.0	ug	16-OCT-19	18-OCT-19	R4880370
Copper (Cu)		50.0		4.0	ug	16-OCT-19	18-OCT-19	R4880370
Iron (Fe)		58		20	ug	16-OCT-19	18-OCT-19	R4880370
Manganese (Mn)		1.6		1.0	ug	16-OCT-19	18-OCT-19	R4880370
Nickel (Ni)		<3.0		3.0	ug	16-OCT-19	18-OCT-19	R4880370
Lead (Pb)		<3.0		3.0	ug	16-OCT-19	18-OCT-19	R4880370
Selenium (Se)		<10		10	ug	16-OCT-19	18-OCT-19	R4880370
Vanadium (V)		<5.0		5.0	ug	16-OCT-19	18-OCT-19	R4880370
Zinc (Zn)		5.6		5.0	ug	16-OCT-19	18-OCT-19	R4880370
L2361505-11	TSP-TRAVEL BLANK							
Sampled By:	Kelsea Hunsperger on 01-OCT-19							
Matrix:	Hi Vol Filter							
Miscellaneous Parameters								
Total particulate		50700		2300	ug		11-OCT-19	R4871967
Metals on High Volume Filter by ICPMS								
Arsenic (As)		<3.0		3.0	ug	16-OCT-19	18-OCT-19	R4880370
Cadmium (Cd)		<2.0		2.0	ug	16-OCT-19	18-OCT-19	R4880370
Cobalt (Co)		<2.0		2.0	ug	16-OCT-19	18-OCT-19	R4880370
Chromium (Cr)		<5.0		5.0	ug	16-OCT-19	18-OCT-19	R4880370
Copper (Cu)		5.7		4.0	ug	16-OCT-19	18-OCT-19	R4880370
Iron (Fe)		23		20	ug	16-OCT-19	18-OCT-19	R4880370
Manganese (Mn)		1.1		1.0	ug	16-OCT-19	18-OCT-19	R4880370
Nickel (Ni)		<3.0		3.0	ug	16-OCT-19	18-OCT-19	R4880370
Lead (Pb)		<3.0		3.0	ug	16-OCT-19	18-OCT-19	R4880370
Selenium (Se)		<10		10	ug	16-OCT-19	18-OCT-19	R4880370
Vanadium (V)		<5.0		5.0	ug	16-OCT-19	18-OCT-19	R4880370
Zinc (Zn)		<5.0		5.0	ug	16-OCT-19	18-OCT-19	R4880370
L2361505-12	NORTH-PM2.5-260							
Sampled By:	Kelsea Hunsperger on 06-SEP-19							
Matrix:	47mm Filter							
Miscellaneous Parameters								
Total particulate		<15		15	ug		29-OCT-19	R4889088
L2361505-13	SOUTH-PM2.5-260							
Sampled By:	Kelsea Hunsperger on 06-SEP-19							
Matrix:	47mm Filter							
Miscellaneous Parameters								
Total particulate		33		15	ug		29-OCT-19	R4889088
L2361505-14	NORTH-PM2.5-261							
Sampled By:	Kelsea Hunsperger on 12-SEP-19							
Matrix:	47mm Filter							
Miscellaneous Parameters								
Total particulate		18		15	ug		29-OCT-19	R4889088

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2361505-15 SOUTH-PM2.5-261 Sampled By: Kelsea Hunsperger on 12-SEP-19 Matrix: 47mm Filter Miscellaneous Parameters Total particulate	<15		15	ug		29-OCT-19	R4889088
L2361505-16 NORTH-PM2.5-262 Sampled By: Kelsea Hunsperger on 18-SEP-19 Matrix: 47mm Filter Miscellaneous Parameters Total particulate	132		15	ug		29-OCT-19	R4889088
L2361505-17 SOUTH-PM2.5-262 Sampled By: Kelsea Hunsperger on 18-SEP-19 Matrix: 47mm Filter Miscellaneous Parameters Total particulate	109		15	ug		29-OCT-19	R4889088
L2361505-18 NORTH-PM2.5-263 Sampled By: Kelsea Hunsperger on 24-SEP-19 Matrix: 47mm Filter Miscellaneous Parameters Total particulate	19		15	ug		29-OCT-19	R4889088
L2361505-19 SOUTH-PM2.5-263 Sampled By: Kelsea Hunsperger on 24-SEP-19 Matrix: 47mm Filter Miscellaneous Parameters Total particulate	<15		15	ug		29-OCT-19	R4889088
L2361505-20 NORTH-PM2.5-264 Sampled By: Kelsea Hunsperger on 30-SEP-19 Matrix: 47mm Filter Miscellaneous Parameters Total particulate	<15		15	ug		29-OCT-19	R4889088
L2361505-21 SOUTH-PM2.5-264 Sampled By: Kelsea Hunsperger on 30-SEP-19 Matrix: 47mm Filter Miscellaneous Parameters Total particulate	<15		15	ug		29-OCT-19	R4889088
L2361505-22 PM2.5-TRAVEL BLANK Sampled By: Kelsea Hunsperger on 01-OCT-19 Matrix: 47mm Filter Miscellaneous Parameters Total particulate	<15		15	ug		29-OCT-19	R4889088
L2361505-23 NORTH-DUSTFALL Sampled By: Kelsea Hunsperger on 01-OCT-19 Matrix: Dustfall Dustfalls-Total, Soluble, Insoluble +FV Total Dustfall Total Insoluble Dustfall Total Soluble Dustfall Fixed Dustfall Fixed Insoluble Dustfall Fixed Soluble Dustfall Volatile Dustfall	0.57 0.32 0.25 0.28 0.15 0.13 0.28		0.11	mg/dm ² .day		29-OCT-19	R4890382 29-OCT-19 R4890382 29-OCT-19 R4890382 29-OCT-19 R4890382 29-OCT-19 R4890382 29-OCT-19 R4890382 29-OCT-19 R4890382

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2361505-23 NORTH-DUSTFALL							
Sampled By: Kelsea Hunsperger on 01-OCT-19							
Matrix: Dustfall							
Dustfalls-Total, Soluble, Insoluble +FV							
Total Volatile Insoluble Dustfall	0.16		0.11	mg/dm ² .day		29-OCT-19	R4890382
Total Volatile Soluble Dustfall	0.12		0.11	mg/dm ² .day		29-OCT-19	R4890382
Total Metals in Dustfalls by ICPMS							
Aluminum (Al)-Total	0.00170		0.00017	mg/dm ² .day	10-OCT-19	10-OCT-19	R4867453
Interval			1	days		10-OCT-19	R4866551
Antimony (Sb)-Total	<0.0000058		0.0000058	mg/dm ² .day	10-OCT-19	10-OCT-19	R4867453
Arsenic (As)-Total	<0.0000058		0.0000058	mg/dm ² .day	10-OCT-19	10-OCT-19	R4867453
Barium (Ba)-Total	0.0000543		0.0000029	mg/dm ² .day	10-OCT-19	10-OCT-19	R4867453
Beryllium (Be)-Total	<0.000029		0.000029	mg/dm ² .day	10-OCT-19	10-OCT-19	R4867453
Bismuth (Bi)-Total	<0.000029		0.000029	mg/dm ² .day	10-OCT-19	10-OCT-19	R4867453
Boron (B)-Total	<0.00058		0.00058	mg/dm ² .day	10-OCT-19	10-OCT-19	R4867453
Cadmium (Cd)-Total	<0.0000029		0.0000029	mg/dm ² .day	10-OCT-19	10-OCT-19	R4867453
Calcium (Ca)-Total	0.0164		0.0012	mg/dm ² .day	10-OCT-19	10-OCT-19	R4867453
Chromium (Cr)-Total	<0.000029		0.000029	mg/dm ² .day	10-OCT-19	10-OCT-19	R4867453
Cobalt (Co)-Total	<0.0000058		0.0000058	mg/dm ² .day	10-OCT-19	10-OCT-19	R4867453
Copper (Cu)-Total	<0.000058	DLB	0.000058	mg/dm ² .day	10-OCT-19	10-OCT-19	R4867453
Lead (Pb)-Total	<0.000012		0.000012	mg/dm ² .day	10-OCT-19	10-OCT-19	R4867453
Iron (Fe)-Total	0.0018		0.0017	mg/dm ² .day	10-OCT-19	10-OCT-19	R4867453
Lithium (Li)-Total	<0.00029		0.00029	mg/dm ² .day	10-OCT-19	10-OCT-19	R4867453
Magnesium (Mg)-Total	0.00445		0.00029	mg/dm ² .day	10-OCT-19	10-OCT-19	R4867453
Manganese (Mn)-Total	0.000176		0.0000058	mg/dm ² .day	10-OCT-19	10-OCT-19	R4867453
Molybdenum (Mo)-Total	<0.0000029		0.0000029	mg/dm ² .day	10-OCT-19	10-OCT-19	R4867453
Nickel (Ni)-Total	<0.000029		0.000029	mg/dm ² .day	10-OCT-19	10-OCT-19	R4867453
Phosphorus (P)-Total	0.0161		0.0029	mg/dm ² .day	10-OCT-19	10-OCT-19	R4867453
Potassium (K)-Total	0.0183		0.0029	mg/dm ² .day	10-OCT-19	10-OCT-19	R4867453
Selenium (Se)-Total	<0.000058		0.000058	mg/dm ² .day	10-OCT-19	10-OCT-19	R4867453
Silicon (Si)-Total	<0.0029		0.0029	mg/dm ² .day	10-OCT-19	10-OCT-19	R4867453
Silver (Ag)-Total	<0.0000058		0.0000005	mg/dm ² .day	10-OCT-19	10-OCT-19	R4867453
Sodium (Na)-Total	0.0063		0.0029	mg/dm ² .day	10-OCT-19	10-OCT-19	R4867453
Strontium (Sr)-Total	0.0000408		0.0000058	mg/dm ² .day	10-OCT-19	10-OCT-19	R4867453
Thallium (Tl)-Total	<0.0000058		0.0000058	mg/dm ² .day	10-OCT-19	10-OCT-19	R4867453
Tin (Sn)-Total	<0.0000058		0.0000058	mg/dm ² .day	10-OCT-19	10-OCT-19	R4867453
Titanium (Ti)-Total	<0.00058		0.00058	mg/dm ² .day	10-OCT-19	10-OCT-19	R4867453
Uranium (U)-Total	<0.0000058		0.0000005	mg/dm ² .day	10-OCT-19	10-OCT-19	R4867453
Vanadium (V)-Total	<0.000058		0.000058	mg/dm ² .day	10-OCT-19	10-OCT-19	R4867453
Zinc (Zn)-Total	0.00046		0.00017	mg/dm ² .day	10-OCT-19	10-OCT-19	R4867453
L2361505-24 SOUTH-DUSTFALL							
Sampled By: Kelsea Hunsperger on 01-OCT-19							
Matrix: Dustfall							
Dustfalls-Total, Soluble, Insoluble +FV							
Total Dustfall	0.34		0.11	mg/dm ² .day		29-OCT-19	R4890382
Total Insoluble Dustfall	0.17		0.11	mg/dm ² .day		29-OCT-19	R4890382
Total Soluble Dustfall	0.18		0.11	mg/dm ² .day		29-OCT-19	R4890382
Fixed Dustfall	0.22		0.11	mg/dm ² .day		29-OCT-19	R4890382
Fixed Insoluble Dustfall	<0.11		0.11	mg/dm ² .day		29-OCT-19	R4890382
Fixed Soluble Dustfall	0.13		0.11	mg/dm ² .day		29-OCT-19	R4890382
Volatile Dustfall	0.12		0.11	mg/dm ² .day		29-OCT-19	R4890382
Volatile Insoluble Dustfall	<0.11		0.11	mg/dm ² .day		29-OCT-19	R4890382
Volatile Soluble Dustfall	<0.11		0.11	mg/dm ² .day		29-OCT-19	R4890382

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2361505-24 SOUTH-DUSTFALL							
Sampled By:	Kelsea Hunsperger on 01-OCT-19						
Matrix:	Dustfall						
Total Metals in Dustfalls by ICPMS							
Aluminum (Al)-Total	0.00252		0.00016	mg/dm ² .day	10-OCT-19	10-OCT-19	R4867453
Interval			1	days		10-OCT-19	R4866551
Antimony (Sb)-Total	<0.0000055		0.0000055	mg/dm ² .day	10-OCT-19	10-OCT-19	R4867453
Arsenic (As)-Total	<0.0000055		0.0000055	mg/dm ² .day	10-OCT-19	10-OCT-19	R4867453
Barium (Ba)-Total	0.0000507		0.0000027	mg/dm ² .day	10-OCT-19	10-OCT-19	R4867453
Beryllium (Be)-Total	<0.000027		0.000027	mg/dm ² .day	10-OCT-19	10-OCT-19	R4867453
Bismuth (Bi)-Total	<0.000027		0.000027	mg/dm ² .day	10-OCT-19	10-OCT-19	R4867453
Boron (B)-Total	<0.00055		0.00055	mg/dm ² .day	10-OCT-19	10-OCT-19	R4867453
Cadmium (Cd)-Total	<0.0000027		0.0000027	mg/dm ² .day	10-OCT-19	10-OCT-19	R4867453
Calcium (Ca)-Total	0.0188		0.0011	mg/dm ² .day	10-OCT-19	10-OCT-19	R4867453
Chromium (Cr)-Total	<0.000027		0.000027	mg/dm ² .day	10-OCT-19	10-OCT-19	R4867453
Cobalt (Co)-Total	<0.0000055		0.0000055	mg/dm ² .day	10-OCT-19	10-OCT-19	R4867453
Copper (Cu)-Total	<0.000055	DLB	0.000055	mg/dm ² .day	10-OCT-19	10-OCT-19	R4867453
Lead (Pb)-Total	<0.0000055	DLB	0.0000055	mg/dm ² .day	10-OCT-19	10-OCT-19	R4867453
Iron (Fe)-Total	0.0027		0.0016	mg/dm ² .day	10-OCT-19	10-OCT-19	R4867453
Lithium (Li)-Total	<0.00027		0.00027	mg/dm ² .day	10-OCT-19	10-OCT-19	R4867453
Magnesium (Mg)-Total	0.00466		0.00027	mg/dm ² .day	10-OCT-19	10-OCT-19	R4867453
Manganese (Mn)-Total	0.000195		0.0000055	mg/dm ² .day	10-OCT-19	10-OCT-19	R4867453
Molybdenum (Mo)-Total	<0.0000027		0.0000027	mg/dm ² .day	10-OCT-19	10-OCT-19	R4867453
Nickel (Ni)-Total	<0.000027		0.000027	mg/dm ² .day	10-OCT-19	10-OCT-19	R4867453
Phosphorus (P)-Total	0.0121		0.0027	mg/dm ² .day	10-OCT-19	10-OCT-19	R4867453
Potassium (K)-Total	0.0157		0.0027	mg/dm ² .day	10-OCT-19	10-OCT-19	R4867453
Selenium (Se)-Total	<0.000055		0.000055	mg/dm ² .day	10-OCT-19	10-OCT-19	R4867453
Silicon (Si)-Total	0.0035		0.0027	mg/dm ² .day	10-OCT-19	10-OCT-19	R4867453
Silver (Ag)-Total	<0.00000055		0.00000055	mg/dm ² .day	10-OCT-19	10-OCT-19	R4867453
Sodium (Na)-Total	0.0047		0.0027	mg/dm ² .day	10-OCT-19	10-OCT-19	R4867453
Strontium (Sr)-Total	0.0000522		0.0000055	mg/dm ² .day	10-OCT-19	10-OCT-19	R4867453
Thallium (Tl)-Total	<0.0000055		0.0000055	mg/dm ² .day	10-OCT-19	10-OCT-19	R4867453
Tin (Sn)-Total	<0.0000055		0.0000055	mg/dm ² .day	10-OCT-19	10-OCT-19	R4867453
Titanium (Ti)-Total	<0.00055		0.00055	mg/dm ² .day	10-OCT-19	10-OCT-19	R4867453
Uranium (U)-Total	<0.00000055		0.00000055	mg/dm ² .day	10-OCT-19	10-OCT-19	R4867453
Vanadium (V)-Total	<0.000055		0.000055	mg/dm ² .day	10-OCT-19	10-OCT-19	R4867453
Zinc (Zn)-Total	<0.00016		0.00016	mg/dm ² .day	10-OCT-19	10-OCT-19	R4867453

Reference Information

Sample Parameter Qualifier Key:

Qualifier	Description
A	Method Blank exceeds ALS DQO. Refer to narrative comments for further information.
B	Method Blank exceeds ALS DQO. Associated sample results which are < Limit of Reporting or > 5 times blank level are considered reliable.
DLB	Detection Limit Raised. Analyte detected at comparable level in Method Blank.
MB-LOR	Method Blank exceeds ALS DQO. Limits of Reporting have been adjusted for samples with positive hits below 5x blank level.
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
AIR VOLUME-HIVOL-BU	Filter	Air volume (m3)	USEPA IO3.1
DUSTFALLS-ALL-DM2-VA	Dustfall	Dustfalls-Total, Soluble, Insoluble +FV	BC LAB MANUAL - PARTICULATE
This analysis is carried out using procedures modified from British Columbia Environmental Manual "Particulate." Particulates or "Dustfalls" are determined gravimetrically. Total Insoluble and Soluble Dustfalls are determined by filtering a sample through a 0.45 um membrane filter and drying the filter and filtrate at 104 C, followed by ignition at 550 C. The remaining residue after 550 C represents the fixed portion and the weight lost on ignition represents the volatile portion. The sum of all fixed and volatile portions on both Insoluble and Soluble portions represents Total Dustfalls.			
MET-DUST(DM2)-MS-VA	Dustfall	Total Metals in Dustfalls by ICPMS	EPA 6020A
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). Instrumental analysis is by inductively coupled plasma - mass spectrometry (EPA Method 6020A).			
MET-IO3.5-MS-BU	Filter	Metals on High Volume Filter by ICPMS	IO3.5
After weighing (if required), hivol filters are sub-sampled and leached with nitric acid to extract available metal analytes. After dilution, the extracts are submitted to the ICPMS instrument for analysis.			
PART-EC6.08-GRAV-BU	Filter	Particulate ENV Canada 6.08 microbalance	ENV CAN 6.08
The particulate matter collected onto tare-weighed 47mm Teflon Disc filter media is desiccated then brought to a constant weight on an analytical balance. Results are presented in ug (per filter). An air volume can be included to allow for reporting in ug/m3.			
PART-HIVOL-GRAV-BU	Filter	Particulate on High Volume Filter	USEPA IO3.1

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
BU	ALS ENVIRONMENTAL - BURLINGTON, ONTARIO, CANADA
VA	ALS ENVIRONMENTAL - VANCOUVER, BRITISH COLUMBIA, CANADA

Chain of Custody Numbers:
GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.

mg/kg - milligrams per kilogram based on dry weight of sample

mg/kg wwt - milligrams per kilogram based on wet weight of sample

mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight

mg/L - unit of concentration based on volume, parts per million.

< - Less than.

D.L. - The reporting limit.

N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.

Quality Control Report

Workorder: L2361505

Report Date: 31-OCT-19

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Client: New Gold Inc. Rainy River Project
 5967 Highway 11/71 P.O. Box 5
 Emo ON P0W 1E0

Contact: Kelsea Hunsperger

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-IO3.5-MS-BU	Filter							
Batch	R4880370							
WG3193770-2 LCS								
Arsenic (As)			93.6		%		80-120	18-OCT-19
Cadmium (Cd)			98.8		%		80-120	18-OCT-19
Cobalt (Co)			96.3		%		80-120	18-OCT-19
Chromium (Cr)			92.4		%		80-120	18-OCT-19
Copper (Cu)			92.9		%		80-120	18-OCT-19
Iron (Fe)			95.2		%		80-120	18-OCT-19
Manganese (Mn)			92.6		%		80-120	18-OCT-19
Nickel (Ni)			92.5		%		80-120	18-OCT-19
Lead (Pb)			97.8		%		80-120	18-OCT-19
Selenium (Se)			98.5		%		80-120	18-OCT-19
Vanadium (V)			92.6		%		80-120	18-OCT-19
Zinc (Zn)			94.0		%		80-120	18-OCT-19
WG3193770-1 MB								
Arsenic (As)			<3.0		ug		3	18-OCT-19
Cadmium (Cd)			<2.0		ug		2	18-OCT-19
Cobalt (Co)			<2.0		ug		2	18-OCT-19
Chromium (Cr)			<5.0		ug		5	18-OCT-19
Copper (Cu)			7.8	A	ug		4	18-OCT-19
Iron (Fe)			<20		ug		20	18-OCT-19
Manganese (Mn)			<1.0		ug		1	18-OCT-19
Nickel (Ni)			<3.0		ug		3	18-OCT-19
Lead (Pb)			<3.0		ug		3	18-OCT-19
Selenium (Se)			<10		ug		10	18-OCT-19
Vanadium (V)			<5.0		ug		10	18-OCT-19
Zinc (Zn)			<5.0		ug		5	18-OCT-19

COMMENTS: Cu observed in the method blank, significantly above the LOR. Data for this analyte is likely to be biased high as a result of this background. PE 23-Oct-19

PART-EC6.08-GRAV-BU Filter

Batch	R4889088							
WG3204738-3 DUP		L2361505-12						
Total particulate		<15	<15	RPD-NA	ug		25	29-OCT-19
WG3204738-1 MB								
Total particulate			<15		ug		15	29-OCT-19
WG3204738-2 MB								
Total particulate			<15		ug		15	29-OCT-19

Quality Control Report

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Report Date: 31-OCT-19

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PART-HIVOL-GRAV-BU Filter								
Batch R4871967								
WG3192664-2 DUP		L2361505-1						
Total particulate		45200	50600		ug	11	25	11-OCT-19
WG3192664-1 MB								
Total particulate			<100		ug		100	11-OCT-19
DUSTFALLS-ALL-DM2-VA Dustfall								
Batch R4890382								
WG3204498-1 MB								
Total Dustfall			<0.10		mg/dm ² .day		0.1	29-OCT-19
Total Insoluble Dustfall			<0.10		mg/dm ² .day		0.1	29-OCT-19
Total Soluble Dustfall			<0.10		mg/dm ² .day		0.1	29-OCT-19
Fixed Dustfall			<0.10		mg/dm ² .day		0.1	29-OCT-19
Fixed Insoluble Dustfall			<0.10		mg/dm ² .day		0.1	29-OCT-19
Fixed Soluble Dustfall			<0.10		mg/dm ² .day		0.1	29-OCT-19
Volatile Dustfall			<0.10		mg/dm ² .day		0.1	29-OCT-19
Volatile Insoluble Dustfall			<0.10		mg/dm ² .day		0.1	29-OCT-19
Volatile Soluble Dustfall			<0.10		mg/dm ² .day		0.1	29-OCT-19
MET-DUST(DM2)-MS-VA Dustfall								
Batch R4867453								
WG3187611-2 LCS								
Aluminum (Al)-Total		96.9		%		80-120	10-OCT-19	
Antimony (Sb)-Total		90.0		%		80-120	10-OCT-19	
Arsenic (As)-Total		92.7		%		80-120	10-OCT-19	
Barium (Ba)-Total		93.1		%		80-120	10-OCT-19	
Beryllium (Be)-Total		91.9		%		80-120	10-OCT-19	
Bismuth (Bi)-Total		96.0		%		80-120	10-OCT-19	
Boron (B)-Total		95.4		%		80-120	10-OCT-19	
Cadmium (Cd)-Total		91.4		%		80-120	10-OCT-19	
Calcium (Ca)-Total		96.1		%		80-120	10-OCT-19	
Chromium (Cr)-Total		91.7		%		80-120	10-OCT-19	
Cobalt (Co)-Total		93.0		%		80-120	10-OCT-19	
Copper (Cu)-Total		92.8		%		80-120	10-OCT-19	
Lead (Pb)-Total		97.1		%		80-120	10-OCT-19	
Iron (Fe)-Total		92.1		%		80-120	10-OCT-19	
Lithium (Li)-Total		90.5		%		80-120	10-OCT-19	
Magnesium (Mg)-Total		93.9		%		80-120	10-OCT-19	
Manganese (Mn)-Total		95.3		%		80-120	10-OCT-19	

Quality Control Report

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-DUST(DM2)-MS-VA Dustfall								
Batch	R4867453							
WG3187611-2 LCS								
Molybdenum (Mo)-Total			97.0		%		80-120	10-OCT-19
Nickel (Ni)-Total			93.7		%		80-120	10-OCT-19
Phosphorus (P)-Total			94.6		%		80-120	10-OCT-19
Potassium (K)-Total			94.6		%		80-120	10-OCT-19
Selenium (Se)-Total			94.1		%		80-120	10-OCT-19
Silicon (Si)-Total			98.0		%		80-120	10-OCT-19
Silver (Ag)-Total			93.4		%		80-120	10-OCT-19
Sodium (Na)-Total			97.5		%		80-120	10-OCT-19
Strontium (Sr)-Total			96.2		%		80-120	10-OCT-19
Thallium (Tl)-Total			94.2		%		80-120	10-OCT-19
Tin (Sn)-Total			92.3		%		80-120	10-OCT-19
Titanium (Ti)-Total			94.7		%		80-120	10-OCT-19
Uranium (U)-Total			102.0		%		80-120	10-OCT-19
Vanadium (V)-Total			95.7		%		80-120	10-OCT-19
Zinc (Zn)-Total			88.1		%		80-120	10-OCT-19
WG3187611-1 MB								
Aluminum (Al)-Total		0.000081	B		mg/dm2.day		0.000079	10-OCT-19
Antimony (Sb)-Total		<0.0000026			mg/dm2.day		0.0000026	10-OCT-19
Arsenic (As)-Total		<0.0000026			mg/dm2.day		0.0000026	10-OCT-19
Barium (Ba)-Total		0.0000027	B		mg/dm2.day		0.0000013	10-OCT-19
Beryllium (Be)-Total		<0.000013			mg/dm2.day		0.000013	10-OCT-19
Bismuth (Bi)-Total		<0.000013			mg/dm2.day		0.000013	10-OCT-19
Boron (B)-Total		<0.00026			mg/dm2.day		0.00026	10-OCT-19
Cadmium (Cd)-Total		<0.0000013			mg/dm2.day		0.0000013	10-OCT-19
Calcium (Ca)-Total		<0.00052			mg/dm2.day		0.00052	10-OCT-19
Chromium (Cr)-Total		<0.000013			mg/dm2.day		0.000013	10-OCT-19
Cobalt (Co)-Total		<0.0000026			mg/dm2.day		0.0000026	10-OCT-19
Copper (Cu)-Total		0.000154	MB-LOR		mg/dm2.day		0.000013	10-OCT-19
Lead (Pb)-Total		0.0000027	MB-LOR		mg/dm2.day		0.0000013	10-OCT-19
Iron (Fe)-Total		<0.00079			mg/dm2.day		0.00079	10-OCT-19
Lithium (Li)-Total		<0.00013			mg/dm2.day		0.00013	10-OCT-19
Magnesium (Mg)-Total		<0.00013			mg/dm2.day		0.00013	10-OCT-19
Manganese (Mn)-Total		<0.0000026			mg/dm2.day		0.0000026	10-OCT-19
Molybdenum (Mo)-Total		<0.0000013			mg/dm2.day		0.0000013	10-OCT-19

Quality Control Report

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-DUST(DM2)-MS-VA		Dustfall						
Batch R4867453								
WG3187611-1 MB								
Nickel (Ni)-Total			<0.000013		mg/dm ² .day		0.000013	10-OCT-19
Phosphorus (P)-Total			<0.0013		mg/dm ² .day		0.0013	10-OCT-19
Potassium (K)-Total			<0.0013		mg/dm ² .day		0.0013	10-OCT-19
Selenium (Se)-Total			<0.000026		mg/dm ² .day		0.000026	10-OCT-19
Silicon (Si)-Total			<0.0013		mg/dm ² .day		0.0013	10-OCT-19
Silver (Ag)-Total			<0.0000002		mg/dm ² .day		0.00000026	10-OCT-19
Sodium (Na)-Total			<0.0013		mg/dm ² .day		0.0013	10-OCT-19
Strontium (Sr)-Total			<0.0000026		mg/dm ² .day		0.0000026	10-OCT-19
Thallium (Tl)-Total			<0.0000026		mg/dm ² .day		0.0000026	10-OCT-19
Tin (Sn)-Total			<0.0000026		mg/dm ² .day		0.0000026	10-OCT-19
Titanium (Ti)-Total			<0.00026		mg/dm ² .day		0.00026	10-OCT-19
Uranium (U)-Total			<0.0000002		mg/dm ² .day		0.00000026	10-OCT-19
Vanadium (V)-Total			<0.000026		mg/dm ² .day		0.000026	10-OCT-19
Zinc (Zn)-Total			<0.000079		mg/dm ² .day		0.000079	10-OCT-19

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Legend:

Limit	ALS Control Limit (Data Quality Objectives)
DUP	Duplicate
RPD	Relative Percent Difference
N/A	Not Available
LCS	Laboratory Control Sample
SRM	Standard Reference Material
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ADE	Average Desorption Efficiency
MB	Method Blank
IRM	Internal Reference Material
CRM	Certified Reference Material
CCV	Continuing Calibration Verification
CVS	Calibration Verification Standard
LCSD	Laboratory Control Sample Duplicate

Sample Parameter Qualifier Definitions:

Qualifier	Description
A	Method Blank exceeds ALS DQO. Refer to narrative comments for further information.
B	Method Blank exceeds ALS DQO. Associated sample results which are < Limit of Reporting or > 5 times blank level are considered reliable.
MB-LOR	Method Blank exceeds ALS DQO. Limits of Reporting have been adjusted for samples with positive hits below 5x blank level.
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Hold Time Exceedances:

All test results reported with this submission were conducted within ALS recommended hold times.

ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where available). For more information, please contact ALS.

The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide confidence in the accuracy of associated test results.

Please note that this report may contain QC results from anonymous Sample Duplicates and Matrix Spikes that do not originate from this Work Order.

Report To		L2361SOS		Report Format / Distribution				Select Service Level Below (Rush Turnaround Time (TAT) is not available for all tests)							
Company:	New Gold Inc Rainy River Project			Report Format: <input checked="" type="checkbox"/> PDF <input type="checkbox"/> Excel <input type="checkbox"/> EDD (Digital)				<input type="checkbox"/> Regular (Standard TAT if received by 3pm - business days) <input type="checkbox"/> Priority (2-4 bus. days if received by 3pm) 50% surcharge - contact ALS to confirm TAT <input type="checkbox"/> Emergency (1-2 bus. days if received by 3pm) 100% surcharge - contact ALS to confirm TAT <input type="checkbox"/> Emergency (1-2 bus. days if received by 3pm) 100% surcharge - contact ALS to confirm TAT							
Contact:	Kelsea Husperger			Quality Control (QC) Report with Report? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No											
Address:	24 Main Rd.			<input type="checkbox"/> Criteria on Report - provide details below if box checked											
City/Province:	Barwick ON			Select Distribution: <input checked="" type="checkbox"/> Email <input type="checkbox"/> Mail <input type="checkbox"/> Fax											
Postal Code:	POW 1AD			Email 1 or Fax: rainyriver.labresults@newgold.com											
Phone:	807-482-0000 x3226							Date and Time Required for all E&P TATs:							
				Email 2 yag.invron@newgold.com				For tests that can not be performed according to the service level selected, you will be contacted.							
Analysis Request															
Invoice To	Same as Report? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			Invoice Distribution				Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below							
Copy of Invoice with Report? <input type="checkbox"/> Yes <input type="checkbox"/> No				Select Invoice Distribution: <input checked="" type="checkbox"/> Email <input type="checkbox"/> Mail <input type="checkbox"/> Fax											
Company:				Email 1 or Fax: rainyriver.labresults@newgold.com											
Contact:				Email 2: Caleb.Vandenbump@amechx.com											
Project Information				Oil and Gas Required Fields (client use)											
ALS Quote #:				Approver ID: Cost Center:											
Job #:	Air Quality			GL Account: Routing Code:											
PO / AFE:	4600018623			Activity Code:											
LSD:				Location:											
ALS Lab Work Order # (lab use only)				ALS Contact:	Claire Kocharakkal	Sampler:	Kelsea Husperger								
Sample Ref (label/EDD)	Sample Identification and/or Coordinates (description will appear on the report)		Filter ID		Date (dd-MMM-yy)	Time (hh:mm)	Sample Type								
123065	TSP		North-TSP-260		06-Sep-19	02:04	Air	<input checked="" type="checkbox"/> TSP and Metals							
123066	TSP		South-TSP-260		06-Sep-19	02:04	Air	<input checked="" type="checkbox"/> Dustfall and volatile							
123067	PM 2.5		North-PM2.5-260		06-Sep-19	02:04	Air	<input checked="" type="checkbox"/> PM2.5							
123068	PM 2.5		South-PM2.5-260		06-Sep-19	02:04	Air	<input checked="" type="checkbox"/> Dustfall and volatile							
123069	TSP		North-TSP-261		12-Sep-19	02:04	Air	<input checked="" type="checkbox"/> TSP and Metals							
123071	PM 2.5		North-PM2.5-261		12-Sep-19	02:04	Air	<input checked="" type="checkbox"/> PM2.5							
123072	TSP		South-TSP-261		12-Sep-19	02:04	Air	<input checked="" type="checkbox"/> Dustfall and volatile							
123073	PM 2.5		South-PM2.5-261		12-Sep-19	02:04	Air	<input checked="" type="checkbox"/> PM2.5							
123074	TSP		North-TSP-262		18-Sep-19	02:04	Air	<input checked="" type="checkbox"/> TSP and Metals							
123075	TSP		South-TSP-262		18-Sep-19	02:04	Air	<input checked="" type="checkbox"/> Dustfall and volatile							
123076	PM 2.5		North-PM2.5-262		18-Sep-19	02:04	Air	<input checked="" type="checkbox"/> PM2.5							
123077	PM 2.5		South-PM2.5-262		18-Sep-19	02:04	Air	<input checked="" type="checkbox"/> Dustfall and volatile							
123078	TSP		North-TSP-263		24-Sep-19	02:04	Air	<input checked="" type="checkbox"/> TSP and Metals							
123079	TSP		South-TSP-263		24-Sep-19	02:04	Air	<input checked="" type="checkbox"/> Dustfall and volatile							
123080	PM 2.5		North-PM2.5-263		24-Sep-19	02:04	Air	<input checked="" type="checkbox"/> PM2.5							
123081	PM 2.5		South-PM2.5-263		24-Sep-19	02:04	Air	<input checked="" type="checkbox"/> Dustfall and volatile							
123082	TSP		North-TSP-264		30-Sep-19	02:04	Air	<input checked="" type="checkbox"/> TSP and Metals							
123083	TSP		South-TSP-264		30-Sep-19	02:04	Air	<input checked="" type="checkbox"/> Dustfall and volatile							
123084	PM 2.5		North-PM2.5-264		30-Sep-19	02:04	Air	<input checked="" type="checkbox"/> PM2.5							
123085	PM 2.5		South-PM2.5-264		30-Sep-19	02:04	Air	<input checked="" type="checkbox"/> Dustfall and volatile							
123086	TSP Travel Blank				01-Oct-19	02:04	Air	<input checked="" type="checkbox"/> TSP and Metals							
123087	PM2.5 Travel Blank				01-Oct-19	02:04	Air	<input checked="" type="checkbox"/> Dustfall and volatile							
123088	Dustfall - Gallinger Road				01-Oct-19	02:04	Air	<input checked="" type="checkbox"/> Dustfall and volatile							
123089	Dustfall - Tak Road	South)			01-Oct-19	02:04	Air	<input checked="" type="checkbox"/> TSP and Metals							
Drinking Water (DW) Samples* (client use)				Special Instructions / Specify Criteria to add on report (client use)				SAMPLE CONDITION AS RECEIVED (lab use only)							
Are samples taken from a Regulated DW System? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				MISA [Template NGSWMISA]				Frozen <input type="checkbox"/> SIF Observations: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Ice packs <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Custody seal intact <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Cooling initiated <input type="checkbox"/>							
Are samples for human drinking water use? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No								INITIAL COOLER TEMPERATURES °C FINAL COOLER TEMPERATURES °C 18.5°C							
SHIPMENT RELEASE (client use)				INITIAL SHIPMENT RECEIPT (lab use only)				FINAL SHIPMENT RECEIPT (lab use only)							
Released by: Kelsea Husperger	Date: 2019-10-01	Time: 15:40	Received by: MIRAQ DRIFTON	Date: 8-Oct-2019	Time: 10:30	Received by:	Date:	Time:							



APPENDIX E

PQ200 & TE-5170 CALIBRATION SHEETS – Q3 2019



Site Information

Location: Rainy River Mine	Site ID: South	Date: 27-Sep-19
Sampler: E-5170 M FC	Serial No: 3150	Tech: Kelsea H.

Site Conditions

Barometric Pressure (in Hg): 28.26	Corrected Pressure (mm Hg): 718
Temperature (deg F): 46	Temperature (deg K): 281
Average Press. (in Hg): 28.26	Corrected Average (mm Hg): 718
Average Temp. (deg F): 45	Average Temp. (deg K): 280

Calibration Orifice

Make: Tisch	Qstd Slope: 1.67950
Model: TE-5028A	Qstd Intercept: -0.02910
Serial#: 3662	Date Certified: 17-Jun-19

Calibration Information

Plate or Test #	H2O (in)	Qstd (m3/min)	I (chart)	IC (corrected)	Linear Regression
1	5.20	1.376	52.0	52.05	Slope: 30.7101
2	4.80	1.323	50.0	50.05	Intercept: 9.6218
3	4.25	1.246	48.0	48.05	Corr. Coeff: 0.9978
4	3.90	1.194	46.0	46.05	
5	3.40	1.116	44.0	44.04	# of Observations: 5

Calculations

$$Q_{std} = 1/m[\text{Sqrt}(H_2O(Pa/P_{std})(T_{std}/T_a)) - b]$$

$$IC = I[\text{Sqrt}(Pa/P_{std})(T_{std}/T_a)]$$

Qstd = standard flow rate

IC = corrected chart response

I = actual chart response

m = calibrator Qstd slope

b = calibrator Qstd intercept

Ta = actual temperature during calibration (deg K)

Pa = actual pressure during calibration (mm Hg)

Tstd = 298 deg K

Pstd = 760 mm Hg

For subsequent calculation of sampler flow:

$$1/m((I)[\text{Sqrt}(298/Tav)(Pav/760)] - b)$$

m = sampler slope

b = sampler intercept

I = chart response

Tav = daily average temperature

Pav = daily average pressure

Average I (chart): 44.0

Average Flow Calculation m3/min

1.122591099

Average Flow Calculation in CFM

39.6386917

Sample Time (Hrs): 24.0

Total Flow in m3/min

1616.531182

Total Flow in CFM

57079.71604

NOTE: Ensure calibration orifice has been certified within 12 months of use

PQ200 Calibration Sheet

Calibrated By: Kelsea Hunsperger / Kari Larson
Date: 2019/09/16
Site Name: New Gold Rainy River Mine
Site Location: Tait Road Station
PQ200 Serial Number: 1751
Calibrator Make: BGI
Calibrator Serial Number: 172457
NIST Certificate Expiry Date: April 30, 2020

System Clock Time:

Actual Time: 15:16
Displayed Time: 15:14
Displayed Year: 2019
Displayed Date: 16 Sep

Ambient Temperature (°C):

PQ200 Reading: 30.1
Actual Reading: 30.1
Difference (+/- 2°C): Yes
Temp Reset (Y/N): No

Ambient Barometric Pressure (mmHg):

PQ200 Reading: 723
Actual Reading: 724.5
Difference (+/- 10mmHg): Yes
Reset (Y/N): No

Flow Check (LPM):

Target Flow: 16.70
Measured Flow: 17.88
Difference (+/- 2%): No
3 Point Flow Calibration (Y/N): Yes

Inspection of Inlet/Seals/Filter:

Inlet Type: Good
Cleanliness of Inlet: Good
Glass Jar: Good
Glass Jar Gasket: Good
PM2.5 VSCC Inlet: Good
Filter Holder: Good
Filter Holder Seals: Good
Filter Tensioner: Good
Cleanliness of Fan Filter: Good

Comments/Recommendations:



TE-5170 Calibration Worksheet

Site Information

Location: Rainy River Mine	Site ID: North	Date: 27-Sep-19
Sampler: E-5170 M FC	Serial No: 3150	Tech: Kelsea H.

Site Conditions

Barometric Pressure (in Hg): 28.23	Corrected Pressure (mm Hg): 717
Temperature (deg F): 44	Temperature (deg K): 280
Average Press. (in Hg): 28.23	Corrected Average (mm Hg): 717
Average Temp. (deg F): 45	Average Temp. (deg K): 280

Calibration Orifice

Make: Tisch	Qstd Slope: 1.67950
Model: TE-5028A	Qstd Intercept: -0.02910
Serial#: 3662	Date Certified: 17-Jun-19

Calibration Information

Plate or Test #	H2O (in)	Qstd (m3/min)	I (chart)	IC (corrected)	Linear Regression
1	7.70	1.674	50.0	50.15	Slope: 26.8067
2	7.20	1.620	48.0	48.14	Intercept: 5.0820
3	6.40	1.528	46.0	46.14	Corr. Coeff: 0.9953
4	5.70	1.443	44.0	44.13	
5	5.30	1.392	42.0	42.12	# of Observations: 5

Calculations

$$Q_{std} = 1/m[\text{Sqrt}(H_2O(Pa/P_{std})(T_{std}/T_a)) - b]$$

$$IC = I[\text{Sqrt}(Pa/P_{std})(T_{std}/T_a)]$$

Qstd = standard flow rate

IC = corrected chart response

I = actual chart response

m = calibrator Qstd slope

b = calibrator Qstd intercept

Ta = actual temperature during calibration (deg K)

Pa = actual pressure during calibration (mm Hg)

Tstd = 298 deg K

Pstd = 760 mm Hg

For subsequent calculation of sampler flow:

$$1/m((I)[\text{Sqrt}(298/Tav)(Pav/760)] - b)$$

m = sampler slope

b = sampler intercept

I = chart response

Tav = daily average temperature

Pav = daily average pressure

Average I (chart): 36.0

Average Flow Calculation m3/min

1.155602414

Average Flow Calculation in CFM

40.80432124

Sample Time (Hrs): 24.0

Total Flow in m3/min

1664.067476

Total Flow in CFM

58758.22258

NOTE: Ensure calibration orifice has been certified within 12 months of use

PQ200 Calibration Sheet

Calibrated By: Kelsea Hunsperger / Kari Larson
Date: 2019/09/16
Site Name: New Gold Rainy River Mine
Site Location: Gallinger Road Station
PQ200 Serial Number: 1752
Calibrator Make: BGI
Calibrator Serial Number: 172457
NIST Certificate Expiry Date: April 30, 2020

System Clock Time:

Actual Time: 14:43
Displayed Time: 14:41
Displayed Year: 2019
Displayed Date: 16 Sep

Ambient Temperature (°C):

PQ200 Reading: 29.5
Actual Reading: 29.7
Difference (+/- 2°C): Yes
Temp Reset (Y/N): No

Ambient Barometric Pressure (mmHg):

PQ200 Reading: 723
Actual Reading: 723.5
Difference (+/- 10mmHg): Yes
Reset (Y/N): No

Flow Check (LPM):

Target Flow: 16.70
Measured Flow: "Over"
Difference (+/- 2%): No
3 Point Flow Calibration (Y/N): Yes

Inspection of Inlet/Seals/Filter:

Inlet Type: Good
Cleanliness of Inlet: Good
Glass Jar: Good
Glass Jar Gasket: Good
PM2.5 VSCC Inlet: Good
Filter Holder: Good
Filter Holder Seals: Good
Filter Tensioner: Good
Cleanliness of Fan Filter: Good

Comments/Recommendations:



**NEW GOLD INC.
RAINY RIVER MINE**

**AMBIENT AIR QUALITY MONITORING PROGRAM
FOURTH QUARTER 2019 REPORT**

FEBRUARY 2020

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
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
PM2.5	Particulate Matter less than 2.5 microns in diameter
US EPA	United States Environmental Protection Agency
µg/m ³	Microgram per Cubic Metre

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1.0 INTRODUCTION

The following is a summary of the Fourth Quarter (Q4) 2019 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 2019, New Gold Inc. (New Gold) staff operated and maintained the ambient air quality monitoring sampling stations. They communicated with the laboratory staff as required, prepared the data summary reports, and performed two calibrations, one on September 27 and another on November 20 of 2019.

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;
- Sampling dates (start and end where applicable); and
- A summary of exceedances of an Ontario Standard, 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, and precipitation data.

The Ambient Air Monitoring Program was carried out per ECA 0412-A2LR4V and the MECP program approval letter dated November 9, 2016.

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 two stations is shown in Figure 2-1. UTM co-ordinates for each station based upon NAD 83, are presented in Table 2-1. Imagery showing each station are presented as Figures 2-2 and 2-3.

There were no changes to the station locations in Q4 2019.

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

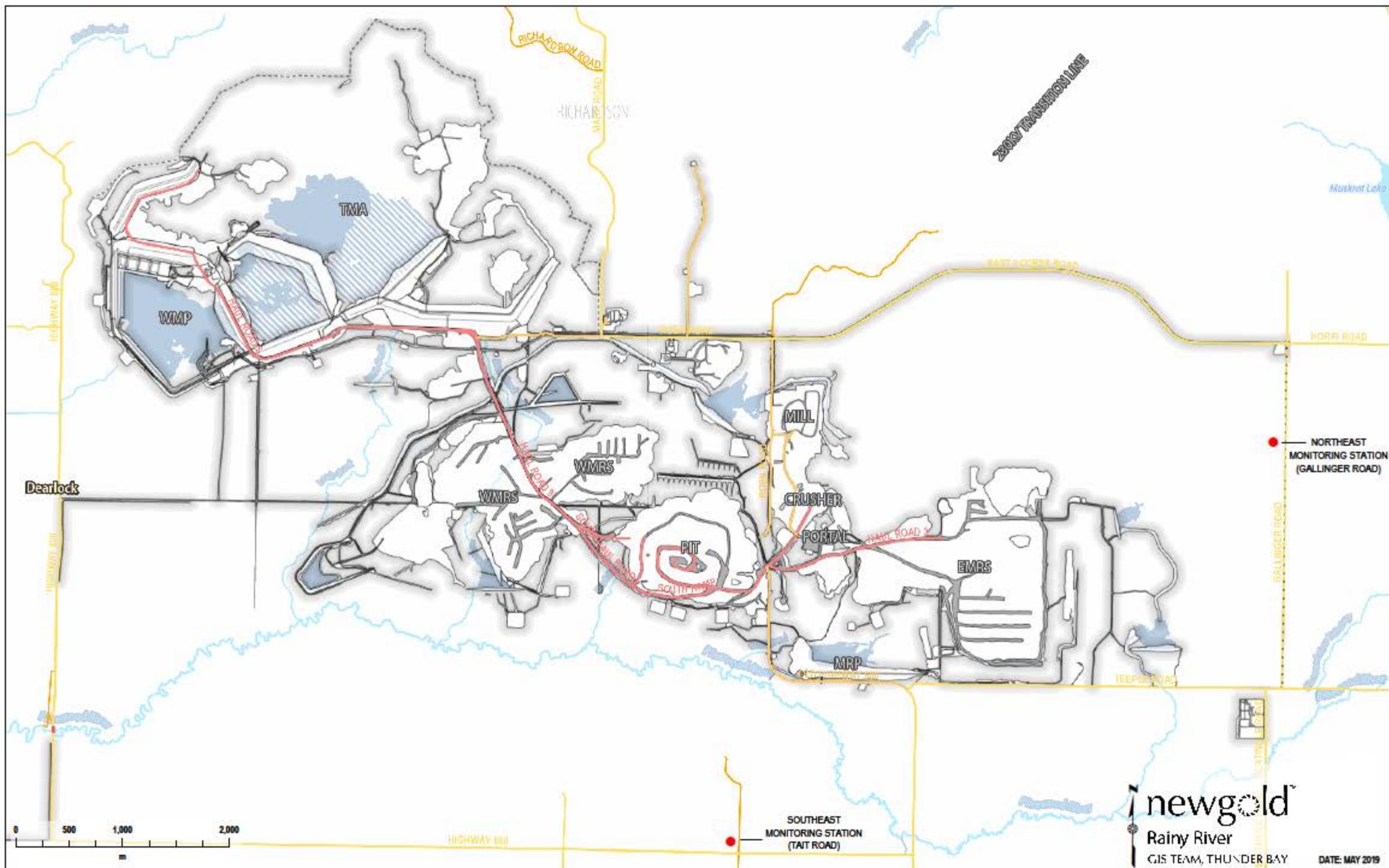


Figure 2-1: Ambient Air Monitoring Stations



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

3.0 ANALYTICAL AND MONITORING METHODS

3.1 TSP and Metals

The 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). Measurements of 24-hour average TSP and metal concentrations were collected as specified in the Operations Manual (MECP 2018); particulate samples 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). 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.

Metal concentrations were determined using standard Inductively Coupled Plasma Atomic Emission Spectroscopy (ICP/AES) methodology. Method detection limits are as shown on the data sheets in Appendix A-1.

The lowest detectable limit of total particulate on the filter is 2.3 milligrams (mg). A typical 24-hour sample volume of 1,630 m³ results in a method detection limit of 1.4 micrograms per cubic metre ($\mu\text{g}/\text{m}^3$).

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.

3.2 PM_{2.5}

Sampling was performed with PQ200 samplers. 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); particulate samples were collected every sixth day as per the North American schedule (US EPA 2017).

The lowest detectable limit of PM_{2.5} on the Teflon filters is 15 μg . A typical 24-hour sample volume of 24 m³ results in a method detection limit of 0.6 $\mu\text{g}/\text{m}^3$.

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

3.3 Total Dustfall

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). Standard dustfall samplers were used to measure total dustfall deposition. The method detection limit for total dustfall is 0.3 g/m²/30 days.

3.4 Passive Sampling for SO₂ and NO₂

SO₂ and NO₂ concentrations were monitored with passive sampling devices. 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.

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). Required meteorological data were obtained from the Environment and Climate Change Canada website. Fort Frances meteorological station (Climate ID 6022474) is downloaded by Maxxam Analytics with each sample submission. For both SO₂ and NO₂, the analytical method detection limit is in the order of 0.1 parts per billion (ppb). 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 MECP guidelines for monthly concentrations of SO₂ and NO₂ obtained from passive sampling, the data is only used for screening purposes. For NO₂, the monthly results were compared to the MECP 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 SO₂, the results were compared against the 30-day Alberta Ambient Air Quality Objective of 30 µg/m³ (AEP 2016).

3.5 Field Operations

3.5.1 Hi-Vol and PQ200 Samplers

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

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 litres per minute (LPM) for each station.

New Gold staff performed flow calibrations on Hi Vol TE-5170 samplers using a Tisch Delta Calibration kit.

Q3 and Q4 calibrations were performed on all Hi-Vol and PQ200 samplers on September 27 and November 20, 2019. Calibration sheets can be found in Appendix D.

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 deployed 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 2019.

3.5.5 Equipment and Sampling Issues

During Q4 2019, 3 samples were invalidated, as discussed below:

- October 18: TSP sample at the Gallinger Road station was invalidated due to air volume of 1797 m³ exceeding theoretical air volume upper range value of 1794m³.
- November 17: TSP sample at the Gallinger Road Station was invalidated due to air volume of 2000 m³ exceeding theoretical air volume upper range value of 1794 m³.
- December 17: TSP sample at the Gallinger Road Station was invalidated due to air volume of 1467 m³ not reaching theoretical air volume lower range value of 1468 m³.
- A new motor was installed in the Hi-vol Gallinger Road station on November 19th. On November 20th, both Gallinger and Tait Road Hi-vol samplers were calibrated.

4.0 RESULTS

Sampling program results for Q4 2019 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 SO₂ and NO₂ data. For the purpose of 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 2019 can be found in Appendix C.

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

Summaries of the statistical analyses for Q4 2019 for the TSP, metals, and PM_{2.5} concentrations are presented in Tables 4-1, 4-2, and 4-3, respectively. During the quarter, the 1 in 6-day sampling schedule presented a possible 15 sampling days between October 1 and December 30, 2019.

A summary of the statistical analyses for Q4 2019 for the total dustfall data is presented in Table 4-4. A summary of the statistical analysis for the Q4 2019 passive SO₂ and NO₂ results is presented in Table 4-5.

4.1 TSP and Metals

The Tait Road station collected 15 valid samples, resulting in 100% valid data for Q4 2019. The Gallinger Road Station collected 12 valid samples, resulting in 80% valid data for Q4 2019.

For the quarter, the geometric mean TSP concentrations were 10.30 µg/m³ for the Tait Road station and 14.19 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 80.61 µg/m³ at the Tait Road station on October 30, 2019, and 121.10 µg/m³ at the Gallinger Road station on October 30, 2019.

The Gallinger Road value slightly exceeds the MECP AAQC value of 120 µg/m³. The exceedance was reported to MECP Spills Action Centre on February 14, 2020. A copy of the report can be found in Appendix B.

There were no exceedances of an MECP AAQC measured for any metals, or metalloids in Q4 2019 at station.

Appendix A-1 and Figure 4-1 present individual sample data. The Q4 2019 TSP and metals summary statistics are summarized in Tables 4-1 and 4-2, respectively.

4.2 PM_{2.5}

Both Tait Road and Gallinger stations collected 15 valid samples, resulting in 100% valid data for Q4 2019.

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 PM_{2.5} was 4.55 µg/m³ at the Tait

Road station (November 23, 2019), and 4.00 µg/m³ at the Gallinger Road station (October 24, 2019).

There were no PM_{2.5} exceedances of the MECP AAQC of 30 µg/m³ or CAAQS (ECCC 2013) of 28 µg/m³ measured in Q4 2019. Appendix A-1 and Figure 4-2 present individual sample data.

The Q4 2019 PM_{2.5} summary statistics are summarized in Table 4-3.

4.3 Total Dustfall

In Q4 2019, 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.

Values reported by the laboratory as below the detection limit were substituted with one-half of the detection limit. The maximum 30-day concentration for dustfall was 1.26 µg/m³ at the Tait Road station (November), and 1.38 µg/m³ at the Gallinger Road station (October).

There were no dustfall exceedances of the 30-day MECP AAQC of 7 g/m² measured in Q4 2019 at either Tait Road or Gallinger Road stations.

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

4.4 Passive SO₂ and NO₂

In Q4 2019, 3 valid samples were collected at each station of each SO₂ and NO₂.

There are no MECP standards, guidelines or AAQCs for SO₂ or NO₂ for a 30-day averaging period. The 30-day measured average SO₂ or NO₂ concentrations allow for future analysis of trends in the ambient concentrations, to identify any notable increases, and for potential comparison with dispersion modelling results.

For NO₂, the monthly results were compared to the MECP 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 SO₂, the results were compared against the Alberta Ambient Air Quality Objective of 30 µg/m³ (AEP 2017).

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

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 AAQC for all Q4 2019 samples.

Table 4-1: Summary Statistics For Q4 2019 TSP Concentration Data

Statistics	Tait Road (SW)	Gallinger (NE)
Geometric mean ($\mu\text{g}/\text{m}^3$)	10.30	14.19
Arithmetic mean ($\mu\text{g}/\text{m}^3$)	15.14	27.96
Oct Maximum ($\mu\text{g}/\text{m}^3$)	80.61	121.10
Nov Maximum ($\mu\text{g}/\text{m}^3$)	12.32	57.56
Dec Maximum ($\mu\text{g}/\text{m}^3$)	29.07	61.74
Maximum 24-hr ($\mu\text{g}/\text{m}^3$)	80.61	121.10
90th percentile	24.51	61.32
95th percentile	44.53	91.42
24-hr AAQC	120	120
No. Valid Samples	15	12
Valid Data	100%	80%
No. Samples > AAQC (particulate)	0	1
No. Samples > AAQC (metals)	0	0
No. Samples > AAQC (metalloids)	0	0

Table 4-2: Summary Statistics For Q4 2019 Metals Concentration Data

Metal	24-hr AAQC ($\mu\text{g}/\text{m}^3$)	Tait Road (SW)		Gallinger Road (NE)	
		Maximum 24-hr Concentration ($\mu\text{g}/\text{m}^3$)	Fraction of 24-hr AAQC	Maximum 24-hr Concentration ($\mu\text{g}/\text{m}^3$)	Fraction of 24-hr AAQC
As	0.3	0.0010	0.33%	0.001	0.3%
Cd	0.025	0.0007	2.8%	0.0006	2.4%
Cr	0.5	0.0037	0.7%	0.004	0.8%
Co	0.1	0.0007	0.7%	0.0006	0.6%
Cu	50	0.0809	0.2%	0.45	0.9%
Fe	4	1.71	42.8%	1.93	48.3%
Pb	0.5	0.0027	0.5%	0.003	0.6%
Mn	0.4	0.0412	10.3%	0.06	15%
Ni	0.2	0.0024	1.2%	0.002	1.0%
Se	10	0.0033	0.03%	0.0031	0.03%
V	2	0.0016	0.08%	0.002	0.1%
Zn	120	0.04	0.03%	0.04	0.03%

Table 4-3: Summary Statistics for Q4 2019 PM_{2.5} Concentration Data

Statistics	Tait Road (SW)	Gallinger (NE)
Arithmetic mean ($\mu\text{g}/\text{m}^3$)	1.81	1.65
Oct Maximum ($\mu\text{g}/\text{m}^3$)	3.45	4.00
Nov Maximum ($\mu\text{g}/\text{m}^3$)	4.55	3.46
Dec Maximum ($\mu\text{g}/\text{m}^3$)	3.16	2.66
Maximum 24-hr ($\mu\text{g}/\text{m}^3$)	4.55	4.00
90th percentile	3.35	3.45
95th percentile	3.78	3.64
24-hr CAAQS	28	28
No. Valid Samples	15	15
Valid Data	100%	100%
No. Samples > AAQC (particulate)	0	0

Table 4-4: Summary Statistics for Q4 2019 Total Dustfall Data

Statistics	Tait Road (SW)	Gallinger (NE)
Arithmetic mean ($\mu\text{g}/\text{m}^3/30\text{d}$)	1.16	1.03
Maximum 24-hr ($\mu\text{g}/\text{m}^3/30\text{d}$)	1.26	1.38
30-day AAQC	7	7
No. > AAQC	0	0
No. Valid Samples	3	3
Valid Data	100%	100%

Table 4-5: Summary Statistics for Q4 2019 Passive SO₂ and NO₂ Concentration Data

Statistics	Tait Road (SW)		Gallinger Road (NE)	
	SO ₂	NO ₂	SO ₂	NO ₂
Mean ($\mu\text{g}/\text{m}^3$)	0.22	1.44	0.26	2.26
Maximum ($\mu\text{g}/\text{m}^3$)	0.26	1.88	0.52	2.82
AAQC* 24-hr converted to 30 day ($\mu\text{g}/\text{m}^3$)	N/A	78	N/A	78
Alberta AAQO ($\mu\text{g}/\text{m}^3$)	30	N/A	30	N/A
No. valid samples ($\mu\text{g}/\text{m}^3$)	3	3	3	3
Valid data	100%	100%	100%	100%

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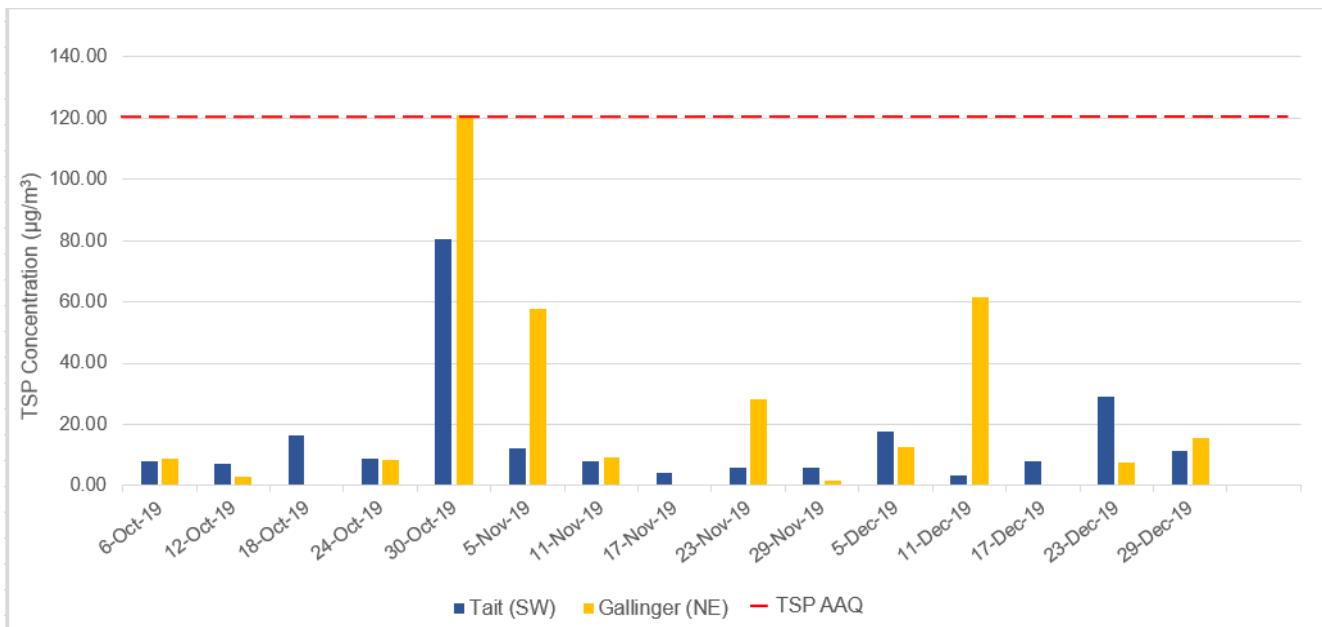


Figure 4-1: TSP Concentrations (Q4 2019)

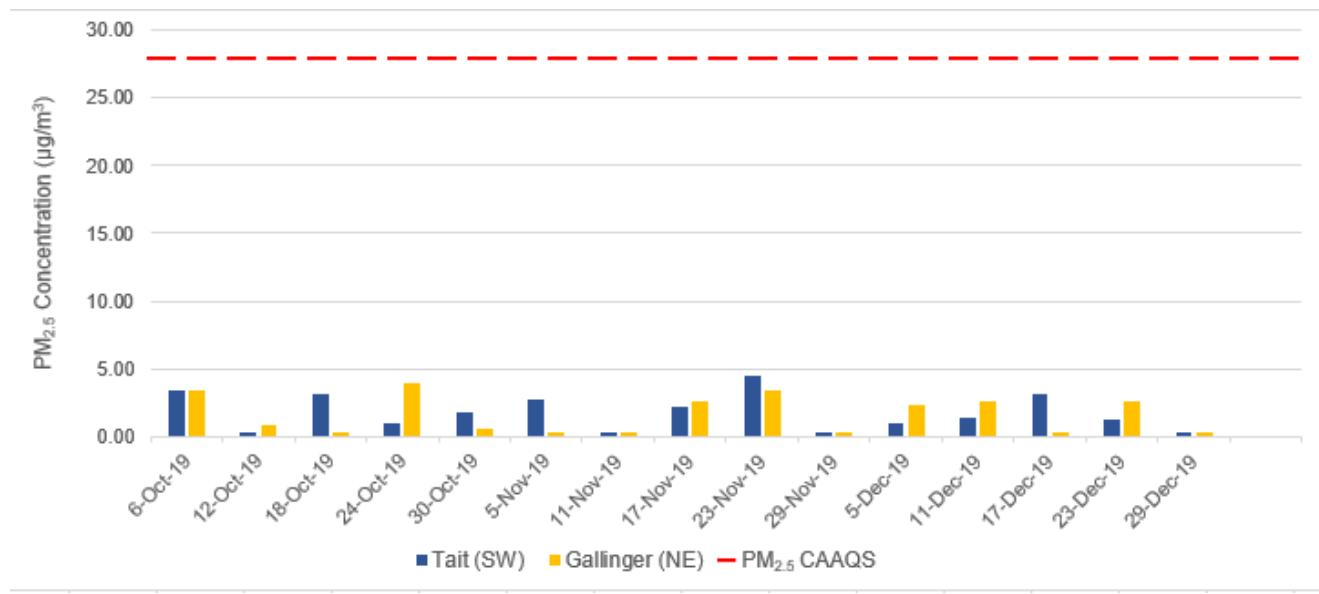


Figure 4-2: PM_{2.5} Concentrations (Q4 2019)

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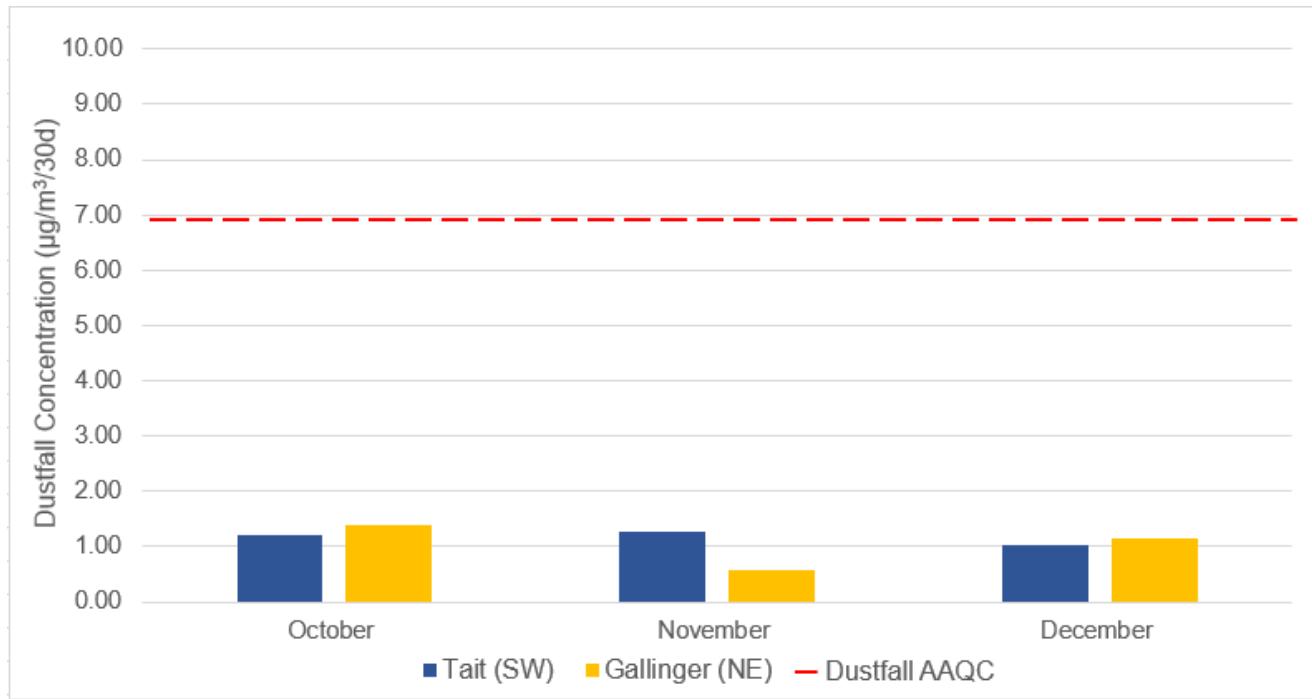


Figure 4-3: Dustfall Concentrations (Q4 2019)

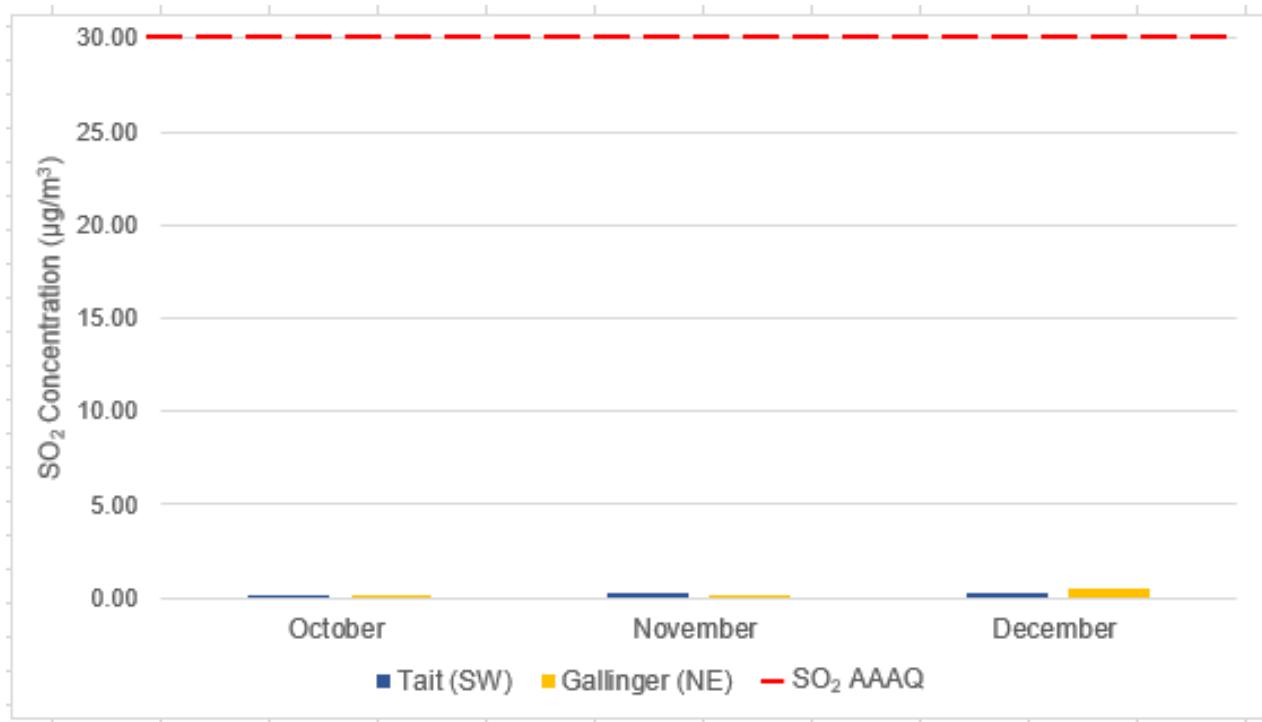


Figure 4-4: SO₂ Concentrations (Q4 2019)

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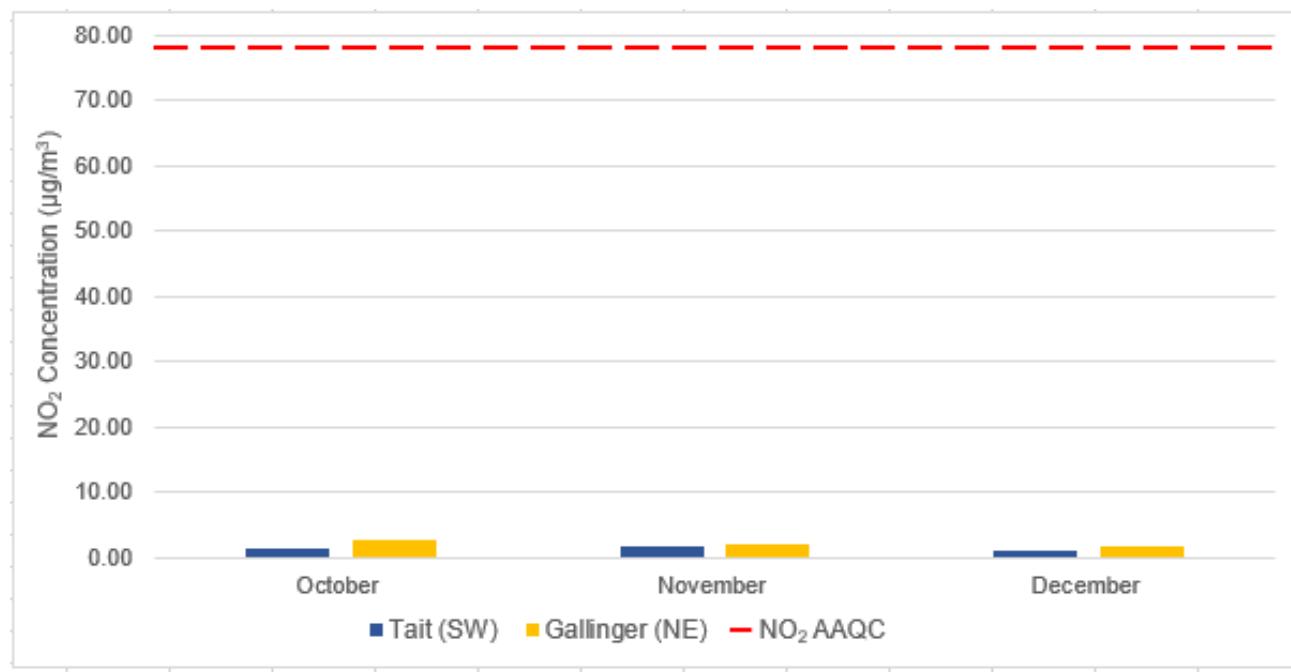


Figure 4-5: NO₂ Concentrations (Q4 2019)

5.0 CONCLUSIONS

A summary of the Q4 2019 ambient air quality monitoring program results is provided below:

- The Tait Road station collected 15 valid TSP samples, resulting in 100% sample validity. The Gallinger Road Station collected 12 valid TSP samples, resulting in 80% sample validity. Metal and metalloid concentrations were measured on each of the valid TSP filters.
- There was one exceedance of the TSP in Q4 2019 during the month of October. This was due to mechanical issues with the Hi-vol motor. Details can be found in Appendix B.
- There were no measured exceedances of an MECP AAQC for metals, or metalloids in Q4 2019.
- 15 valid PM_{2.5} samples were collected at the Tait and Gallinger Road stations, resulting in 100% valid data, overall. There were no exceedances of the 24-hour PM_{2.5} CAAQS in Q4 2019.
- 3 valid dustfall samples were collected at each station (100% sample validity). There were no exceedances of the 30-day dustfall AAQC in Q4 2019.
- 3 valid passive SO₂ and NO₂ samples were collected at each of the two stations (100% sample validity). There were no exceedances of AEP Criterion for SO₂ or the 30-day equivalent AAQC for NO₂ in Q4 2019.

6.0 REFERENCES

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- 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.
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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).

7.0 CLOSING

This *Rainy River Mine Ambient Air Quality Monitoring Program Fourth Quarter 2019 Report* was prepared by New Gold Inc. The quality of information, conclusions and estimates contained herein are 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.

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:



Twila Griffith, MSc., P.Geo.
Sr. Environmental Specialist



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 2019)
(results expressed in µg/m³)

Date	PM2.5	TSP	As	Cd	Cr	Co	Cu	Fe	Pb	Mn	Ni	Se	V	Zn
6-Oct-19	3.45	8.02	<u>9.18E-04</u>	<u>6.12E-04</u>	<u>1.53E-03</u>	<u>6.12E-04</u>	0.024	0.09	<u>9.18E-04</u>	0.003	<u>9.18E-04</u>	<u>3.06E-03</u>	<u>1.53E-03</u>	0.007
12-Oct-19	<u>0.31</u>	7.12	<u>9.62E-04</u>	<u>6.41E-04</u>	<u>1.60E-03</u>	<u>6.41E-04</u>	0.075	0.12	<u>9.62E-04</u>	0.003	<u>9.62E-04</u>	<u>3.21E-03</u>	<u>1.60E-03</u>	0.007
18-Oct-19	3.21	16.50	<u>9.82E-04</u>	<u>6.55E-04</u>	<u>1.64E-03</u>	<u>6.55E-04</u>	0.023	0.24	<u>9.82E-04</u>	0.010	<u>9.82E-04</u>	<u>3.22E-03</u>	<u>1.64E-03</u>	0.009
24-Oct-19	1.04	8.93	<u>9.37E-04</u>	<u>6.25E-04</u>	<u>1.56E-03</u>	<u>6.25E-04</u>	0.023	0.15	<u>9.37E-04</u>	0.005	<u>9.37E-04</u>	<u>3.12E-03</u>	<u>1.56E-03</u>	0.007
30-Oct-19	1.79	80.61	<u>9.67E-04</u>	<u>6.45E-04</u>	3.68E-03	<u>6.45E-04</u>	0.018	1.71	<u>9.67E-04</u>	0.041	2.39E-03	<u>3.22E-03</u>	<u>1.61E-03</u>	0.010
5-Nov-19	2.78	12.32	<u>9.38E-04</u>	<u>6.25E-04</u>	<u>1.56E-03</u>	<u>6.25E-04</u>	0.015	0.25	<u>9.38E-04</u>	0.006	<u>9.38E-04</u>	<u>3.13E-03</u>	<u>1.56E-03</u>	0.012
11-Nov-19	<u>0.31</u>	7.93	<u>9.51E-04</u>	<u>6.34E-04</u>	<u>1.59E-03</u>	<u>6.34E-04</u>	0.044	0.18	<u>9.51E-04</u>	0.004	<u>9.51E-04</u>	<u>3.17E-03</u>	<u>1.59E-03</u>	0.009
17-Nov-19	2.25	4.04	<u>9.61E-04</u>	<u>6.41E-04</u>	<u>1.60E-03</u>	<u>6.41E-04</u>	0.062	0.08	<u>9.61E-04</u>	0.003	<u>9.61E-04</u>	<u>3.20E-03</u>	<u>1.60E-03</u>	0.006
23-Nov-19	4.55	5.97	<u>8.87E-04</u>	<u>5.91E-04</u>	<u>1.48E-03</u>	<u>5.91E-04</u>	0.041	0.13	<u>8.87E-04</u>	0.007	<u>8.87E-04</u>	<u>2.96E-03</u>	<u>1.48E-03</u>	0.013
29-Nov-19	<u>0.31</u>	5.95	<u>8.92E-04</u>	<u>5.95E-04</u>	<u>1.49E-03</u>	<u>5.95E-04</u>	0.032	0.36	<u>8.92E-04</u>	0.008	<u>8.92E-04</u>	<u>2.97E-03</u>	<u>1.49E-03</u>	0.010
5-Dec-19	1.00	17.66	<u>8.92E-04</u>	<u>5.95E-04</u>	<u>1.49E-03</u>	<u>5.95E-04</u>	0.081	0.40	<u>8.92E-04</u>	0.009	<u>8.92E-04</u>	<u>2.97E-03</u>	<u>1.49E-03</u>	0.021
11-Dec-19	1.37	3.43	<u>9.35E-04</u>	<u>6.23E-04</u>	<u>1.56E-03</u>	<u>6.23E-04</u>	0.044	0.07	<u>9.35E-04</u>	0.002	<u>9.35E-04</u>	<u>3.12E-03</u>	<u>1.56E-03</u>	0.008
17-Dec-19	3.16	8.02	<u>9.33E-04</u>	<u>6.22E-04</u>	<u>1.55E-03</u>	<u>6.22E-04</u>	0.075	0.14	<u>9.33E-04</u>	0.003	<u>9.33E-04</u>	<u>3.11E-03</u>	<u>1.55E-03</u>	0.009
23-Dec-19	1.33	29.07	<u>9.38E-04</u>	<u>6.25E-04</u>	3.69E-03	<u>6.25E-04</u>	0.079	0.55	<u>9.38E-04</u>	0.014	<u>9.38E-04</u>	<u>3.13E-03</u>	<u>1.56E-03</u>	0.015
29-Dec-19	<u>0.31</u>	11.56	<u>8.84E-04</u>	<u>5.90E-04</u>	<u>1.47E-03</u>	<u>5.90E-04</u>	0.067	0.24	2.65E-03	0.006	<u>8.84E-04</u>	<u>2.95E-03</u>	<u>1.47E-03</u>	0.040

Geometric mean	1.26	10.30	9.31E-04	6.21E-04	1.74E-03	6.21E-04	4.04E-02	2.10E-01	1.00E-03	5.83E-03	9.89E-04	3.10E-03	1.55E-03	1.05E-02
Arithmetic mean	1.81	15.14	9.32E-04	6.21E-04	1.83E-03	6.21E-04	4.68E-02	3.15E-01	1.05E-03	8.28E-03	1.03E-03	3.11E-03	1.55E-03	1.21E-02
Max. concentration	4.55	80.61	0.0010	0.0007	0.0037	0.0007	0.0809	1.7090	0.0027	0.0412	0.0024	0.0033	0.0016	0.0403
Min. concentration	0.31	3.43	8.84E-04	5.90E-04	1.47E-03	5.90E-04	1.49E-02	6.80E-02	8.87E-04	1.81E-03	8.84E-04	2.95E-03	1.47E-03	6.15E-03
90th percentile	3.35	24.51	9.65E-04	6.43E-04	2.86E-03	6.43E-04	7.74E-02	4.91E-01	9.76E-04	1.25E-02	9.74E-04	3.22E-03	1.61E-03	1.83E-02
95th percentile	3.78	44.53	9.72E-04	6.48E-04	3.68E-03	6.48E-04	7.94E-02	8.97E-01	1.48E-03	2.25E-02	1.40E-03	3.24E-03	1.62E-03	2.65E-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	4	0	16	15	4	15	0	0	14	0	14	15	15	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	13	0	100	100	25	100	0	0	93	0	93	100	100	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

RAINY RIVER MINE

Ambient Air Quality Monitoring Program
 Fourth Quarter 2019 Report

Northeast Gallinger Road Monitoring Results for TSP and Metals (Fourth Quarter 2019)
(results expressed in µg/m³)

Date	PM2.5	TSP	As	Cd	Cr	Co	Cu	Fe	Pb	Mn	Ni	Se	V	Zn
6-Oct-19	3.45	8.70	<i>8.70E-04</i>	<i>5.80E-04</i>	<i>1.45E-03</i>	<i>5.80E-04</i>	0.090	0.12	<i>8.70E-04</i>	0.00	<i>8.70E-04</i>	<i>2.90E-03</i>	<i>1.45E-03</i>	0.02
12-Oct-19	0.92	3.00	<i>9.18E-04</i>	<i>6.12E-04</i>	<i>1.53E-03</i>	<i>6.12E-04</i>	0.452	0.03	<i>9.18E-04</i>	0.00	<i>9.18E-04</i>	<i>3.06E-03</i>	<i>1.53E-03</i>	0.01
18-Oct-19	<i>0.31</i>	-	-	-	-	-	-	-	-	-	-	-	-	-
24-Oct-19	4.00	8.29	<i>8.95E-04</i>	<i>5.97E-04</i>	<i>1.49E-03</i>	<i>5.97E-04</i>	0.427	0.11	<i>8.95E-04</i>	0.00	<i>8.95E-04</i>	<i>2.98E-03</i>	<i>1.49E-03</i>	0.01
30-Oct-19	0.67	121.10	<i>9.08E-04</i>	<i>6.05E-04</i>	4.06E-03	<i>6.05E-04</i>	0.163	1.93	3.21E-03	0.06	2.42E-03	<i>3.03E-03</i>	<i>1.51E-03</i>	0.04
5-Nov-19	<i>0.31</i>	57.56	<i>9.02E-04</i>	<i>6.01E-04</i>	3.37E-03	<i>6.01E-04</i>	0.165	1.15	2.29E-03	0.04	<i>9.02E-04</i>	<i>3.01E-03</i>	<i>1.50E-03</i>	0.04
11-Nov-19	<i>0.31</i>	9.16	<i>9.23E-04</i>	<i>6.15E-04</i>	<i>1.54E-03</i>	<i>6.15E-04</i>	0.415	0.17	<i>9.23E-04</i>	0.00	<i>9.23E-04</i>	<i>3.08E-03</i>	<i>1.54E-03</i>	0.01
17-Nov-19	2.66	-	-	-	-	-	-	-	-	-	-	-	-	-
23-Nov-19	3.46	28.29	<i>8.37E-04</i>	<i>5.58E-04</i>	<i>1.39E-03</i>	<i>5.58E-04</i>	0.073	0.54	1.90E-03	0.02	<i>8.37E-04</i>	<i>2.79E-03</i>	<i>1.39E-03</i>	0.02
29-Nov-19	<i>0.31</i>	1.86	<i>9.02E-04</i>	<i>6.01E-04</i>	<i>1.50E-03</i>	<i>6.01E-04</i>	0.026	0.03	<i>9.02E-04</i>	0.00	<i>9.02E-04</i>	<i>3.01E-03</i>	<i>1.50E-03</i>	<i>1.50E-03</i>
5-Dec-19	2.37	12.77	<i>9.17E-04</i>	<i>6.11E-04</i>	<i>1.53E-03</i>	<i>6.11E-04</i>	0.079	0.33	<i>9.17E-04</i>	0.01	<i>9.17E-04</i>	<i>3.06E-03</i>	<i>1.53E-03</i>	0.02
11-Dec-19	2.66	61.74	<i>9.26E-04</i>	<i>6.17E-04</i>	<i>1.54E-03</i>	<i>6.17E-04</i>	0.075	0.91	<i>9.26E-04</i>	0.03	<i>9.26E-04</i>	<i>3.09E-03</i>	<i>1.54E-03</i>	0.02
17-Dec-19	<i>0.31</i>	-	-	-	-	-	-	-	-	-	-	-	-	-
23-Dec-19	2.62	7.46	<i>8.47E-04</i>	<i>5.65E-04</i>	<i>1.41E-03</i>	<i>5.65E-04</i>	0.056	0.12	<i>8.47E-04</i>	0.00	<i>8.47E-04</i>	<i>2.82E-03</i>	<i>1.41E-03</i>	0.01
29-Dec-19	<i>0.31</i>	15.62	<i>9.08E-04</i>	<i>6.05E-04</i>	3.87E-03	<i>6.05E-04</i>	0.067	0.16	<i>9.08E-04</i>	0.01	<i>9.08E-04</i>	<i>3.03E-03</i>	<i>1.51E-03</i>	0.02

Geometric mean	1.01	14.19	0.001	0.0006	0.002	0.0006	0.12	0.22	0.001	0.01	0.001	0.0030	0.001	0.01
Arithmetic mean	1.65	27.96	0.001	0.0006	0.002	0.0006	0.17	0.47	0.001	0.01	0.001	0.0030	0.001	0.02
Max. concentration	4.00	121.10	0.001	0.0006	0.004	0.0006	0.45	1.93	0.003	0.06	0.002	0.0031	0.002	0.04
Min. concentration	0.31	1.86	0.001	0.0006	0.001	0.0006	0.03	0.03	0.001	0.00	0.001	0.0028	0.001	0.00
90th percentile	3.45	61.32	0.001	0.0006	0.004	0.0006	0.43	1.13	0.002	0.04	0.001	0.0031	0.002	0.03
95th percentile	3.64	91.42	0.001	0.0006	0.004	0.0006	0.44	1.54	0.003	0.05	0.002	0.0031	0.002	0.04
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	1	0	0	0	0	0	0	0	0	0	0	0	0
No. of valid samples	15	12	12	12	12	12	12	12	12	12	12	12	12	12
No. samples < mdL	6	0	15	12	9	12	0	0	9	0	11	12	12	1
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	40	0	100	100	75	100	0	0	75	0	92	100	100	8
% valid data	100	80	80	80	80	80	80	80	80	80	80	80	80	80

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 2019) (results expressed in g/m²/30days)

Month	No. Exposure Days	Dustfall (insoluble)	Dustfall (soluble)	Dustfall (total)
October	35	0.75	0.45	1.20
November	27	1.14	<u>0.15</u>	1.26
December	31	0.93	<u>0.15</u>	1.02
Arithmetic mean				1.16
Max. concentration				1.26
Min. concentration				1.02
AAQC				7
No. > AAQC value**				0
No. of valid samples				3
% Valid data				100
No. samples < mdl				0
Detection limit*				0.10
Half detection limit				0.05

Gallinger Road Monitoring Results for Dustfall (Fourth Quarter 2019) (results expressed in g/m²/30days)

Month	No. Exposure Days	Dustfall (insoluble)	Dustfall (soluble)	Dustfall (total)
October	35	0.87	0.51	1.38
November	27	0.57	<u>0.15</u>	0.57
December	31	1.08	<u>0.15</u>	1.14
Arithmetic mean				1.03
Max. concentration				1.38
Min. concentration				0.30
AAQC				7
No. > AAQC value**				0
No. of valid samples				3
% Valid data				100
No. samples < mdl				0
Detection limit*				0.10
Half detection limit				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

N/A: Not applicable

—: Invalid Sample

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

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

RAINY RIVER MINE

Ambient Air Quality Monitoring Program
Fourth Quarter 2019 Report



APPENDIX A-3

SO₂ AND NO₂ PASSIVE SAMPLING RESULTS

newgold™ Rainy River

Monitoring Results for Passive SO₂ and NO₂ (Fourth Quarter 2019) (results expressed in µg/m³)

Southwest Tait Road		
Month	SO ₂	NO ₂
October	<u>0.13</u>	1.32
November	0.26	1.88
December	0.26	1.13
Arithmetic mean	0.22	1.44
Max. concentration	0.26	1.88
Min. concentration	0.13	0.56
AAQC* (24-hr AAQC converted to equivalent 30-day average)	N/A	78 µg/m ³
Alberta Ambient Air Quality Objectives 2013	30 µg/m ³	N/A
No. of valid samples	3	3
No. samples < mdl	1	0
Detection limit	0.10	0.10
Half detection limit	0.05	0.05

Monitoring Results for Passive SO₂ and NO₂ (Fourth Quarter 2019) (results expressed in µg/m³)

Northeast Gallinger Road		
Month	SO ₂	NO ₂
October	<u>0.13</u>	2.82
November	<u>0.13</u>	2.07
December	0.52	1.88
Arithmetic mean	0.26	2.26
Max. concentration	0.52	2.82
Min. concentration	<u>0.13</u>	1.88
AAQC* (24-hr AAQC converted to equivalent 30-day average)	N/A	78 µg/m ³
Alberta Ambient Air Quality Objectives 2013	30 µg/m ³	N/A
No. of valid samples	3	3
No. samples < mdl	2	0
Detection limit	0.10	0.10
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

RAINY RIVER MINE

Ambient Air Quality Monitoring Program
Fourth Quarter 2019 Report



APPENDIX B

NOTICES OF EXCEEDANCE FOR Q4 2019

February 14, 2020

Matt Hoffmeister & Jason Tittlemier
Senior Environmental Officers
Ministry of the Environment, Conservation and Parks
808 Robertson St.
Kenora, ON P9N 1X9

Dear Mr. Hoffmeister and Mr. Tittlemier,

RE: AIR QUALITY EXCEEDANCES OF 24-HOUR TOTAL SUSPENDED PARTICULATE-MONITORING LIMITS - SAC REFERENCE #7107-BLSQR2

During preparation of the 2019 fourth quarter ambient air quality report, it was noted that on October 30, 2019, the total suspended particulates (TSP) concentration at Gallinger Road air quality station had exceeded Ministry approved limits by less than 1%.

New Gold notified the Spills Action Centre (SAC) Reference #7107-BLSQR2 of the exceedance of the ministry approved limits for Total Suspended Particulate Matter concentrations on February 14th, 2020. The exceedance occurred on October 30th, 2019 at the Gallinger Air Quality Monitoring Station. The following letter report accompanies a copy of the Notification of Exceedance form (NOE) as per ECA #0412-A2LR4V.

Gallinger Road air quality station is located approximately 4.5 km due east of the primary crusher on the Rainy River Mine Site. Gallinger Road itself passes by the air quality station in a north-south direction at approximately 50 metres east.

TSP samples were collected during a 24-hr period on October 30th, 2019 as per Rainy River Project Ambient Air Quality Monitoring Plan, accepted by MECP on November 9th, 2016. During this 24-hour period, predominant wind direction varied from west to southwest with an average wind speed of 10 km/hr. With these wind directions, it is unlikely that the source of the dust would be from the crusher which is situated to the west of the air monitoring station and suggests that the source was related to the road dust.

Once the 24-hour sampling period is complete, New Gold's sampling protocol states that the glass particle filter be removed and replaced with a new filter before the next 24-hour sample period. After the 24-hour sampling period on October 30th, the filter was left in place for 5 days. Filter changeover was performed under less than optimal conditions with poor visibility resulting in sampler error. Mitigation measures include modification of the ambient air quality monitoring sampling procedure. Modifications will include performing glass particle filter changes within 2 days of the sampling date, in either later morning or early afternoon, and auditing of sampling techniques.

Once you have had the opportunity to review this document, please contact me at (807) 708-2407 with any questions or concerns.

Regards,



Twila Griffith, M.Sc., P.Geo.
Sr. Environmental Specialist

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cc. Sylvie St.Jean (Sylvie.st.jean@newgold.com)

Notification of Exceedance – Local Air Quality Regulation

General Information

Information requested in this notification form is collected under the authority of the *Environmental Protection Act*, R.S.O. 1990 (EPA) and Ontario Regulation 419/05: Air Pollution – Local Air Quality (the Regulation) made under the EPA and will be used to collect information relating to a measured or modelled air-related exceedance as required by s.25(9), s.28(1) and s.30(3) of the Regulation. The Ministry of the Environment and Climate Change (Ministry) may also request additional information.

1. Questions regarding completion and submission of this notification form should be directed to your local Ministry District Office. A list of these District Offices (including fax numbers) is available on the [Ministry Internet site](#) at <http://www.ontario.ca/environment-and-energy/ministry-environment-and-climate-change-district-locator>. A copy of this form may be acquired through the Ministry public web site <http://www.ontario.ca/environment-and-energy/rules-air-quality-and-pollution> or by contacting any Ministry office.
2. For notification under s.25(9) or s.28(1), the completed notification form should be sent, as soon as practicable, to the local Ministry District Office which has jurisdiction over the area in which the facility is located. A list of these District Offices (including fax numbers) is available on the [Ministry Internet site](#) at <http://www.ontario.ca/environment-and-energy/ministry-environment-and-climate-change-district-locator>.
3. For notification under s.30(3), the completed notification form should be immediately faxed to the local Ministry District Office which has jurisdiction over the area which the facility is located. A list of these District Offices (including fax numbers) is available on the [Ministry Internet site](#) at <http://www.ontario.ca/environment-and-energy/ministry-environment-and-climate-change-district-locator>. If the exceedance is determined outside of the business hours of the District Office then the completed notification form should be faxed to the Spills Action Center (1-800-268-6061).
4. Information on this form may be claimed as confidential but will be subject to the *Freedom of Information and Protection of Privacy Act* (FOIPPA) and the EBR. If you do not claim confidentiality at the time of submitting the information, the MOECC Ministry may make the information available to the public without further notice to you.

Instructions

This form should be used to notify the Ministry of a measured or modelled air-related exceedance. Notification is required under the Regulation and failure to notify the Ministry constitutes an offence under the Regulation and the EPA.

The publication titled “Air Contaminants Benchmarks (ACB) List: Standards, guidelines and screening levels for assessing point of impingement concentrations of air contaminants” contains two types of benchmarks: Benchmark 1 values (standards and guidelines) and Benchmark 2 values (screening levels). This list is available on the [Internet site](#) at <https://www.ontario.ca/page/air-contaminants-benchmarks-list-standards-guidelines-and-screening-levels-assessing-point>. This form is to be used to notify the Ministry of an exceedance of a Benchmark 1 value. If a concentration of a contaminant exceeds a Benchmark 1 value that is based on a guideline value, it is an indication that discharges of the contaminant may cause an adverse effect. If a concentration of a contaminant exceeds a Benchmark 2 value, it may be an indication that discharges of the contaminant may cause an adverse effect – further assessment should be undertaken to determine if an adverse effect may occur. If so, this form should be used to notify the Ministry.

This form may be used for notification of exceedances of more than one contaminant; Table 1 (or equivalent) should be completed for modelled exceedances. Table 2 should be completed for measured exceedances. If this notification is made pursuant to s. 30 then this form must be submitted immediately.

Note: The Ministry publishes a separate list of Ontario’s Ambient Air Quality Criteria (AAQCs) which can be found on our [website](#) <http://www.ontario.ca/document/ontarios-ambient-air-quality-criteria-sorted-contaminant-name>. AAQCs are intended to address general air quality, not contributions of a contaminant to air quality from a facility. Hence, the notification requirements under the Regulation do not apply to AAQCs.

Regulatory Authority

Exceedance of a Benchmark 1 Value (Standard or Guideline)

"28. (1) A person who discharges or causes or permits the discharge of a contaminant shall, as soon as practicable, notify a provincial officer in writing if,

- (a) the person uses an approved dispersion model to predict concentrations of the contaminant that result from the discharges and,
 - i. the use of the model indicates that discharges of the contaminant may result in a contravention of section 19 or 20, or
 - ii. sections 19 and 20 do not apply to discharges of the contaminant and the use of the model indicates that discharges of the contaminant may cause an adverse effect;
 - (b) measurements of air samples indicate that discharges of the contaminant may result in a contravention of section 19 or 20; or
 - (c) sections 19 and 20 do not apply to discharges of the contaminant and measurements of air samples indicate that discharges of the contaminant may cause an adverse effect. ..."
3. The emission rate that, for the relevant averaging period, is derived from a combination of a method that complies with paragraph 1 or 2 and ambient monitoring, according to a plan approved by the Director as likely to provide an accurate reflection of emissions.

"25. (9) A person who is required under subsection (8) to complete the update of a report not later than March 31 in a year shall, as soon as practicable after that date, notify a provincial officer in writing if the person has started to use an approved dispersion model with respect to a contaminant for the purpose of completing the update but has not yet complied with section 12, and,

- (a) the use of the model indicates that discharges of the contaminant may result in a contravention of section 19 or 20; or
- (b) sections 19 and 20 do not apply to discharges of the contaminant and the use of the model indicates that discharges of the contaminant may cause an adverse effect. ..."

Exceedance of an Upper Risk Threshold

"30. (1) A person who discharges or causes or permits the discharge of a contaminant listed in Schedule 6 into the air shall comply with subsections (3) and (4) if there is reason to believe, based on any relevant information, that discharges of the contaminant may result in,

- (a) the concentration of the contaminant exceeding the half hour upper risk threshold set out for that contaminant in Schedule 6 at a point of impingement, if section 19 applies to the person in respect of the contaminant; or
 - (b) the other time period upper risk threshold set out for that contaminant in Schedule 6 at a point of impingement, if section 20 applies to the person in respect of the contaminant.
- (1.1) The two items in Schedule 6 that set out upper risk thresholds for total reduced sulphur (TRS) compounds specify the facilities to which they apply.
- (2) Without limiting the generality of subsection (1), the reference in that subsection to relevant information includes relevant information from predictions of a dispersion model, including,
- (a) an approved dispersion model or other dispersion model; or
 - (b) a dispersion model that is not used in accordance with this Regulation.
- (3) If subsection (1) applies to a discharge, the person who discharged or caused or permitted the discharge of the contaminant shall immediately notify the Director in writing. ..."

Section 1 - Ministry of the Environment and Climate Change District Office Information

Date Form Submitted (yyyy/mm/dd) 2020/02/14	Date Exceedance Determined (yyyy/mm/dd) 2019/10/30
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MOECC District Office
Kenora Area Office

District Office Fax Number
807 468-2178

Supporting information attached? Yes No If yes, number of pages

Section 2 - Facility and Site Information

Name of Person Making the Notification

Last Name
Griffith

First Name
Twila

Business Name (the name under which the entity is operating or trading - also referred to as trade name)

New Gold Inc.

Business Number

Business Activity Description (a description of the business endeavour, this may include products sold, services provided, equipment used, etc.)

Gold Ore Mining

Site Name
Rainy River Mine

MOECC District Office
Kenora Area Office

Primary North American Industry Classification System (NAICS) Code Section 19 (Schedule 2) Section 20 (Schedule 3)
212220 applies applies

Other NAICS Code

Civic Address

Unit Number	Street Number 24	Street Name Marr Road	PO Box
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Survey Address

Lot and Concession: used to indicate location within a subdivided township and consists of a lot number and a concession number.	Part and Reference: used to indicate location within an unsubdivided township or unsurveyed territory, and consists of a part and a reference plan number indicating the location within that plan. Attach copy of the plan.
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Lot	Concession	Part	Reference Plan
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Non Address Information (includes any additional information to clarify requestor's physical location)

Municipality/Unorganized Township or Territory Upper Tier/District Barwick/Rainy River	Postal Code P0W 1A0
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Telephone Number ext.	Fax Number	Mobile Number	Email Address
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Geo Reference

Description of location	Map Datum	Zone	Accuracy Estimate	Geo-Referencing Method	UTM Easting	UTM Northing
Vacant White House	NAD83	15N	+/- 5m	GIS	431129	5410540

Environmental Compliance Approval (ECA) Number(s) and/or Environmental Activity and Sector Registry (EASR) Number(s) – attach a separate list if more space is required

1 0412-A2LR4V	2	3
4	5	6

Section 3 - Type of Notification – Table 1 or Table 2 should be completed and submitted with this notification

This is a notification under subsection 28(1) – Notice to Provincial Officer as a result of modelling or measurements (select all that apply)

Exceedance of Benchmark 1 Exceedance of Benchmark 1 Value (Standard) Exceedance of Benchmark 2 Value (determined discharge may cause adverse effect) Exceedance of Benchmark 1 Value (Guideline)

Other (explain)

This is a notification under subsection 25(9) – Notice to Provincial Officer as a result an update of an Emission Summary and Dispersion Modelling Report (ESDM) (select all that apply)

Exceedance of Benchmark 1 Exceedance of Benchmark 1 Value (Standard) Exceedance of Benchmark 2 Value (determined discharge may cause adverse effect) Exceedance of Benchmark 1 Value (Guideline)

Other (explain)

Date that Refinement (see section 12 of the regulation) is anticipated to be complete (yyyy/mm/dd)

This is a notification under subsection 30(3) – Notice to the Director as a result of an exceedance of Upper Risk Threshold (URT) (Schedule 6)

Yes No

Section 4 - Follow-Up Action

Section 28 Notifications

Will an Abatement Plan be submitted to the Ministry within 30 days of this notice as per s.29?

Yes No If No, please provide the following

Type of Previously Submitted Abatement Plan assessing for contamination	Date Submitted under s.29 of the Regulation (yyyy/mm/dd)
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Subsection 30(3) Notifications for URT Exceedance

Has an ESDM Report been prepared in accordance with s.30(4) and submitted to the Ministry?

Yes No If No, what is the anticipated submission date for the ESDM* (yyyy/mm/dd)?

*Note: ESDM Report must be submitted within three months of the discharge

Section 5 - Model Based Assessment – please complete this section if notifying of a modelled exceedance (complete Table 1)

Was an ESDM Report prepared in accordance with s.26 of the Regulation?

Yes No

If yes, was the ESDM Report prepared to fulfill (select all that apply)

- s.22 of the Regulation - Application for ECA under s. 20.2 of the *Environmental Protection Act*
- s.9 of the EPA – Condition of an ECA (e.g. ECA with Limited Operational Flexibility)
- s.23 of the Regulation - Requirement for Schedule 4 and 5 sector facilities
- s.24 of the Regulation - Notice issued by Director
- s.25 of the Regulation - Requirement for updating ESDM Report
- s.30(4) of the Regulation – Required as result of URT exceedance
- s.33(1) of the Regulation – Required as part of a request for a site-specific standard

s.11 (1) of Ontario Regulation 1/17 – Registrations under Part II.2 of the Act – Activities Requiring Assessment of Air Emissions (Air Emissions EASR Regulation)

Other (please specify) _____

What approved dispersion model was used? Include version number (select all that apply)

Appendix to Reg. 346 AERMOD ASHRAE SCREEN 3

Other (please specify) (if other, provide copy of section 7 notice) _____

Was the approved dispersion model refined as required by s.12 of the Regulation (i.e. operating conditions, emission rates)?

Yes No

What meteorological data was used?

Regional Data Regional data refined, in consultation with the EMRB, to reflect local land use conditions

Local or Site-Specific Data Data from a computational method

Did you receive approval under s. 13 for the Meteorological Data? Yes No

Have you modelled a concentration at a Point of Impingement (POI) other than the maximum POI? (please include figure showing maximum POI location)

Yes No

If Yes, specify additional locations (i.e., land use) at which the exceedence may occur (select all that apply – please include figure showing additional modelled locations):

Health Care Seniors Residence/Long Term Care Facility Child Care Facility Educational Facility

Dwelling

Location Specified by the Director (explain) _____

Other Location (explain) _____

Section 6 - Measurement Based Assessment – please complete this section if notifying of a measured **exceedance** (Complete Table 2 or equivalent)

Type of Monitor / Measurement Type	Date of Exceedance (yyyy/mm/dd)	Duration of Exceedance
High Volume Sampler	2019/10/30	24-hr Average

Is the monitoring approved by the Ministry?

Yes No If yes, please describe the approval [Air Monitoring Program letter of Approval dated Nov. 9, 2016.](#)

Monitoring Reference Number: (if available)

Specify the location (i.e., land use) at which the exceedence did occur (select all that apply):

Health Care Seniors Residence/Long Term Care Facility Child Care Facility Educational Facility

Dwelling

Location Specified by the Director (explain) _____

Other Location (explain) [Gallinger Road Station](#)

Section 7 - Statement of Company Official

I, the undersigned hereby declare that, to the best of my knowledge:

- The information contained herein and the information submitted is complete and accurate in every way and I am aware of the penalties against providing false information as per s.184 (2) of the *Environmental Protection Act*.
- I have been authorized to act on behalf of the company identified in this form for the purpose of providing this notification of exceedance under the Regulation to the Ministry of the Environment and Climate Change.
- I have used the most recent notification form (as obtained from the Ministry Internet site at <http://www.ontario.ca/environment-and-energy/rules-air-quality-and-pollution> or from my local Ministry District Office and I have included all necessary information required by the Regulation and identified on this form.

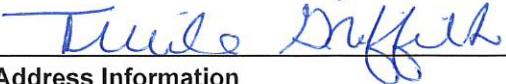
Name of Signing Authority
Twila Griffith

2179 (2017/06)

Title
Sr. Environmental Specialist

Page 5 of 8

Telephone Number 807 482-0900	Fax Number ext.8064	Mobile Number 807 708-2407	Email Address twila.griffith@newgold.com
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Signature 	Date (yyyy/mm/dd) 2020/02/14
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Address Information

Same as Site Physical Address? Yes No (If no, please provide signing authority mailing address information below)

Civic Address

Unit Number 5967	Street Number 5967	Street Name Highway 11/71	PO Box 5
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Delivery Designator: If signing authority mailing address is a Rural Route, Suburban Service, Mobile Route or General Delivery (i.e., RR#3)

Municipality/Unorganized Township or Territory Emo	County/District	Province/State Ontario	Country Canada	Postal Code P0W 1E0
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Table 1 - Information About Modelled Exceedance

Contaminant (a)	CAS (b) Number	Air Dispersion Model Used (include version number)	Maximum POI (c) Concentration ($\mu\text{g}/\text{m}^3$)	Averaging Period (hours)(minute/hour/day/annual)	Ministry Limit ($\mu\text{g}/\text{m}^3$) or URT ($\mu\text{g}/\text{m}^3$)	Limiting Effect	Schedule 2, Schedule 3, Guideline, Schedule 6 URT or Other (specify) (d)	Benchmark 1, Benchmark 2, or No Benchmark (e) (specify)	Percentage of Ministry Limit or URT

Provide additional information as needed (e.g. Location of Maximum POI Concentrations (e.g. UTM, street address, land use at Maximum POI if known, etc.)

Notes:

- (a) Proper Chemical Name should be given (Abbreviations, acronyms, numeric codes, trade names and mixtures NOT ACCEPTABLE).
- (b) CAS Number : Chemical Abstracts Services Number (UNIQUE Identifier for a chemical)
- (c) POI Concentration : Point of Impingement Concentration
- (d) Schedule 2 = section 19 applies; Schedule 3 = section 20 applies
- (e) If a B2 value is exceeded, the regulation requires potential adverse effects to be assessed. If it is determined that an adverse effect may occur for the contaminant in question, this should be included in the table

Table 2 - Information About Measured Exceedance

Contaminant ^(a)	CAS ^(b) Number	Type of Assessment (Measurement Method)	Maximum POI ^(c) Concentration ($\mu\text{g}/\text{m}^3$)	Averaging Period (minute/hour/day/annual)	Ministry Limit ($\mu\text{g}/\text{m}^3$) or URT ($\mu\text{g}/\text{m}^3$)	Limiting Effect	Schedule 2, Schedule 3, Guideline, Schedule 6 URT, or Other (specify)	Benchmark 1, Benchmark 2, or No Benchmark ^(d) (specify)	Percentage of Ministry Limit or URT
Suspended particulate	N/A	HiVol	N/A	24 hour	120	Soiling	3	B1	101%

* For additional measurement locations / sampling times, please include additional tables

** If you are reporting more than one exceedence, include the time of the exceedence in the contaminant column

Notes:

(a) Proper Chemical Name should be given (Abbreviations, acronyms, numeric codes, trade names and mixtures NOT ACCEPTABLE).

(b) CAS Number : Chemical Abstracts Services Number (UNIQUE Identifier for a chemical)

(c) POI Concentration : Point of Impingement Concentration

(d) Schedule 2 = section 19 applies; Schedule 3 = section 20 applies

(e) If a B2 value is exceeded, the regulation requires potential adverse effects to be assessed. If it is determined that an adverse effect may occur for the contaminant in question, this should be included in the table



APPENDIX C

LABORATORY RESULTS – CERTIFICATES OF ANALYSIS



BUREAU
VERITAS

Your Project #: EMO ON - TC111504.2015.6
Site#: 2019/10/01 - 2019/11/06
Site Location: NEW GOLD - EMO, ON

Attention: Claire Kocharakkal

ALS Environmental
Burlington ON
1435 Norjohn Court
Unit 1
Burlington, ON
CANADA L7L 0E6

Report Date: 2019/11/21
Report #: R2813819
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: B997248

Received: 2019/11/12, 12:52

Sample Matrix: Air
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
NO2 Passive Analysis	2	2019/11/15	2019/11/21	PTC SOP-00148	Passive NO2 in ATM
SO2 Passive Analysis	2	2019/11/14	2019/11/21	PTC SOP-00149	Passive SO2 in ATM

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Results relate only to the items tested.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Levi Manchak, Project Manager SR
Email: Levi.MANCHAK@bvlabs.com
Phone# (780)378-8542

=====
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BUREAU
VERITAS

BV Labs Job #: B997248

Report Date: 2019/11/21

ALS Environmental

Client Project #: EMO ON - TC111504.2015.6

Site Location: NEW GOLD - EMO, ON

Sampler Initials: KH

RESULTS OF CHEMICAL ANALYSES OF AIR

BV Labs ID		WX3827		WX3828		
Sampling Date		2019/10/01		2019/10/01		
	UNITS	RRP SOUTH	QC Batch	RRP NORTH	RDL	QC Batch
Passive Monitoring						
Calculated NO2	ppb	0.7	9673127	1.5	0.1	9673127
Calculated SO2	ppb	<0.1	9671354	<0.1	0.1	9671351

RDL = Reportable Detection Limit



BUREAU
VERITAS

BV Labs Job #: B997248

Report Date: 2019/11/21

ALS Environmental

Client Project #: EMO ON - TC111504.2015.6

Site Location: NEW GOLD - EMO, ON

Sampler Initials: KH

GENERAL COMMENTS

Results relate only to the items tested.



BUREAU
VERITAS

BV Labs Job #: B997248

Report Date: 2019/11/21

ALS Environmental

Client Project #: EMO ON - TC111504.2015.6

Site Location: NEW GOLD - EMO, ON

Sampler Initials: KH

QUALITY ASSURANCE REPORT

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
9671351	OZ		Spiked Blank	Calculated SO2			101	%	90 - 110
9671351	OZ		Method Blank	Calculated SO2		<0.1		ppb	
9671354	OZ		Spiked Blank	Calculated SO2			100	%	90 - 110
9671354	OZ		Method Blank	Calculated SO2		<0.1		ppb	
9673127	OZ		Spiked Blank	Calculated NO2			100	%	90 - 110
9673127	OZ		Method Blank	Calculated NO2		<0.1		ppb	

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.



BUREAU
VERITAS

BV Labs Job #: B997248

Report Date: 2019/11/21

ALS Environmental
Client Project #: EMO ON - TC111504.2015.6
Site Location: NEW GOLD - EMO, ON
Sampler Initials: KH

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Linda Lin, Supervisor, Centre for Passive Sampling Technology

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For Service Group specific validation please refer to the Validation Signature Page.



BUREAU
VERITAS

Your P.O. #: 4500022601
Your Project #: TC111504.2015.6
Site#: 2019/11/05 - 2019/12/02
Site Location: NEW GOLD - EMO, ON

Attention: Claire Kocharakkal

ALS Environmental
Burlington ON
1435 Norjohn Court
Unit 1
Burlington, ON
CANADA L7L 0E6

Report Date: 2020/01/13
Report #: R2832983
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: C000210

Received: 2020/01/02, 07:44

Sample Matrix: Air
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
NO2 Passive Analysis	2	2020/01/06	2020/01/13	PTC SOP-00148	Passive NO2 in ATM
SO2 Passive Analysis	2	2020/01/03	2020/01/13	PTC SOP-00149	Passive SO2 in ATM

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Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Levi Manchak, Project Manager SR
Email: Levi.MANCHAK@bvlabs.com
Phone# (780)378-8542

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BUREAU
VERITAS

BV Labs Job #: C000210

Report Date: 2020/01/13

ALS Environmental
Client Project #: TC111504.2015.6
Site Location: NEW GOLD - EMO, ON
Your P.O. #: 4500022601
Sampler Initials: MW

RESULTS OF CHEMICAL ANALYSES OF AIR

BV Labs ID		XE7030	XE7031		
Sampling Date		2019/11/05	2019/11/05		
	UNITS	RRP SOUTH	RRP NORTH	RDL	QC Batch

Passive Monitoring					
Calculated NO2	ppb	1.0	1.1	0.1	9726045
Calculated SO2	ppb	0.1	<0.1	0.1	9725627

RDL = Reportable Detection Limit



BUREAU
VERITAS

BV Labs Job #: C000210

Report Date: 2020/01/13

ALS Environmental

Client Project #: TC111504.2015.6

Site Location: NEW GOLD - EMO, ON

Your P.O. #: 4500022601

Sampler Initials: MW

GENERAL COMMENTS

Results relate only to the items tested.



BUREAU
VERITAS

BV Labs Job #: C000210

Report Date: 2020/01/13

ALS Environmental

Client Project #: TC111504.2015.6

Site Location: NEW GOLD - EMO, ON

Your P.O. #: 4500022601

Sampler Initials: MW

QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
9725627	OZ	Spiked Blank	Calculated SO2			100	%	90 - 110
9725627	OZ	Method Blank	Calculated SO2		<0.1		ppb	
9726045	YL6	Spiked Blank	Calculated NO2			98	%	90 - 110
9726045	YL6	Method Blank	Calculated NO2		<0.1		ppb	

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.



BUREAU
VERITAS

BV Labs Job #: C000210

Report Date: 2020/01/13

ALS Environmental

Client Project #: TC111504.2015.6

Site Location: NEW GOLD - EMO, ON

Your P.O. #: 4500022601

Sampler Initials: MW

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Linda Lin, Supervisor, Centre for Passive Sampling Technology

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BUREAU
VERITAS

Your P.O. #: 4500022601
Your Project #: TC111504.2015.6
Site#: 2019/12/02 - 2020/01/02
Site Location: NEW GOLD - EMO, ON

Attention: Claire Kocharakkal

ALS Environmental
Burlington ON
1435 Norjohn Court
Unit 1
Burlington, ON
CANADA L7L 0E6

Report Date: 2020/01/15
Report #: R2833836
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: C001540

Received: 2020/01/09, 10:47

Sample Matrix: Air
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
NO2 Passive Analysis	2	2020/01/10	2020/01/15	PTC SOP-00148	Passive NO2 in ATM
SO2 Passive Analysis	2	2020/01/10	2020/01/15	PTC SOP-00149	Passive SO2 in ATM

This report shall not be reproduced except in full, without the written approval of the laboratory.
Results relate only to the items tested.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Levi Manchak, Project Manager SR
Email: Levi.MANCHAK@bvlabs.com
Phone# (780)378-8542

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BUREAU
VERITAS

BV Labs Job #: C001540

Report Date: 2020/01/15

ALS Environmental

Client Project #: TC111504.2015.6

Site Location: NEW GOLD - EMO, ON

Your P.O. #: 4500022601

Sampler Initials: MW

RESULTS OF CHEMICAL ANALYSES OF AIR

BV Labs ID		XF2223	XF2224		
Sampling Date		2019/12/02	2019/12/02		
	UNITS	RRP SOUTH	RRP NORTH	RDL	QC Batch

Passive Monitoring					
Calculated NO2	ppb	0.6	1.0	0.1	9731028
Calculated SO2	ppb	0.1	0.2	0.1	9731119
RDL = Reportable Detection Limit					



BUREAU
VERITAS

BV Labs Job #: C001540

Report Date: 2020/01/15

ALS Environmental

Client Project #: TC111504.2015.6

Site Location: NEW GOLD - EMO, ON

Your P.O. #: 4500022601

Sampler Initials: MW

GENERAL COMMENTS

Results relate only to the items tested.



BUREAU
VERITAS

BV Labs Job #: C001540

Report Date: 2020/01/15

ALS Environmental

Client Project #: TC111504.2015.6

Site Location: NEW GOLD - EMO, ON

Your P.O. #: 4500022601

Sampler Initials: MW

QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
9731028	YL6	Spiked Blank	Calculated NO2			96	%	90 - 110
9731028	YL6	Method Blank	Calculated NO2		<0.1		ppb	
9731119	OZ	Spiked Blank	Calculated SO2			104	%	90 - 110
9731119	OZ	Method Blank	Calculated SO2		<0.1		ppb	

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.



BUREAU
VERITAS

BV Labs Job #: C001540

Report Date: 2020/01/15

ALS Environmental

Client Project #: TC111504.2015.6

Site Location: NEW GOLD - EMO, ON

Your P.O. #: 4500022601

Sampler Initials: MW

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Linda Lin, Supervisor, Centre for Passive Sampling Technology

BV Labs has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation please refer to the Validation Signature Page.



New Gold Inc. Rainy River Project
ATTN: Twila Griffith
5967 Highway 11/71
P.O. Box 5
Emo ON POW 1E0

Date Received: 11-NOV-19
Report Date: 05-DEC-19 13:08 (MT)
Version: FINAL

Client Phone: 807-482-0900

Certificate of Analysis

Lab Work Order #: L2380277

Project P.O. #: 4500035097

Job Reference: NEW GOLD RRP

C of C Numbers:

Legal Site Desc:

A circular ink stamp containing a handwritten signature that appears to read "wirek".

Claire Kocharakkal, B.Sc.
Account Manager

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2380277-1	NORTH-TSP-265							
Sampled By:	Client on 06-OCT-19							
Matrix:	Hi Vol Filter							
Miscellaneous Parameters								
Total particulate		15000		2300	ug		19-NOV-19	R4915745
Metals on High Volume Filter by ICPMS								
Arsenic (As)		<3.0		3.0	ug	19-NOV-19	19-NOV-19	R4916143
Cadmium (Cd)		<2.0		2.0	ug	19-NOV-19	19-NOV-19	R4916143
Cobalt (Co)		<2.0		2.0	ug	19-NOV-19	19-NOV-19	R4916143
Chromium (Cr)		<5.0		5.0	ug	19-NOV-19	19-NOV-19	R4916143
Copper (Cu)		155		4.0	ug	19-NOV-19	19-NOV-19	R4916143
Iron (Fe)		206		20	ug	19-NOV-19	19-NOV-19	R4916143
Manganese (Mn)		6.4		1.0	ug	19-NOV-19	19-NOV-19	R4916143
Nickel (Ni)		<3.0		3.0	ug	19-NOV-19	19-NOV-19	R4916143
Lead (Pb)		<3.0		3.0	ug	19-NOV-19	19-NOV-19	R4916143
Selenium (Se)		<10		10	ug	19-NOV-19	19-NOV-19	R4916143
Vanadium (V)		<5.0		5.0	ug	19-NOV-19	19-NOV-19	R4916143
Zinc (Zn)		32.0		5.0	ug	19-NOV-19	19-NOV-19	R4916143
L2380277-2	SOUTH-TSP-265							
Sampled By:	Client on 06-OCT-19							
Matrix:	Hi Vol Filter							
Miscellaneous Parameters								
Total particulate		13100		2300	ug		19-NOV-19	R4915745
Metals on High Volume Filter by ICPMS								
Arsenic (As)		<3.0		3.0	ug	19-NOV-19	19-NOV-19	R4916143
Cadmium (Cd)		<2.0		2.0	ug	19-NOV-19	19-NOV-19	R4916143
Cobalt (Co)		<2.0		2.0	ug	19-NOV-19	19-NOV-19	R4916143
Chromium (Cr)		<5.0		5.0	ug	19-NOV-19	19-NOV-19	R4916143
Copper (Cu)		39.4		4.0	ug	19-NOV-19	19-NOV-19	R4916143
Iron (Fe)		154		20	ug	19-NOV-19	19-NOV-19	R4916143
Manganese (Mn)		4.5		1.0	ug	19-NOV-19	19-NOV-19	R4916143
Nickel (Ni)		<3.0		3.0	ug	19-NOV-19	19-NOV-19	R4916143
Lead (Pb)		<3.0		3.0	ug	19-NOV-19	19-NOV-19	R4916143
Selenium (Se)		<10		10	ug	19-NOV-19	19-NOV-19	R4916143
Vanadium (V)		<5.0		5.0	ug	19-NOV-19	19-NOV-19	R4916143
Zinc (Zn)		12.1		5.0	ug	19-NOV-19	19-NOV-19	R4916143
L2380277-3	NORTH-TSP-266							
Sampled By:	Client on 12-OCT-19							
Matrix:	Hi Vol Filter							
Miscellaneous Parameters								
Total particulate		4900		2300	ug		19-NOV-19	R4915745
Metals on High Volume Filter by ICPMS								
Arsenic (As)		<3.0		3.0	ug	19-NOV-19	19-NOV-19	R4916143
Cadmium (Cd)		<2.0		2.0	ug	19-NOV-19	19-NOV-19	R4916143
Cobalt (Co)		<2.0		2.0	ug	19-NOV-19	19-NOV-19	R4916143
Chromium (Cr)		<5.0		5.0	ug	19-NOV-19	19-NOV-19	R4916143
Copper (Cu)		738		4.0	ug	19-NOV-19	19-NOV-19	R4916143
Iron (Fe)		56		20	ug	19-NOV-19	19-NOV-19	R4916143
Manganese (Mn)		1.3		1.0	ug	19-NOV-19	19-NOV-19	R4916143
Nickel (Ni)		<3.0		3.0	ug	19-NOV-19	19-NOV-19	R4916143
Lead (Pb)		<3.0		3.0	ug	19-NOV-19	19-NOV-19	R4916143
Selenium (Se)		<10		10	ug	19-NOV-19	19-NOV-19	R4916143
Vanadium (V)		<5.0		5.0	ug	19-NOV-19	19-NOV-19	R4916143
Zinc (Zn)		9.7		5.0	ug	19-NOV-19	19-NOV-19	R4916143

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2380277-4	SOUTH-TSP-266							
Sampled By:	Client on 12-OCT-19							
Matrix:	Hi Vol Filter							
Miscellaneous Parameters								
Total particulate		11100		2300	ug		19-NOV-19	R4915745
Metals on High Volume Filter by ICPMS								
Arsenic (As)		<3.0		3.0	ug	19-NOV-19	19-NOV-19	R4916143
Cadmium (Cd)		<2.0		2.0	ug	19-NOV-19	19-NOV-19	R4916143
Cobalt (Co)		<2.0		2.0	ug	19-NOV-19	19-NOV-19	R4916143
Chromium (Cr)		<5.0		5.0	ug	19-NOV-19	19-NOV-19	R4916143
Copper (Cu)		117		4.0	ug	19-NOV-19	19-NOV-19	R4916143
Iron (Fe)		185		20	ug	19-NOV-19	19-NOV-19	R4916143
Manganese (Mn)		4.2		1.0	ug	19-NOV-19	19-NOV-19	R4916143
Nickel (Ni)		<3.0		3.0	ug	19-NOV-19	19-NOV-19	R4916143
Lead (Pb)		<3.0		3.0	ug	19-NOV-19	19-NOV-19	R4916143
Selenium (Se)		<10		10	ug	19-NOV-19	19-NOV-19	R4916143
Vanadium (V)		<5.0		5.0	ug	19-NOV-19	19-NOV-19	R4916143
Zinc (Zn)		10.4		5.0	ug	19-NOV-19	19-NOV-19	R4916143
L2380277-5	NORTH-TSP-267							
Sampled By:	Client on 18-OCT-19							
Matrix:	Hi Vol Filter							
Miscellaneous Parameters								
Total particulate		32100		2300	ug		19-NOV-19	R4915745
Metals on High Volume Filter by ICPMS								
Arsenic (As)		<3.0		3.0	ug	19-NOV-19	19-NOV-19	R4916143
Cadmium (Cd)		<2.0		2.0	ug	19-NOV-19	19-NOV-19	R4916143
Cobalt (Co)		<2.0		2.0	ug	19-NOV-19	19-NOV-19	R4916143
Chromium (Cr)		<5.0		5.0	ug	19-NOV-19	19-NOV-19	R4916143
Copper (Cu)		522		4.0	ug	19-NOV-19	19-NOV-19	R4916143
Iron (Fe)		527		20	ug	19-NOV-19	19-NOV-19	R4916143
Manganese (Mn)		21.4		1.0	ug	19-NOV-19	19-NOV-19	R4916143
Nickel (Ni)		<3.0		3.0	ug	19-NOV-19	19-NOV-19	R4916143
Lead (Pb)		<3.0		3.0	ug	19-NOV-19	19-NOV-19	R4916143
Selenium (Se)		<10		10	ug	19-NOV-19	19-NOV-19	R4916143
Vanadium (V)		<5.0		5.0	ug	19-NOV-19	19-NOV-19	R4916143
Zinc (Zn)		13.6		5.0	ug	19-NOV-19	19-NOV-19	R4916143
L2380277-6	SOUTH-TSP-267							
Sampled By:	Client on 18-OCT-19							
Matrix:	Hi Vol Filter							
Miscellaneous Parameters								
Total particulate		25200		2300	ug		19-NOV-19	R4915745
Metals on High Volume Filter by ICPMS								
Arsenic (As)		<3.0		3.0	ug	19-NOV-19	19-NOV-19	R4916143
Cadmium (Cd)		<2.0		2.0	ug	19-NOV-19	19-NOV-19	R4916143
Cobalt (Co)		<2.0		2.0	ug	19-NOV-19	19-NOV-19	R4916143
Chromium (Cr)		<5.0		5.0	ug	19-NOV-19	19-NOV-19	R4916143
Copper (Cu)		35.8		4.0	ug	19-NOV-19	19-NOV-19	R4916143
Iron (Fe)		366		20	ug	19-NOV-19	19-NOV-19	R4916143
Manganese (Mn)		14.7		1.0	ug	19-NOV-19	19-NOV-19	R4916143
Nickel (Ni)		<3.0		3.0	ug	19-NOV-19	19-NOV-19	R4916143
Lead (Pb)		<3.0		3.0	ug	19-NOV-19	19-NOV-19	R4916143
Selenium (Se)		<10		10	ug	19-NOV-19	19-NOV-19	R4916143
Vanadium (V)		<5.0		5.0	ug	19-NOV-19	19-NOV-19	R4916143
Zinc (Zn)		14.5		5.0	ug	19-NOV-19	19-NOV-19	R4916143

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2380277-7	NORTH-TSP-268							
Sampled By:	Client on 24-OCT-19							
Matrix:	Hi Vol Filter							
Miscellaneous Parameters								
Total particulate		13900		2300	ug		19-NOV-19	R4915745
Metals on High Volume Filter by ICPMS								
Arsenic (As)		<3.0		3.0	ug	19-NOV-19	19-NOV-19	R4916143
Cadmium (Cd)		<2.0		2.0	ug	19-NOV-19	19-NOV-19	R4916143
Cobalt (Co)		<2.0		2.0	ug	19-NOV-19	19-NOV-19	R4916143
Chromium (Cr)		<5.0		5.0	ug	19-NOV-19	19-NOV-19	R4916143
Copper (Cu)		716		4.0	ug	19-NOV-19	19-NOV-19	R4916143
Iron (Fe)		185		20	ug	19-NOV-19	19-NOV-19	R4916143
Manganese (Mn)		7.3		1.0	ug	19-NOV-19	19-NOV-19	R4916143
Nickel (Ni)		<3.0		3.0	ug	19-NOV-19	19-NOV-19	R4916143
Lead (Pb)		<3.0		3.0	ug	19-NOV-19	19-NOV-19	R4916143
Selenium (Se)		<10		10	ug	19-NOV-19	19-NOV-19	R4916143
Vanadium (V)		<5.0		5.0	ug	19-NOV-19	19-NOV-19	R4916143
Zinc (Zn)		12.9		5.0	ug	19-NOV-19	19-NOV-19	R4916143
L2380277-8	SOUTH-TSP-268							
Sampled By:	Client on 24-OCT-19							
Matrix:	Hi Vol Filter							
Miscellaneous Parameters								
Total particulate		14300		2300	ug		19-NOV-19	R4915745
Metals on High Volume Filter by ICPMS								
Arsenic (As)		<3.0		3.0	ug	19-NOV-19	19-NOV-19	R4916143
Cadmium (Cd)		<2.0		2.0	ug	19-NOV-19	19-NOV-19	R4916143
Cobalt (Co)		<2.0		2.0	ug	19-NOV-19	19-NOV-19	R4916143
Chromium (Cr)		<5.0		5.0	ug	19-NOV-19	19-NOV-19	R4916143
Copper (Cu)		36.2		4.0	ug	19-NOV-19	19-NOV-19	R4916143
Iron (Fe)		246		20	ug	19-NOV-19	19-NOV-19	R4916143
Manganese (Mn)		7.8		1.0	ug	19-NOV-19	19-NOV-19	R4916143
Nickel (Ni)		<3.0		3.0	ug	19-NOV-19	19-NOV-19	R4916143
Lead (Pb)		<3.0		3.0	ug	19-NOV-19	19-NOV-19	R4916143
Selenium (Se)		<10		10	ug	19-NOV-19	19-NOV-19	R4916143
Vanadium (V)		<5.0		5.0	ug	19-NOV-19	19-NOV-19	R4916143
Zinc (Zn)		11.3		5.0	ug	19-NOV-19	19-NOV-19	R4916143
L2380277-9	NORTH-TSP-269							
Sampled By:	Client on 30-OCT-19							
Matrix:	Hi Vol Filter							
Miscellaneous Parameters								
Total particulate		200000		2300	ug		19-NOV-19	R4915745
Metals on High Volume Filter by ICPMS								
Arsenic (As)		<3.0		3.0	ug	19-NOV-19	19-NOV-19	R4916143
Cadmium (Cd)		<2.0		2.0	ug	19-NOV-19	19-NOV-19	R4916143
Cobalt (Co)		<2.0		2.0	ug	19-NOV-19	19-NOV-19	R4916143
Chromium (Cr)		6.7		5.0	ug	19-NOV-19	19-NOV-19	R4916143
Copper (Cu)		270		4.0	ug	19-NOV-19	19-NOV-19	R4916143
Iron (Fe)		3180		20	ug	19-NOV-19	19-NOV-19	R4916143
Manganese (Mn)		97.2		1.0	ug	19-NOV-19	19-NOV-19	R4916143
Nickel (Ni)		4.0		3.0	ug	19-NOV-19	19-NOV-19	R4916143
Lead (Pb)		5.3		3.0	ug	19-NOV-19	19-NOV-19	R4916143
Selenium (Se)		<10		10	ug	19-NOV-19	19-NOV-19	R4916143
Vanadium (V)		<5.0		5.0	ug	19-NOV-19	19-NOV-19	R4916143
Zinc (Zn)		67.1		5.0	ug	19-NOV-19	19-NOV-19	R4916143

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2380277-10	SOUTH-TSP-269							
Sampled By:	Client on 30-OCT-19							
Matrix:	Hi Vol Filter							
Miscellaneous Parameters								
Total particulate		125000		2300	ug		19-NOV-19	R4915745
Metals on High Volume Filter by ICPMS								
Arsenic (As)		<3.0		3.0	ug	19-NOV-19	19-NOV-19	R4916143
Cadmium (Cd)		<2.0		2.0	ug	19-NOV-19	19-NOV-19	R4916143
Cobalt (Co)		<2.0		2.0	ug	19-NOV-19	19-NOV-19	R4916143
Chromium (Cr)		5.7		5.0	ug	19-NOV-19	19-NOV-19	R4916143
Copper (Cu)		27.8		4.0	ug	19-NOV-19	19-NOV-19	R4916143
Iron (Fe)		2650		20	ug	19-NOV-19	19-NOV-19	R4916143
Manganese (Mn)		63.9		1.0	ug	19-NOV-19	19-NOV-19	R4916143
Nickel (Ni)		3.7		3.0	ug	19-NOV-19	19-NOV-19	R4916143
Lead (Pb)		<3.0		3.0	ug	19-NOV-19	19-NOV-19	R4916143
Selenium (Se)		<10		10	ug	19-NOV-19	19-NOV-19	R4916143
Vanadium (V)		<5.0		5.0	ug	19-NOV-19	19-NOV-19	R4916143
Zinc (Zn)		15.1		5.0	ug	19-NOV-19	19-NOV-19	R4916143
L2380277-11	NORTH-PM2.5-265							
Sampled By:	Client on 06-OCT-19							
Matrix:	47mm Filter							
Miscellaneous Parameters								
Total particulate		83		15	ug		04-DEC-19	R4933927
L2380277-12	SOUTH-PM2.5-265							
Sampled By:	Client on 06-OCT-19							
Matrix:	47mm Filter							
Miscellaneous Parameters								
Total particulate		83		15	ug		04-DEC-19	R4933927
L2380277-13	NORTH-PM2.5-266							
Sampled By:	Client on 12-OCT-19							
Matrix:	47mm Filter							
Miscellaneous Parameters								
Total particulate		22		15	ug		04-DEC-19	R4933927
L2380277-14	SOUTH-PM2.5-266							
Sampled By:	Client on 12-OCT-19							
Matrix:	47mm Filter							
Miscellaneous Parameters								
Total particulate		<15		15	ug		04-DEC-19	R4933927
L2380277-15	NORTH-PM2.5-267							
Sampled By:	Client on 18-OCT-19							
Matrix:	47mm Filter							
Miscellaneous Parameters								
Total particulate		<15		15	ug		04-DEC-19	R4933927
L2380277-16	SOUTH-PM2.5-267							
Sampled By:	Client on 18-OCT-19							
Matrix:	47mm Filter							
Miscellaneous Parameters								
Total particulate		77		15	ug		04-DEC-19	R4933927
L2380277-17	NORTH-PM2.5-268							
Sampled By:	Client on 24-OCT-19							
Matrix:	47mm Filter							
Miscellaneous Parameters								

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2380277-17	NORTH-PM2.5-268							
Sampled By:	Client on 24-OCT-19							
Matrix:	47mm Filter							
Total particulate		96		15	ug		04-DEC-19	R4933927
L2380277-18	SOUTH-PM2.5-268							
Sampled By:	Client on 24-OCT-19							
Matrix:	47mm Filter							
Miscellaneous Parameters								
Total particulate		25		15	ug		04-DEC-19	R4933927
L2380277-19	NORTH-PM2.5-269							
Sampled By:	Client on 30-OCT-19							
Matrix:	47mm Filter							
Miscellaneous Parameters								
Total particulate		16		15	ug		04-DEC-19	R4933927
L2380277-20	SOUTH-PM2.5-269							
Sampled By:	Client on 30-OCT-19							
Matrix:	47mm Filter							
Miscellaneous Parameters								
Total particulate		43		15	ug		04-DEC-19	R4933927
L2380277-21	NORTH-DUSTFALL							
Sampled By:	Client on 05-NOV-19							
Matrix:	Dustfall							
Dustfalls-Total, Soluble, Insoluble +FV								
Total Dustfall		0.46		0.10	mg/dm ² .day		15-NOV-19	R4917147
Total Insoluble Dustfall		0.29		0.10	mg/dm ² .day		15-NOV-19	R4917147
Total Soluble Dustfall		0.17		0.10	mg/dm ² .day		15-NOV-19	R4917147
Fixed Dustfall		0.35		0.10	mg/dm ² .day		15-NOV-19	R4917147
Fixed Insoluble Dustfall		0.27		0.10	mg/dm ² .day		15-NOV-19	R4917147
Fixed Soluble Dustfall		<0.10		0.10	mg/dm ² .day		15-NOV-19	R4917147
Volatile Dustfall		0.12		0.10	mg/dm ² .day		15-NOV-19	R4917147
Volatile Insoluble Dustfall		<0.10		0.10	mg/dm ² .day		15-NOV-19	R4917147
Volatile Soluble Dustfall		<0.10		0.10	mg/dm ² .day		15-NOV-19	R4917147
Total Metals in Dustfalls by ICPMS								
Aluminum (Al)-Total		0.00591		0.00014	mg/dm ² .day	15-NOV-19	15-NOV-19	R4910247
Interval			1	days			15-NOV-19	R4908602
Antimony (Sb)-Total		<0.0000045		0.0000045	mg/dm ² .day	15-NOV-19	15-NOV-19	R4910247
Arsenic (As)-Total		<0.0000045		0.0000045	mg/dm ² .day	15-NOV-19	15-NOV-19	R4910247
Barium (Ba)-Total		0.0000594		0.0000023	mg/dm ² .day	15-NOV-19	15-NOV-19	R4910247
Beryllium (Be)-Total		<0.000023		0.000023	mg/dm ² .day	15-NOV-19	15-NOV-19	R4910247
Bismuth (Bi)-Total		<0.000023		0.000023	mg/dm ² .day	15-NOV-19	15-NOV-19	R4910247
Boron (B)-Total		<0.00045		0.00045	mg/dm ² .day	15-NOV-19	15-NOV-19	R4910247
Cadmium (Cd)-Total		<0.0000023		0.0000023	mg/dm ² .day	15-NOV-19	15-NOV-19	R4910247
Calcium (Ca)-Total		0.0234		0.00090	mg/dm ² .day	15-NOV-19	15-NOV-19	R4910247
Chromium (Cr)-Total		<0.000023		0.000023	mg/dm ² .day	15-NOV-19	15-NOV-19	R4910247
Cobalt (Co)-Total		<0.0000045		0.0000045	mg/dm ² .day	15-NOV-19	15-NOV-19	R4910247
Copper (Cu)-Total		<0.000045		0.000045	mg/dm ² .day	15-NOV-19	15-NOV-19	R4910247
Lead (Pb)-Total		0.0000097		0.0000023	mg/dm ² .day	15-NOV-19	15-NOV-19	R4910247
Iron (Fe)-Total		0.0053		0.0014	mg/dm ² .day	15-NOV-19	15-NOV-19	R4910247
Lithium (Li)-Total		<0.00023		0.00023	mg/dm ² .day	15-NOV-19	15-NOV-19	R4910247
Magnesium (Mg)-Total		0.00637		0.00023	mg/dm ² .day	15-NOV-19	15-NOV-19	R4910247
Manganese (Mn)-Total		0.000292		0.0000045	mg/dm ² .day	15-NOV-19	15-NOV-19	R4910247
Molybdenum (Mo)-Total		<0.0000023		0.0000023	mg/dm ² .day	15-NOV-19	15-NOV-19	R4910247

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2380277-21 NORTH-DUSTFALL Sampled By: Client on 05-NOV-19 Matrix: Dustfall Total Metals in Dustfalls by ICPMS Nickel (Ni)-Total Phosphorus (P)-Total Potassium (K)-Total Selenium (Se)-Total Silicon (Si)-Total Silver (Ag)-Total Sodium (Na)-Total Strontium (Sr)-Total Thallium (Tl)-Total Tin (Sn)-Total Titanium (Ti)-Total Uranium (U)-Total Vanadium (V)-Total Zinc (Zn)-Total	<0.000023 <0.0023 0.0025 <0.000045 0.0069 0.00000140 <0.0023 0.0000443 <0.000045 <0.000045 <0.00045 <0.0000045 <0.000045 <0.00041	0.000023 0.0023 0.0023 0.000045 0.0023 0.0000004 5 0.000045 0.0000045 0.000045 0.0000004 0.000045 0.000045 0.00041	mg/dm2.day mg/dm2.day mg/dm2.day mg/dm2.day mg/dm2.day mg/dm2.day mg/dm2.day mg/dm2.day mg/dm2.day mg/dm2.day mg/dm2.day mg/dm2.day mg/dm2.day mg/dm2.day	15-NOV-19 15-NOV-19 15-NOV-19 15-NOV-19 15-NOV-19 15-NOV-19 15-NOV-19 15-NOV-19 15-NOV-19 15-NOV-19 15-NOV-19 15-NOV-19 15-NOV-19 15-NOV-19	15-NOV-19 15-NOV-19 15-NOV-19 15-NOV-19 15-NOV-19 15-NOV-19 15-NOV-19 15-NOV-19 15-NOV-19 15-NOV-19 15-NOV-19 15-NOV-19 15-NOV-19 15-NOV-19	15-NOV-19 15-NOV-19 15-NOV-19 15-NOV-19 15-NOV-19 15-NOV-19 15-NOV-19 15-NOV-19 15-NOV-19 15-NOV-19 15-NOV-19 15-NOV-19 15-NOV-19 15-NOV-19	R4910247 R4910247 R4910247 R4910247 R4910247 R4910247 R4910247 R4910247 R4910247 R4910247 R4910247 R4910247 R4910247 R4910247
L2380277-22 SOUTH-DUSTFALL Sampled By: Client on 05-NOV-19 Matrix: Dustfall Dustfalls-Total, Soluble, Insoluble +FV Total Dustfall Total Insoluble Dustfall Total Soluble Dustfall Fixed Dustfall Fixed Insoluble Dustfall Fixed Soluble Dustfall Volatile Dustfall Volatile Insoluble Dustfall Volatile Soluble Dustfall	0.40 0.25 0.15 0.31 0.24 <0.10 <0.10 <0.10 <0.10	0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10	mg/dm2.day mg/dm2.day mg/dm2.day mg/dm2.day mg/dm2.day mg/dm2.day mg/dm2.day mg/dm2.day mg/dm2.day	15-NOV-19 15-NOV-19 15-NOV-19 15-NOV-19 15-NOV-19 15-NOV-19 15-NOV-19 15-NOV-19 15-NOV-19	15-NOV-19 15-NOV-19 15-NOV-19 15-NOV-19 15-NOV-19 15-NOV-19 15-NOV-19 15-NOV-19 15-NOV-19	15-NOV-19 15-NOV-19 15-NOV-19 15-NOV-19 15-NOV-19 15-NOV-19 15-NOV-19 15-NOV-19 15-NOV-19	R4917147 R4917147 R4917147 R4917147 R4917147 R4917147 R4917147 R4917147 R4917147
Total Metals in Dustfalls by ICPMS Aluminum (Al)-Total Interval Antimony (Sb)-Total Arsenic (As)-Total Barium (Ba)-Total Beryllium (Be)-Total Bismuth (Bi)-Total Boron (B)-Total Cadmium (Cd)-Total Calcium (Ca)-Total Chromium (Cr)-Total Cobalt (Co)-Total Copper (Cu)-Total Lead (Pb)-Total Iron (Fe)-Total Lithium (Li)-Total Magnesium (Mg)-Total Manganese (Mn)-Total Molybdenum (Mo)-Total Nickel (Ni)-Total Phosphorus (P)-Total	0.00748 1 <0.000043 <0.000043 0.0000724 <0.000021 <0.000021 <0.00043 <0.000021 0.0194 <0.000021 0.0000054 <0.000043 0.0000087 0.0094 <0.00021 0.00636 0.000324 <0.0000021 0.000021 <0.0021	0.00013 1 0.0000043 0.0000043 0.0000021 0.000021 0.000021 0.00043 0.0000021 0.00085 0.000021 0.0000043 0.000043 0.0000021 0.000021 0.000021 0.000021 0.0000043 0.0000043 0.0000021 0.000021 0.000021 0.000021	mg/dm2.day days mg/dm2.day mg/dm2.day mg/dm2.day mg/dm2.day mg/dm2.day mg/dm2.day 15-NOV-19	15-NOV-19 15-NOV-19	15-NOV-19 15-NOV-19	15-NOV-19 15-NOV-19	R4910247 R4908602 R4910247

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2380277-22 SOUTH-DUSTFALL							
Sampled By:	Client on 05-NOV-19						
Matrix:	Dustfall						
Total Metals in Dustfalls by ICPMS							
Potassium (K)-Total	0.0028		0.0021	mg/dm ² .day	15-NOV-19	15-NOV-19	R4910247
Selenium (Se)-Total	<0.000043		0.000043	mg/dm ² .day	15-NOV-19	15-NOV-19	R4910247
Silicon (Si)-Total	0.0102		0.0021	mg/dm ² .day	15-NOV-19	15-NOV-19	R4910247
Silver (Ag)-Total	<0.00000043		0.0000043	mg/dm ² .day	15-NOV-19	15-NOV-19	R4910247
Sodium (Na)-Total	<0.0021		0.0021	mg/dm ² .day	15-NOV-19	15-NOV-19	R4910247
Strontium (Sr)-Total	0.0000583		0.0000043	mg/dm ² .day	15-NOV-19	15-NOV-19	R4910247
Thallium (Tl)-Total	<0.0000043		0.0000043	mg/dm ² .day	15-NOV-19	15-NOV-19	R4910247
Tin (Sn)-Total	<0.0000043		0.0000043	mg/dm ² .day	15-NOV-19	15-NOV-19	R4910247
Titanium (Ti)-Total	<0.00043		0.00043	mg/dm ² .day	15-NOV-19	15-NOV-19	R4910247
Uranium (U)-Total	<0.00000043		0.00000043	mg/dm ² .day	15-NOV-19	15-NOV-19	R4910247
Vanadium (V)-Total	<0.000043		0.000043	mg/dm ² .day	15-NOV-19	15-NOV-19	R4910247
Zinc (Zn)-Total	<0.00038	DLM	0.00038	mg/dm ² .day	15-NOV-19	15-NOV-19	R4910247

Reference Information

Sample Parameter Qualifier Key:

Qualifier	Description
B	Method Blank exceeds ALS DQO. Associated sample results which are < Limit of Reporting or > 5 times blank level are considered reliable.
DLB	Detection Limit Raised. Analyte detected at comparable level in Method Blank.
DLM	Detection Limit Adjusted due to sample matrix effects (e.g. chemical interference, colour, turbidity).
DUP-H	Duplicate results outside ALS DQO, due to sample heterogeneity.
DUP-H,J	Duplicate results outside ALS DQO, due to sample heterogeneity. Duplicate results and limits are expressed in terms of absolute difference.
G	QC result did not meet ALS DQO. Refer to narrative comments for further information.
MB-LOR	Method Blank exceeds ALS DQO. Limits of Reporting have been adjusted for samples with positive hits below 5x blank level.
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
AIR VOLUME-HIVOL-BU	Filter	Air volume (m3)	USEPA IO3.1
AIR VOLUME-M212 F-BU	Filter	Air volume (m3)	EPA QA Guidance Document 2.12
DUSTFALLS-ALL-DM2-VA	Dustfall	Dustfalls-Total, Soluble, Insoluble +FV	BC LAB MANUAL - PARTICULATE
<p>This analysis is carried out using procedures modified from British Columbia Environmental Manual "Particulate." Particulates or "Dustfalls" are determined gravimetrically. Total Insoluble and Soluble Dustfalls are determined by filtering a sample through a 0.45 um membrane filter and drying the filter and filtrate at 104 C, followed by ignition at 550 C. The remaining residue after 550 C represents the fixed portion and the weight lost on ignition represents the volatile portion. The sum of all fixed and volatile portions on both Insoluble and Soluble portions represents Total Dustfalls.</p>			
MET-DUST(DM2)-MS-VA	Dustfall	Total Metals in Dustfalls by ICPMS	EPA 6020A
<p>This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). Instrumental analysis is by inductively coupled plasma - mass spectrometry (EPA Method 6020A).</p>			
MET-IO3.5-MS-BU	Filter	Metals on High Volume Filter by ICPMS	IO3.5
<p>After weighing (if required), hivol filters are sub-sampled and leached with nitric acid to extract available metal analytes. After dilution, the extracts are submitted to the ICPMS instrument for analysis.</p>			
PART-HIVOL-GRAV-BU	Filter	Particulate on High Volume Filter	USEPA IO3.1
PART-M212 F-GRAV-BU	Filter	PM via Gravimetric Analysis	EPA QA Guidance Document 2.12
<p>The particulate matter collected onto tare-weighed 47mm Teflon Disc filter media is desiccated then brought to a constant weight on an analytical balance. Results are presented in ug (per filter). An air volume can be included to allow for reporting in ug/m3.</p>			

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
BU	ALS ENVIRONMENTAL - BURLINGTON, ONTARIO, CANADA
VA	ALS ENVIRONMENTAL - VANCOUVER, BRITISH COLUMBIA, CANADA

Chain of Custody Numbers:

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
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GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.

mg/kg - milligrams per kilogram based on dry weight of sample

mg/kg wwt - milligrams per kilogram based on wet weight of sample

mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight

mg/L - unit of concentration based on volume, parts per million.

< - Less than.

D.L. - The reporting limit.

N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.

Quality Control Report

Workorder: L2380277

Report Date: 05-DEC-19

Page 1 of 6

Client: New Gold Inc. Rainy River Project
 5967 Highway 11/71 P.O. Box 5
 Emo ON P0W 1E0

Contact: Twila Griffith

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-IO3.5-MS-BU	Filter							
Batch	R4916143							
WG3222660-3 DUP		L2380277-1						
Arsenic (As)		<3.0	<3.0	RPD-NA	ug	N/A	20	19-NOV-19
Cadmium (Cd)		<2.0	<2.0	RPD-NA	ug	N/A	20	19-NOV-19
Cobalt (Co)		<2.0	<2.0	RPD-NA	ug	N/A	20	19-NOV-19
Chromium (Cr)		<5.0	<5.0	RPD-NA	ug	N/A	20	19-NOV-19
Copper (Cu)		155	151		ug	2.9	20	19-NOV-19
Iron (Fe)		206	202		ug	2.0	25	19-NOV-19
Manganese (Mn)		6.4	6.2		ug	3.6	20	19-NOV-19
Nickel (Ni)		<3.0	<3.0	RPD-NA	ug	N/A	20	19-NOV-19
Lead (Pb)		<3.0	<3.0	RPD-NA	ug	N/A	20	19-NOV-19
Selenium (Se)		<10	<10	RPD-NA	ug	N/A	20	19-NOV-19
Vanadium (V)		<5.0	<5.0	RPD-NA	ug	N/A	20	19-NOV-19
Zinc (Zn)		32.0	88.2	G	ug	94	20	19-NOV-19
COMMENTS: Zn RPD is outside ALS DQOs. Data for this analyte may show higher than normal variation. PE 20-Nov-19								
WG3222660-2 LCS								
Arsenic (As)		85.2		%		80-120	19-NOV-19	
Cadmium (Cd)		95.2		%		80-120	19-NOV-19	
Cobalt (Co)		88.9		%		80-120	19-NOV-19	
Chromium (Cr)		86.6		%		80-120	19-NOV-19	
Copper (Cu)		107.0		%		80-120	19-NOV-19	
Iron (Fe)		88.0		%		80-120	19-NOV-19	
Manganese (Mn)		87.9		%		80-120	19-NOV-19	
Nickel (Ni)		86.4		%		80-120	19-NOV-19	
Lead (Pb)		88.9		%		80-120	19-NOV-19	
Selenium (Se)		91.5		%		80-120	19-NOV-19	
Vanadium (V)		86.6		%		80-120	19-NOV-19	
Zinc (Zn)		91.0		%		80-120	19-NOV-19	
WG3222660-1 MB								
Arsenic (As)		<3.0		ug		3	19-NOV-19	
Cadmium (Cd)		<2.0		ug		2	19-NOV-19	
Cobalt (Co)		<2.0		ug		2	19-NOV-19	
Chromium (Cr)		<5.0		ug		5	19-NOV-19	
Copper (Cu)		<4.0		ug		4	19-NOV-19	
Iron (Fe)		<20		ug		20	19-NOV-19	
Manganese (Mn)		<1.0		ug		1	19-NOV-19	
Nickel (Ni)		<3.0		ug		3	19-NOV-19	

Quality Control Report

Workorder: L2380277

Report Date: 05-DEC-19

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-IO3.5-MS-BU Filter								
Batch R4916143								
WG3222660-1 MB								
Lead (Pb)			<3.0		ug	3	19-NOV-19	
Selenium (Se)			<10		ug	10	19-NOV-19	
Vanadium (V)			<5.0		ug	10	19-NOV-19	
Zinc (Zn)			<5.0		ug	5	19-NOV-19	
WG3222660-4 MS L2380277-1								
Arsenic (As)			79.8		%	75-125	19-NOV-19	
Cadmium (Cd)			89.0		%	75-125	19-NOV-19	
Cobalt (Co)			83.3		%	75-125	19-NOV-19	
Chromium (Cr)			81.6		%	75-125	19-NOV-19	
Copper (Cu)		N/A	MS-B		%	-	19-NOV-19	
Iron (Fe)		N/A	MS-B		%	75-125	19-NOV-19	
Manganese (Mn)			79.7		%	75-125	19-NOV-19	
Nickel (Ni)			80.9		%	75-125	19-NOV-19	
Lead (Pb)			80.2		%	75-125	19-NOV-19	
Selenium (Se)			85.2		%	75-125	19-NOV-19	
Vanadium (V)			81.9		%	75-125	19-NOV-19	
Zinc (Zn)		N/A	MS-B		%	75-125	19-NOV-19	
PART-HIVOL-GRAV-BU Filter								
Batch R4915745								
WG3222320-4 DUP L2380277-1								
Total particulate		15000	14400		ug	4.1	25	19-NOV-19
WG3222320-3 MB								
Total particulate			<100		ug		100	19-NOV-19
PART-M212 F-GRAV-BU Filter								
Batch R4933927								
WG3235112-2 DUP L2380277-11								
Total particulate		83	90		ug	8.1	10	04-DEC-19
WG3235112-1 MB								
Total particulate			<15		ug		15	04-DEC-19
DUSTFALLS-ALL-DM2-VA Dustfall								
Batch R4917147								
WG3219779-1 MB								
Total Dustfall			<0.10		mg/dm ² .day	0.1	15-NOV-19	
Total Insoluble Dustfall			<0.10		mg/dm ² .day	0.1	15-NOV-19	
Total Soluble Dustfall			<0.10		mg/dm ² .day	0.1	15-NOV-19	

Quality Control Report

Workorder: L2380277

Report Date: 05-DEC-19

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
DUSTFALLS-ALL-DM2-VA Dustfall								
Batch R4917147								
WG3219779-1 MB								
Fixed Dustfall			<0.10		mg/dm ² .day		0.1	15-NOV-19
Fixed Insoluble Dustfall			<0.10		mg/dm ² .day		0.1	15-NOV-19
Fixed Soluble Dustfall			<0.10		mg/dm ² .day		0.1	15-NOV-19
Volatile Dustfall			<0.10		mg/dm ² .day		0.1	15-NOV-19
Volatile Insoluble Dustfall			<0.10		mg/dm ² .day		0.1	15-NOV-19
Volatile Soluble Dustfall			<0.10		mg/dm ² .day		0.1	15-NOV-19
MET-DUST(DM2)-MS-VA Dustfall								
Batch R4910247								
WG3216938-2 LCS								
Aluminum (Al)-Total			116.1		%		80-120	15-NOV-19
Antimony (Sb)-Total			116.1		%		80-120	15-NOV-19
Arsenic (As)-Total			113.5		%		80-120	15-NOV-19
Barium (Ba)-Total			116.8		%		80-120	15-NOV-19
Beryllium (Be)-Total			104.3		%		80-120	15-NOV-19
Bismuth (Bi)-Total			104.8		%		80-120	15-NOV-19
Boron (B)-Total			109.7		%		80-120	15-NOV-19
Cadmium (Cd)-Total			117.9		%		80-120	15-NOV-19
Calcium (Ca)-Total			106.9		%		80-120	15-NOV-19
Chromium (Cr)-Total			111.0		%		80-120	15-NOV-19
Cobalt (Co)-Total			112.0		%		80-120	15-NOV-19
Copper (Cu)-Total			118.5		%		80-120	15-NOV-19
Lead (Pb)-Total			110.1		%		80-120	15-NOV-19
Iron (Fe)-Total			115.1		%		80-120	15-NOV-19
Lithium (Li)-Total			99.9		%		80-120	15-NOV-19
Magnesium (Mg)-Total			116.4		%		80-120	15-NOV-19
Manganese (Mn)-Total			114.7		%		80-120	15-NOV-19
Molybdenum (Mo)-Total			113.8		%		80-120	15-NOV-19
Nickel (Ni)-Total			109.4		%		80-120	15-NOV-19
Phosphorus (P)-Total			114.4		%		80-120	15-NOV-19
Potassium (K)-Total			113.5		%		80-120	15-NOV-19
Selenium (Se)-Total			110.0		%		80-120	15-NOV-19
Silicon (Si)-Total			113.0		%		80-120	15-NOV-19
Silver (Ag)-Total			103.2		%		80-120	15-NOV-19
Sodium (Na)-Total			116.4		%		80-120	15-NOV-19

Quality Control Report

Workorder: L2380277

Report Date: 05-DEC-19

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-DUST(DM2)-MS-VA		Dustfall						
Batch R4910247								
WG3216938-2 LCS								
Strontium (Sr)-Total			112.4		%		80-120	15-NOV-19
Thallium (Tl)-Total			97.7		%		80-120	15-NOV-19
Tin (Sn)-Total			111.7		%		80-120	15-NOV-19
Titanium (Ti)-Total			109.9		%		80-120	15-NOV-19
Uranium (U)-Total			108.4		%		80-120	15-NOV-19
Vanadium (V)-Total			113.9		%		80-120	15-NOV-19
Zinc (Zn)-Total			114.6		%		80-120	15-NOV-19
WG3216938-1 MB								
Aluminum (Al)-Total			0.000117	B	mg/dm ² .day		0.000079	15-NOV-19
Antimony (Sb)-Total			<0.0000026		mg/dm ² .day		0.0000026	15-NOV-19
Arsenic (As)-Total			<0.0000026		mg/dm ² .day		0.0000026	15-NOV-19
Barium (Ba)-Total			0.0000041	B	mg/dm ² .day		0.0000013	15-NOV-19
Beryllium (Be)-Total			<0.000013		mg/dm ² .day		0.000013	15-NOV-19
Bismuth (Bi)-Total			<0.000013		mg/dm ² .day		0.000013	15-NOV-19
Boron (B)-Total			<0.00026		mg/dm ² .day		0.00026	15-NOV-19
Cadmium (Cd)-Total			<0.0000013		mg/dm ² .day		0.0000013	15-NOV-19
Calcium (Ca)-Total			<0.00052		mg/dm ² .day		0.00052	15-NOV-19
Chromium (Cr)-Total			<0.000013		mg/dm ² .day		0.000013	15-NOV-19
Cobalt (Co)-Total			<0.0000026		mg/dm ² .day		0.0000026	15-NOV-19
Copper (Cu)-Total			0.000020	MB-LOR	mg/dm ² .day		0.000013	15-NOV-19
Lead (Pb)-Total			<0.0000013		mg/dm ² .day		0.0000013	15-NOV-19
Iron (Fe)-Total			<0.00079		mg/dm ² .day		0.00079	15-NOV-19
Lithium (Li)-Total			<0.00013		mg/dm ² .day		0.00013	15-NOV-19
Magnesium (Mg)-Total			<0.00013		mg/dm ² .day		0.00013	15-NOV-19
Manganese (Mn)-Total			0.0000050	B	mg/dm ² .day		0.0000026	15-NOV-19
Molybdenum (Mo)-Total			<0.0000013		mg/dm ² .day		0.0000013	15-NOV-19
Nickel (Ni)-Total			<0.000013		mg/dm ² .day		0.000013	15-NOV-19
Phosphorus (P)-Total			<0.0013		mg/dm ² .day		0.0013	15-NOV-19
Potassium (K)-Total			<0.0013		mg/dm ² .day		0.0013	15-NOV-19
Selenium (Se)-Total			<0.000026		mg/dm ² .day		0.000026	15-NOV-19
Silicon (Si)-Total			<0.0013		mg/dm ² .day		0.0013	15-NOV-19
Silver (Ag)-Total			<0.0000002		mg/dm ² .day		0.00000026	15-NOV-19
Sodium (Na)-Total			<0.0013		mg/dm ² .day		0.0013	15-NOV-19
Strontium (Sr)-Total			<0.0000026		mg/dm ² .day		0.0000026	15-NOV-19

Quality Control Report

Workorder: L2380277

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-DUST(DM2)-MS-VA Dustfall								
Batch R4910247								
WG3216938-1 MB								
Thallium (Tl)-Total			<0.0000026		mg/dm ² .day		0.0000026	15-NOV-19
Tin (Sn)-Total			<0.0000026		mg/dm ² .day		0.0000026	15-NOV-19
Titanium (Ti)-Total			<0.00026		mg/dm ² .day		0.00026	15-NOV-19
Uranium (U)-Total			<0.0000002		mg/dm ² .day		0.00000026	15-NOV-19
Vanadium (V)-Total			<0.000026		mg/dm ² .day		0.000026	15-NOV-19
Zinc (Zn)-Total			0.000126	MB-LOR	mg/dm ² .day		0.000079	15-NOV-19

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Legend:

Limit	ALS Control Limit (Data Quality Objectives)
DUP	Duplicate
RPD	Relative Percent Difference
N/A	Not Available
LCS	Laboratory Control Sample
SRM	Standard Reference Material
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ADE	Average Desorption Efficiency
MB	Method Blank
IRM	Internal Reference Material
CRM	Certified Reference Material
CCV	Continuing Calibration Verification
CVS	Calibration Verification Standard
LCSD	Laboratory Control Sample Duplicate

Sample Parameter Qualifier Definitions:

Qualifier	Description
B	Method Blank exceeds ALS DQO. Associated sample results which are < Limit of Reporting or > 5 times blank level are considered reliable.
G	QC result did not meet ALS DQO. Refer to narrative comments for further information.
MB-LOR	Method Blank exceeds ALS DQO. Limits of Reporting have been adjusted for samples with positive hits below 5x blank level.
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Hold Time Exceedances:

All test results reported with this submission were conducted within ALS recommended hold times.

ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where available). For more information, please contact ALS.

The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide confidence in the accuracy of associated test results.

Please note that this report may contain QC results from anonymous Sample Duplicates and Matrix Spikes that do not originate from this Work Order.

Report To			Report Format / Distribution			Select Service Level Below (Rush Turnaround Time (TAT) is not available for all tests)					
Company:	New Gold Inc. Rainy River Project		Report Format	<input checked="" type="checkbox"/> PDF	<input type="checkbox"/> Excel	<input type="checkbox"/> EDD (Digital)	R	<input type="checkbox"/> Regular (Standard TAT if received by 3pm - business days)			
Contact:	Twila Griffith		Quality Control (QC) Report with Report	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	P	<input type="checkbox"/> Priority (1-2 bus. days) Received by 3pm: 50% surcharge - contact ALS to confirm TAT				
Address:	24 Marr Rd.		<input type="checkbox"/> Criteria on Report - provide details below if box checked			E	<input type="checkbox"/> Emergency (1-2 bus. days) Received by 3pm: 100% surcharge - contact ALS to confirm TAT				
City/Province:	Barwick ON		Select Distribution:	<input checked="" type="checkbox"/> Email	<input type="checkbox"/> Mail	<input type="checkbox"/> Fax	E2	<input type="checkbox"/> Emergency (1-2 bus. days) Received by 3pm: 100% surcharge - contact ALS to confirm TAT			
Postal Code:	POW 1AO		Email 1 or Fax:	rainyriver.labresults@newgold.com			Date and Time Required for all E&P TATs				
Phone:	807-482-0000 x8064						For tests that can not be performed according to the service level selected, you will be contacted				
			Email 2	yag.inviron@newgold.com			Analysis Request				
Invoice To	Same as Report?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Invoice Distribution			Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below				
Copy of Invoice with Report?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Select Invoice Distribution: <input checked="" type="checkbox"/> Email <input type="checkbox"/> Mail <input type="checkbox"/> Fax								
Company			Email 1 or Fax: rainyriver.labresults@newgold.com								
Contact:			Email 2: Twila.griffith@newgold.com								
Project Information			Oil and Gas Required Fields (client use)								
ALS Quote #:			Approver ID:	Cost Center							
Job #:	Air Quality		GL Account:	Routing Code							
PO / AFE:	4500035097		Activity Code:								
LSD			Location:								
ALS Lab Work Order # (lab use only)			ALS Contact:	Kyle Watkins	Sampler:						
Sample Ref (upload EDD)	Sample Identification and/or Coordinates (Description of location on the report)		Filter ID	Date (dd-MMM-yy)	Time (hh:mm)	Sample Type	TSP	PM2.5	Oil & Grease	Volatile	Number of Containers
123260	TSP		North-TSP-265	06-Oct-19	12:00	Ar	X				
123261	TSP		South-TSP-265	06-Oct-19	12:00	Ar	X				
123262	PM 2.5		North-PM2.5-265	06-Oct-19	12:00	Ar		X			
123263	PM 2.5		South-PM2.5-265	06-Oct-19	12:00	Ar		X			
123264	TSP		North-TSP-266	12-Oct-19	12:00	Ar	X				
123265	TSP		South-TSP-266	12-Oct-19	12:00	Ar	X				
123266	PM 2.5		North-PM2.5-266	12-Oct-19	12:00	Ar		X			
123267	PM 2.5		South-PM2.5-266	12-Oct-19	12:00	Ar		X			
123268	TSP		North-TSP-267	16-Oct-19	12:00	Ar	X				
123269	TSP		South-TSP-267	16-Oct-19	12:00	Ar	X				
123270	PM 2.5		North-PM2.5-267	16-Oct-19	12:00	Ar		X			
123271	PM 2.5		South-PM2.5-267	16-Oct-19	12:00	Ar		X			
123272	TSP		North-TSP-268	24-Oct-19	12:00	Ar	X				
123273	TSP		South-TSP-268	24-Oct-19	12:00	Ar	X				
123274	PM 2.5		North-PM2.5-268	24-Oct-19	12:00	Ar		X			
123275	PM 2.5		South-PM2.5-268	24-Oct-19	12:00	Ar		X			
123276	TSP		North-TSP-269	30-Oct-19	12:00	Ar	X				
123277	TSP		South-TSP-269	30-Oct-19	12:00	Ar	X				
123278	PM 2.5		North-PM2.5-269	30-Oct-19	12:00	Ar		X			
123279	PM 2.5		South-PM2.5-269	30-Oct-19	12:00	Ar		X			
123300	TSP Travel Blank			05-Nov-19	12:00	Ar	X				
123301	PM 2.5 Travel Blank			05-Nov-19	12:00	Ar		X			
123302	Dustbin - Tail Road (South)			05-Nov-19	12:00	Ar		X			
123303	Dustbin - Gatering Road			05-Nov-19	12:00	Ar		X			
Drinking Water (DW) Samples* (client use)			Special Instructions / Specify Criteria to add on report (client use)			SAMPLE CONDITION AS RECEIVED (lab use only)					
Are samples taken from a Regulated DW System?			MISA (Template NGSWMISA)			Frozen	<input type="checkbox"/>	SIF Observations	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
Are samples for human drinking water use?						Ice packs	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Custody seal intact	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
						Cooling Initiated	<input type="checkbox"/>				
SHIPMENT RELEASE (client use)			INITIAL SHIPMENT RECEIPT (lab use only)			INITIAL COOLER TEMPERATURES °C			FINAL COOLER TEMPERATURES °C		
Released by	Date:	Time:	Received by:	Date:	Time:	11.3°C			11.3°C		
Keisha Hunsperger	2019-11-14	11:00	AARON BURTON	11-Nov-2019	9:50	Received by:	Date:	Time:	Received by:	Date:	Time:



New Gold Inc. Rainy River Project
ATTN: Amanda Jacobs / Carolyn Winik
5967 Highway 11/71
P.O. Box 5
Emo ON POW 1E0

Date Received: 30-DEC-19
Report Date: 21-JAN-20 14:03 (MT)
Version: FINAL

Client Phone: 807-482-0900

Certificate of Analysis

Lab Work Order #: L2400811
Project P.O. #: 4500035097
Job Reference: NEW GOLD RRP
C of C Numbers:
Legal Site Desc:



Claire Kocharakkal, B.Sc.
Account Manager

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2400811-1	NORTH-TSP-270							
Sampled By:	Client on 05-NOV-19							
Matrix:	Hi Vol Filter							
Miscellaneous Parameters								
Total particulate		95700		2300	ug		08-JAN-20	R4963848
Metals on High Volume Filter by ICPMS								
Arsenic (As)		<3.0		3.0	ug	10-JAN-20	13-JAN-20	R4971927
Cadmium (Cd)		<2.0		2.0	ug	10-JAN-20	13-JAN-20	R4971927
Cobalt (Co)		<2.0		2.0	ug	10-JAN-20	13-JAN-20	R4971927
Chromium (Cr)		5.6		5.0	ug	10-JAN-20	13-JAN-20	R4971927
Copper (Cu)		275		4.0	ug	10-JAN-20	13-JAN-20	R4971927
Iron (Fe)		1920		20	ug	10-JAN-20	13-JAN-20	R4971927
Manganese (Mn)		61.7		1.0	ug	10-JAN-20	13-JAN-20	R4971927
Nickel (Ni)		<3.0		3.0	ug	10-JAN-20	13-JAN-20	R4971927
Lead (Pb)		3.8		3.0	ug	10-JAN-20	13-JAN-20	R4971927
Selenium (Se)		<10		10	ug	10-JAN-20	13-JAN-20	R4971927
Vanadium (V)		<5.0		5.0	ug	10-JAN-20	13-JAN-20	R4971927
Zinc (Zn)		58.5		5.0	ug	10-JAN-20	13-JAN-20	R4971927
L2400811-2	SOUTH-TSP-270							
Sampled By:	Client on 05-NOV-19							
Matrix:	Hi Vol Filter							
Miscellaneous Parameters								
Total particulate		19700		2300	ug		08-JAN-20	R4963848
Metals on High Volume Filter by ICPMS								
Arsenic (As)		<3.0		3.0	ug	10-JAN-20	13-JAN-20	R4971927
Cadmium (Cd)		<2.0		2.0	ug	10-JAN-20	13-JAN-20	R4971927
Cobalt (Co)		<2.0		2.0	ug	10-JAN-20	13-JAN-20	R4971927
Chromium (Cr)		<5.0		5.0	ug	10-JAN-20	13-JAN-20	R4971927
Copper (Cu)		23.9		4.0	ug	10-JAN-20	13-JAN-20	R4971927
Iron (Fe)		399		20	ug	10-JAN-20	13-JAN-20	R4971927
Manganese (Mn)		9.5		1.0	ug	10-JAN-20	13-JAN-20	R4971927
Nickel (Ni)		<3.0		3.0	ug	10-JAN-20	13-JAN-20	R4971927
Lead (Pb)		<3.0		3.0	ug	10-JAN-20	13-JAN-20	R4971927
Selenium (Se)		<10		10	ug	10-JAN-20	13-JAN-20	R4971927
Vanadium (V)		<5.0		5.0	ug	10-JAN-20	13-JAN-20	R4971927
Zinc (Zn)		18.5		5.0	ug	10-JAN-20	13-JAN-20	R4971927
L2400811-3	NORTH-TSP-271							
Sampled By:	Client on 11-NOV-19							
Matrix:	Hi Vol Filter							
Miscellaneous Parameters								
Total particulate		14900		2300	ug		08-JAN-20	R4963848
Metals on High Volume Filter by ICPMS								
Arsenic (As)		<3.0		3.0	ug	10-JAN-20	13-JAN-20	R4971927
Cadmium (Cd)		<2.0		2.0	ug	10-JAN-20	13-JAN-20	R4971927
Cobalt (Co)		<2.0		2.0	ug	10-JAN-20	13-JAN-20	R4971927
Chromium (Cr)		<5.0		5.0	ug	10-JAN-20	13-JAN-20	R4971927
Copper (Cu)		675		4.0	ug	10-JAN-20	13-JAN-20	R4971927
Iron (Fe)		280		20	ug	10-JAN-20	13-JAN-20	R4971927
Manganese (Mn)		8.1		1.0	ug	10-JAN-20	13-JAN-20	R4971927
Nickel (Ni)		<3.0		3.0	ug	10-JAN-20	13-JAN-20	R4971927
Lead (Pb)		<3.0		3.0	ug	10-JAN-20	13-JAN-20	R4971927
Selenium (Se)		<10		10	ug	10-JAN-20	13-JAN-20	R4971927
Vanadium (V)		<5.0		5.0	ug	10-JAN-20	13-JAN-20	R4971927
Zinc (Zn)		21.4		5.0	ug	10-JAN-20	13-JAN-20	R4971927

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2400811-4	SOUTH-TSP-271							
Sampled By:	Client on 11-NOV-19							
Matrix:	Hi Vol Filter							
Miscellaneous Parameters								
Total particulate		12500		2300	ug		08-JAN-20	R4963848
Metals on High Volume Filter by ICPMS								
Arsenic (As)		<3.0		3.0	ug	10-JAN-20	13-JAN-20	R4971927
Cadmium (Cd)		<2.0		2.0	ug	10-JAN-20	13-JAN-20	R4971927
Cobalt (Co)		<2.0		2.0	ug	10-JAN-20	13-JAN-20	R4971927
Chromium (Cr)		<5.0		5.0	ug	10-JAN-20	13-JAN-20	R4971927
Copper (Cu)		69.3		4.0	ug	10-JAN-20	13-JAN-20	R4971927
Iron (Fe)		291		20	ug	10-JAN-20	13-JAN-20	R4971927
Manganese (Mn)		6.6		1.0	ug	10-JAN-20	13-JAN-20	R4971927
Nickel (Ni)		<3.0		3.0	ug	10-JAN-20	13-JAN-20	R4971927
Lead (Pb)		<3.0		3.0	ug	10-JAN-20	13-JAN-20	R4971927
Selenium (Se)		<10		10	ug	10-JAN-20	13-JAN-20	R4971927
Vanadium (V)		<5.0		5.0	ug	10-JAN-20	13-JAN-20	R4971927
Zinc (Zn)		13.7		5.0	ug	10-JAN-20	13-JAN-20	R4971927
L2400811-5	NORTH-TSP-272							
Sampled By:	Client on 17-NOV-19							
Matrix:	Hi Vol Filter							
Miscellaneous Parameters								
Total particulate		15100		2300	ug		08-JAN-20	R4963848
Metals on High Volume Filter by ICPMS								
Arsenic (As)		<3.0		3.0	ug	10-JAN-20	13-JAN-20	R4971927
Cadmium (Cd)		<2.0		2.0	ug	10-JAN-20	13-JAN-20	R4971927
Cobalt (Co)		<2.0		2.0	ug	10-JAN-20	13-JAN-20	R4971927
Chromium (Cr)		<5.0		5.0	ug	10-JAN-20	13-JAN-20	R4971927
Copper (Cu)		102		4.0	ug	10-JAN-20	13-JAN-20	R4971927
Iron (Fe)		295		20	ug	10-JAN-20	13-JAN-20	R4971927
Manganese (Mn)		12.8		1.0	ug	10-JAN-20	13-JAN-20	R4971927
Nickel (Ni)		<3.0		3.0	ug	10-JAN-20	13-JAN-20	R4971927
Lead (Pb)		<3.0		3.0	ug	10-JAN-20	13-JAN-20	R4971927
Selenium (Se)		<10		10	ug	10-JAN-20	13-JAN-20	R4971927
Vanadium (V)		<5.0		5.0	ug	10-JAN-20	13-JAN-20	R4971927
Zinc (Zn)		19.1		5.0	ug	10-JAN-20	13-JAN-20	R4971927
L2400811-6	SOUTH-TSP-272							
Sampled By:	Client on 17-NOV-19							
Matrix:	Hi Vol Filter							
Miscellaneous Parameters								
Total particulate		6300		2300	ug		08-JAN-20	R4963848
Metals on High Volume Filter by ICPMS								
Arsenic (As)		<3.0		3.0	ug	10-JAN-20	13-JAN-20	R4971927
Cadmium (Cd)		<2.0		2.0	ug	10-JAN-20	13-JAN-20	R4971927
Cobalt (Co)		<2.0		2.0	ug	10-JAN-20	13-JAN-20	R4971927
Chromium (Cr)		<5.0		5.0	ug	10-JAN-20	13-JAN-20	R4971927
Copper (Cu)		96.3		4.0	ug	10-JAN-20	13-JAN-20	R4971927
Iron (Fe)		132		20	ug	10-JAN-20	13-JAN-20	R4971927
Manganese (Mn)		4.8		1.0	ug	10-JAN-20	13-JAN-20	R4971927
Nickel (Ni)		<3.0		3.0	ug	10-JAN-20	13-JAN-20	R4971927
Lead (Pb)		<3.0		3.0	ug	10-JAN-20	13-JAN-20	R4971927
Selenium (Se)		<10		10	ug	10-JAN-20	13-JAN-20	R4971927
Vanadium (V)		<5.0		5.0	ug	10-JAN-20	13-JAN-20	R4971927
Zinc (Zn)		9.6		5.0	ug	10-JAN-20	13-JAN-20	R4971927

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2400811-7	NORTH-TSP-273							
Sampled By:	Client on 23-NOV-19							
Matrix:	Hi Vol Filter							
Miscellaneous Parameters								
Total particulate		50700		2300	ug		08-JAN-20	R4963848
Metals on High Volume Filter by ICPMS								
Arsenic (As)		<3.0		3.0	ug	10-JAN-20	13-JAN-20	R4971927
Cadmium (Cd)		<2.0		2.0	ug	10-JAN-20	13-JAN-20	R4971927
Cobalt (Co)		<2.0		2.0	ug	10-JAN-20	13-JAN-20	R4971927
Chromium (Cr)		<5.0		5.0	ug	10-JAN-20	13-JAN-20	R4971927
Copper (Cu)		130		4.0	ug	10-JAN-20	13-JAN-20	R4971927
Iron (Fe)		972		20	ug	10-JAN-20	13-JAN-20	R4971927
Manganese (Mn)		39.4		1.0	ug	10-JAN-20	13-JAN-20	R4971927
Nickel (Ni)		<3.0		3.0	ug	10-JAN-20	13-JAN-20	R4971927
Lead (Pb)		3.4		3.0	ug	10-JAN-20	13-JAN-20	R4971927
Selenium (Se)		<10		10	ug	10-JAN-20	13-JAN-20	R4971927
Vanadium (V)		<5.0		5.0	ug	10-JAN-20	13-JAN-20	R4971927
Zinc (Zn)		35.8		5.0	ug	10-JAN-20	13-JAN-20	R4971927
L2400811-8	SOUTH-TSP-273							
Sampled By:	Client on 23-NOV-19							
Matrix:	Hi Vol Filter							
Miscellaneous Parameters								
Total particulate		10100		2300	ug		08-JAN-20	R4963848
Metals on High Volume Filter by ICPMS								
Arsenic (As)		<3.0		3.0	ug	10-JAN-20	13-JAN-20	R4971927
Cadmium (Cd)		<2.0		2.0	ug	10-JAN-20	13-JAN-20	R4971927
Cobalt (Co)		<2.0		2.0	ug	10-JAN-20	13-JAN-20	R4971927
Chromium (Cr)		<5.0		5.0	ug	10-JAN-20	13-JAN-20	R4971927
Copper (Cu)		68.9		4.0	ug	10-JAN-20	13-JAN-20	R4971927
Iron (Fe)		220		20	ug	10-JAN-20	13-JAN-20	R4971927
Manganese (Mn)		11.1		1.0	ug	10-JAN-20	13-JAN-20	R4971927
Nickel (Ni)		<3.0		3.0	ug	10-JAN-20	13-JAN-20	R4971927
Lead (Pb)		<3.0		3.0	ug	10-JAN-20	13-JAN-20	R4971927
Selenium (Se)		<10		10	ug	10-JAN-20	13-JAN-20	R4971927
Vanadium (V)		<5.0		5.0	ug	10-JAN-20	13-JAN-20	R4971927
Zinc (Zn)		21.2		5.0	ug	10-JAN-20	13-JAN-20	R4971927
L2400811-9	NORTH-TSP-274							
Sampled By:	Client on 29-NOV-19							
Matrix:	Hi Vol Filter							
Miscellaneous Parameters								
Total particulate		3100		2300	ug		08-JAN-20	R4963848
Metals on High Volume Filter by ICPMS								
Arsenic (As)		<3.0		3.0	ug	10-JAN-20	13-JAN-20	R4971927
Cadmium (Cd)		<2.0		2.0	ug	10-JAN-20	13-JAN-20	R4971927
Cobalt (Co)		<2.0		2.0	ug	10-JAN-20	13-JAN-20	R4971927
Chromium (Cr)		<5.0		5.0	ug	10-JAN-20	13-JAN-20	R4971927
Copper (Cu)		43.2		4.0	ug	10-JAN-20	13-JAN-20	R4971927
Iron (Fe)		50		20	ug	10-JAN-20	13-JAN-20	R4971927
Manganese (Mn)		1.1		1.0	ug	10-JAN-20	13-JAN-20	R4971927
Nickel (Ni)		<3.0		3.0	ug	10-JAN-20	13-JAN-20	R4971927
Lead (Pb)		<3.0		3.0	ug	10-JAN-20	13-JAN-20	R4971927
Selenium (Se)		<10		10	ug	10-JAN-20	13-JAN-20	R4971927
Vanadium (V)		<5.0		5.0	ug	10-JAN-20	13-JAN-20	R4971927
Zinc (Zn)		<5.0		5.0	ug	10-JAN-20	13-JAN-20	R4971927

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2400811-10	SOUTH-TSP-274							
Sampled By:	Client on 29-NOV-19							
Matrix:	Hi Vol Filter							
Miscellaneous Parameters								
Total particulate		10000		2300	ug		08-JAN-20	R4963848
Metals on High Volume Filter by ICPMS								
Arsenic (As)		<3.0		3.0	ug	10-JAN-20	13-JAN-20	R4971927
Cadmium (Cd)		<2.0		2.0	ug	10-JAN-20	13-JAN-20	R4971927
Cobalt (Co)		<2.0		2.0	ug	10-JAN-20	13-JAN-20	R4971927
Chromium (Cr)		<5.0		5.0	ug	10-JAN-20	13-JAN-20	R4971927
Copper (Cu)		53.1		4.0	ug	10-JAN-20	13-JAN-20	R4971927
Iron (Fe)		603		20	ug	10-JAN-20	13-JAN-20	R4971927
Manganese (Mn)		14.1		1.0	ug	10-JAN-20	13-JAN-20	R4971927
Nickel (Ni)		<3.0		3.0	ug	10-JAN-20	13-JAN-20	R4971927
Lead (Pb)		<3.0		3.0	ug	10-JAN-20	13-JAN-20	R4971927
Selenium (Se)		<10		10	ug	10-JAN-20	13-JAN-20	R4971927
Vanadium (V)		<5.0		5.0	ug	10-JAN-20	13-JAN-20	R4971927
Zinc (Zn)		17.6		5.0	ug	10-JAN-20	13-JAN-20	R4971927
L2400811-11	TSP-BLANK							
Sampled By:	Client on 02-DEC-19							
Matrix:	Hi Vol Filter							
Miscellaneous Parameters								
Total particulate		<2300		2300	ug		08-JAN-20	R4963848
Metals on High Volume Filter by ICPMS								
Arsenic (As)		<3.0		3.0	ug	10-JAN-20	13-JAN-20	R4971927
Cadmium (Cd)		<2.0		2.0	ug	10-JAN-20	13-JAN-20	R4971927
Cobalt (Co)		<2.0		2.0	ug	10-JAN-20	13-JAN-20	R4971927
Chromium (Cr)		<5.0		5.0	ug	10-JAN-20	13-JAN-20	R4971927
Copper (Cu)		<4.0		4.0	ug	10-JAN-20	13-JAN-20	R4971927
Iron (Fe)		37		20	ug	10-JAN-20	13-JAN-20	R4971927
Manganese (Mn)		<1.0		1.0	ug	10-JAN-20	13-JAN-20	R4971927
Nickel (Ni)		<3.0		3.0	ug	10-JAN-20	13-JAN-20	R4971927
Lead (Pb)		<3.0		3.0	ug	10-JAN-20	13-JAN-20	R4971927
Selenium (Se)		<10		10	ug	10-JAN-20	13-JAN-20	R4971927
Vanadium (V)		<5.0		5.0	ug	10-JAN-20	13-JAN-20	R4971927
Zinc (Zn)		<5.0		5.0	ug	10-JAN-20	13-JAN-20	R4971927
L2400811-12	NORTH-PM2.5-270							
Sampled By:	Client on 05-NOV-19							
Matrix:	47mm Filter							
Miscellaneous Parameters								
Total particulate		<15		15	ug		08-JAN-20	R4963848
Note: Samples L2400811-12, and -22 show signs of damage, sustained during the sampling event. This is evidenced by holes in each filter, and an overall loss of mass. Data for these samples are biased low. PE 9-Jan-20								
L2400811-13	SOUTH-PM2.5-270							
Sampled By:	Client on 05-NOV-19							
Matrix:	47mm Filter							
Miscellaneous Parameters								
Total particulate		67		15	ug		08-JAN-20	R4963848
L2400811-14	NORTH-PM2.5-271							
Sampled By:	Client on 11-NOV-19							
Matrix:	47mm Filter							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2400811-14	NORTH-PM2.5-271 Sampled By: Client on 11-NOV-19 Matrix: 47mm Filter Miscellaneous Parameters Total particulate	<15		15	ug		08-JAN-20	R4963848
L2400811-15	SOUTH-PM2.5-271 Sampled By: Client on 11-NOV-19 Matrix: 47mm Filter Miscellaneous Parameters Total particulate	<15		15	ug		08-JAN-20	R4963848
L2400811-16	NORTH-PM2.5-272 Sampled By: Client on 17-NOV-19 Matrix: 47mm Filter Miscellaneous Parameters Total particulate	64		15	ug		08-JAN-20	R4963848
L2400811-17	SOUTH-PM2.5-272 Sampled By: Client on 17-NOV-19 Matrix: 47mm Filter Miscellaneous Parameters Total particulate	54		15	ug		08-JAN-20	R4963848
L2400811-18	NORTH-PM2.5-273 Sampled By: Client on 23-NOV-19 Matrix: 47mm Filter Miscellaneous Parameters Total particulate	83		15	ug		08-JAN-20	R4963848
L2400811-19	SOUTH-PM2.5-273 Sampled By: Client on 23-NOV-19 Matrix: 47mm Filter Miscellaneous Parameters Total particulate	109		15	ug		08-JAN-20	R4963848
L2400811-20	NORTH-PM2.5-274 Sampled By: Client on 29-NOV-19 Matrix: 47mm Filter Miscellaneous Parameters Total particulate	<15		15	ug		08-JAN-20	R4963848
L2400811-21	SOUTH-PM2.5-274 Sampled By: Client on 29-NOV-19 Matrix: 47mm Filter Miscellaneous Parameters Total particulate	<15		15	ug		08-JAN-20	R4963848
L2400811-22	PM2.5-BLANK Sampled By: Client on 02-DEC-19 Matrix: 47mm Filter Miscellaneous Parameters Total particulate	<15		15	ug		08-JAN-20	R4963848
L2400811-23	NORTH-DUSTFALL Sampled By: Client on 02-DEC-19 Matrix: Dustfall Dustfalls-Total, Soluble, Insoluble +FV Total Dustfall	0.19		0.11	mg/dm ² .day		16-JAN-20	R4973141

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2400811-23 NORTH-DUSTFALL Sampled By: Client on 02-DEC-19 Matrix: Dustfall Dustfalls-Total, Soluble, Insoluble +FV Total Insoluble Dustfall 0.19 0.11 mg/dm2.day 16-JAN-20 R4973141 Total Soluble Dustfall <0.11 0.11 mg/dm2.day 16-JAN-20 R4973141 Fixed Dustfall 0.19 0.11 mg/dm2.day 16-JAN-20 R4973141 Fixed Insoluble Dustfall 0.19 0.11 mg/dm2.day 16-JAN-20 R4973141 Fixed Soluble Dustfall <0.11 0.11 mg/dm2.day 16-JAN-20 R4973141 Volatile Dustfall <0.11 0.11 mg/dm2.day 16-JAN-20 R4973141 Volatile Insoluble Dustfall <0.11 0.11 mg/dm2.day 16-JAN-20 R4973141 Volatile Soluble Dustfall <0.11 0.11 mg/dm2.day 16-JAN-20 R4973141 Total Metals in Dustfalls by ICPMS Aluminum (Al)-Total 0.00418 0.000086 mg/dm2.day 03-JAN-20 04-JAN-20 R4959256 Interval 1 days DLM 0.0000029 mg/dm2.day 03-JAN-20 04-JAN-20 R4958977 Antimony (Sb)-Total <0.0000029 0.0000029 mg/dm2.day 03-JAN-20 04-JAN-20 R4959256 Arsenic (As)-Total <0.00011 0.00011 mg/dm2.day 03-JAN-20 04-JAN-20 R4959256 Barium (Ba)-Total 0.0000289 0.0000014 mg/dm2.day 03-JAN-20 04-JAN-20 R4959256 Beryllium (Be)-Total <0.000014 0.000014 mg/dm2.day 03-JAN-20 04-JAN-20 R4959256 Bismuth (Bi)-Total <0.000014 0.000014 mg/dm2.day 03-JAN-20 04-JAN-20 R4959256 Boron (B)-Total <0.00029 0.00029 mg/dm2.day 03-JAN-20 04-JAN-20 R4959256 Cadmium (Cd)-Total <0.0000014 0.0000014 mg/dm2.day 03-JAN-20 04-JAN-20 R4959256 Calcium (Ca)-Total 0.00826 0.00057 mg/dm2.day 03-JAN-20 04-JAN-20 R4959256 Chromium (Cr)-Total <0.000014 0.000014 mg/dm2.day 03-JAN-20 04-JAN-20 R4959256 Cobalt (Co)-Total <0.0000029 0.0000029 mg/dm2.day 03-JAN-20 04-JAN-20 R4959256 Copper (Cu)-Total <0.000017 0.000017 mg/dm2.day 03-JAN-20 04-JAN-20 R4959256 Lead (Pb)-Total 0.0000069 0.0000014 mg/dm2.day 03-JAN-20 04-JAN-20 R4959256 Iron (Fe)-Total 0.00347 0.00086 mg/dm2.day 03-JAN-20 04-JAN-20 R4959256 Lithium (Li)-Total <0.00014 0.00014 mg/dm2.day 03-JAN-20 04-JAN-20 R4959256 Magnesium (Mg)-Total 0.00271 0.00014 mg/dm2.day 03-JAN-20 04-JAN-20 R4959256 Manganese (Mn)-Total 0.000172 0.0000029 mg/dm2.day 03-JAN-20 04-JAN-20 R4959256 Molybdenum (Mo)-Total <0.0000014 0.0000014 mg/dm2.day 03-JAN-20 04-JAN-20 R4959256 Nickel (Ni)-Total 0.000017 0.000014 mg/dm2.day 03-JAN-20 04-JAN-20 R4959256 Phosphorus (P)-Total <0.0014 0.0014 mg/dm2.day 03-JAN-20 04-JAN-20 R4959256 Potassium (K)-Total <0.0014 0.0014 mg/dm2.day 03-JAN-20 04-JAN-20 R4959256 Selenium (Se)-Total <0.000029 0.000029 mg/dm2.day 03-JAN-20 04-JAN-20 R4959256 Silicon (Si)-Total 0.0065 0.0014 mg/dm2.day 03-JAN-20 04-JAN-20 R4959256 Silver (Ag)-Total <0.00000029 0.00000029 mg/dm2.day 03-JAN-20 04-JAN-20 R4959256 Sodium (Na)-Total <0.0014 0.0014 mg/dm2.day 03-JAN-20 04-JAN-20 R4959256 Strontium (Sr)-Total 0.0000237 0.0000029 mg/dm2.day 03-JAN-20 04-JAN-20 R4959256 Thallium (Tl)-Total <0.0000029 0.0000029 mg/dm2.day 03-JAN-20 04-JAN-20 R4959256 Tin (Sn)-Total <0.0000029 0.0000029 mg/dm2.day 03-JAN-20 04-JAN-20 R4959256 Titanium (Ti)-Total <0.00029 0.00029 mg/dm2.day 03-JAN-20 04-JAN-20 R4959256 Uranium (U)-Total <0.00000029 0.00000029 mg/dm2.day 03-JAN-20 04-JAN-20 R4959256 Vanadium (V)-Total <0.000029 0.000029 mg/dm2.day 03-JAN-20 04-JAN-20 R4959256 Zinc (Zn)-Total 0.000123 0.000086 mg/dm2.day 03-JAN-20 04-JAN-20 R4959256							
L2400811-24 SOUTH-DUSTFALL Sampled By: Client on 02-DEC-19 Matrix: Dustfall Dustfalls-Total, Soluble, Insoluble +FV Total Dustfall 0.42 0.11 mg/dm2.day 16-JAN-20 R4973141 Total Insoluble Dustfall 0.38 0.11 mg/dm2.day 16-JAN-20 R4973141 Total Soluble Dustfall <0.11 0.11 mg/dm2.day 16-JAN-20 R4973141							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2400811-24 SOUTH-DUSTFALL							
Sampled By:	Client on 02-DEC-19						
Matrix:	Dustfall						
Dustfalls-Total, Soluble, Insoluble +FV							
Fixed Dustfall	0.38		0.11	mg/dm ² .day		16-JAN-20	R4973141
Fixed Insoluble Dustfall	0.38		0.11	mg/dm ² .day		16-JAN-20	R4973141
Fixed Soluble Dustfall	<0.11		0.11	mg/dm ² .day		16-JAN-20	R4973141
Volatile Dustfall	<0.11		0.11	mg/dm ² .day		16-JAN-20	R4973141
Volatile Insoluble Dustfall	<0.11		0.11	mg/dm ² .day		16-JAN-20	R4973141
Volatile Soluble Dustfall	<0.11		0.11	mg/dm ² .day		16-JAN-20	R4973141
Total Metals in Dustfalls by ICPMS							
Aluminum (Al)-Total	0.00852		0.000072	mg/dm ² .day	03-JAN-20	04-JAN-20	R4959256
Interval			1	days		03-JAN-20	R4958977
Antimony (Sb)-Total	<0.0000024		0.0000024	mg/dm ² .day	03-JAN-20	04-JAN-20	R4959256
Arsenic (As)-Total	<0.000095	DLM	0.000095	mg/dm ² .day	03-JAN-20	04-JAN-20	R4959256
Barium (Ba)-Total	0.0000471		0.0000012	mg/dm ² .day	03-JAN-20	04-JAN-20	R4959256
Beryllium (Be)-Total	<0.000012		0.000012	mg/dm ² .day	03-JAN-20	04-JAN-20	R4959256
Bismuth (Bi)-Total	<0.000012		0.000012	mg/dm ² .day	03-JAN-20	04-JAN-20	R4959256
Boron (B)-Total	<0.00024		0.00024	mg/dm ² .day	03-JAN-20	04-JAN-20	R4959256
Cadmium (Cd)-Total	<0.0000012		0.0000012	mg/dm ² .day	03-JAN-20	04-JAN-20	R4959256
Calcium (Ca)-Total	0.0126		0.00048	mg/dm ² .day	03-JAN-20	04-JAN-20	R4959256
Chromium (Cr)-Total	<0.000012		0.000012	mg/dm ² .day	03-JAN-20	04-JAN-20	R4959256
Cobalt (Co)-Total	<0.0000024		0.0000024	mg/dm ² .day	03-JAN-20	04-JAN-20	R4959256
Copper (Cu)-Total	<0.000019	DLB	0.000019	mg/dm ² .day	03-JAN-20	04-JAN-20	R4959256
Lead (Pb)-Total	0.0000087		0.0000012	mg/dm ² .day	03-JAN-20	04-JAN-20	R4959256
Iron (Fe)-Total	0.00687		0.00072	mg/dm ² .day	03-JAN-20	04-JAN-20	R4959256
Lithium (Li)-Total	<0.00012		0.00012	mg/dm ² .day	03-JAN-20	04-JAN-20	R4959256
Magnesium (Mg)-Total	0.00465		0.00012	mg/dm ² .day	03-JAN-20	04-JAN-20	R4959256
Manganese (Mn)-Total	0.000228		0.0000024	mg/dm ² .day	03-JAN-20	04-JAN-20	R4959256
Molybdenum (Mo)-Total	<0.0000012		0.0000012	mg/dm ² .day	03-JAN-20	04-JAN-20	R4959256
Nickel (Ni)-Total	<0.000012		0.000012	mg/dm ² .day	03-JAN-20	04-JAN-20	R4959256
Phosphorus (P)-Total	<0.0012		0.0012	mg/dm ² .day	03-JAN-20	04-JAN-20	R4959256
Potassium (K)-Total	0.0020		0.0012	mg/dm ² .day	03-JAN-20	04-JAN-20	R4959256
Selenium (Se)-Total	<0.000024		0.000024	mg/dm ² .day	03-JAN-20	04-JAN-20	R4959256
Silicon (Si)-Total	0.0128		0.0012	mg/dm ² .day	03-JAN-20	04-JAN-20	R4959256
Silver (Ag)-Total	<0.00000024		0.00000024	mg/dm ² .day	03-JAN-20	04-JAN-20	R4959256
Sodium (Na)-Total	0.0017		0.0012	mg/dm ² .day	03-JAN-20	04-JAN-20	R4959256
Strontium (Sr)-Total	0.0000437		0.0000024	mg/dm ² .day	03-JAN-20	04-JAN-20	R4959256
Thallium (Tl)-Total	<0.0000024		0.0000024	mg/dm ² .day	03-JAN-20	04-JAN-20	R4959256
Tin (Sn)-Total	<0.0000024		0.0000024	mg/dm ² .day	03-JAN-20	04-JAN-20	R4959256
Titanium (Ti)-Total	<0.00024		0.00024	mg/dm ² .day	03-JAN-20	04-JAN-20	R4959256
Uranium (U)-Total	<0.00000024		0.00000024	mg/dm ² .day	03-JAN-20	04-JAN-20	R4959256
Vanadium (V)-Total	<0.000024		0.000024	mg/dm ² .day	03-JAN-20	04-JAN-20	R4959256
Zinc (Zn)-Total	0.000100		0.000072	mg/dm ² .day	03-JAN-20	04-JAN-20	R4959256

Reference Information

Sample Parameter Qualifier Key:

Qualifier	Description
A	Method Blank exceeds ALS DQO. Refer to narrative comments for further information.
B	Method Blank exceeds ALS DQO. Associated sample results which are < Limit of Reporting or > 5 times blank level are considered reliable.
DLB	Detection Limit Raised. Analyte detected at comparable level in Method Blank.
DLM	Detection Limit Adjusted due to sample matrix effects (e.g. chemical interference, colour, turbidity).
MB-LOR	Method Blank exceeds ALS DQO. Limits of Reporting have been adjusted for samples with positive hits below 5x blank level.
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
AIR VOLUME-HIVOL-BU	Filter	Air volume (m3)	USEPA IO3.1
AIR VOLUME-M212 F-BU	Filter	Air volume (m3)	EPA QA Guidance Document 2.12
DUSTFALLS-ALL-DM2-VA	Dustfall	Dustfalls-Total, Soluble, Insoluble +FV	BC LAB MANUAL - PARTICULATE
This analysis is carried out using procedures modified from British Columbia Environmental Manual "Particulate." Particulates or "Dustfalls" are determined gravimetrically. Total Insoluble and Soluble Dustfalls are determined by filtering a sample through a 0.45 um membrane filter and drying the filter and filtrate at 104 C, followed by ignition at 550 C. The remaining residue after 550 C represents the fixed portion and the weight lost on ignition represents the volatile portion. The sum of all fixed and volatile portions on both Insoluble and Soluble portions represents Total Dustfalls.			
MET-DUST(DM2)-MS-VA	Dustfall	Total Metals in Dustfalls by ICPMS	EPA 6020A
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). Instrumental analysis is by inductively coupled plasma - mass spectrometry (EPA Method 6020A).			
MET-IO3.5-MS-BU	Filter	Metals on High Volume Filter by ICPMS	IO3.5
After weighing (if required), hivol filters are sub-sampled and leached with nitric acid to extract available metal analytes. After dilution, the extracts are submitted to the ICPMS instrument for analysis.			
PART-HIVOL-GRAV-BU	Filter	Particulate on High Volume Filter	USEPA IO3.1
PART-M212 F-GRAV-BU	Filter	PM via Gravimetric Analysis	EPA QA Guidance Document 2.12
The particulate matter collected onto tare-weighted 47mm Teflon Disc filter media is desiccated then brought to a constant weight on an analytical balance. Results are presented in ug (per filter). An air volume can be included to allow for reporting in ug/m3.			

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
BU	ALS ENVIRONMENTAL - BURLINGTON, ONTARIO, CANADA
VA	ALS ENVIRONMENTAL - VANCOUVER, BRITISH COLUMBIA, CANADA

Chain of Custody Numbers:

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
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GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.

mg/kg - milligrams per kilogram based on dry weight of sample

mg/kg wwt - milligrams per kilogram based on wet weight of sample

mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight

mg/L - unit of concentration based on volume, parts per million.

< - Less than.

D.L. - The reporting limit.

N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.

Quality Control Report

Workorder: L2400811

Report Date: 21-JAN-20

Page 1 of 7

Client: New Gold Inc. Rainy River Project
 5967 Highway 11/71 P.O. Box 5
 Emo ON P0W 1E0

Contact: Amanda Jacobs / Carolyn Winik

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-IO3.5-MS-BU	Filter							
Batch	R4971927							
WG3256997-3 DUP		L2400811-1						
Arsenic (As)		<3.0	<3.0	RPD-NA	ug	N/A	20	13-JAN-20
Cadmium (Cd)		<2.0	<2.0	RPD-NA	ug	N/A	20	13-JAN-20
Cobalt (Co)		<2.0	<2.0	RPD-NA	ug	N/A	20	13-JAN-20
Chromium (Cr)		5.6	5.2		ug	8.3	20	13-JAN-20
Copper (Cu)		275	226		ug	19	20	13-JAN-20
Iron (Fe)		1920	1750		ug	9.6	25	13-JAN-20
Manganese (Mn)		61.7	59.0		ug	4.5	20	13-JAN-20
Nickel (Ni)		<3.0	<3.0	RPD-NA	ug	N/A	20	13-JAN-20
Lead (Pb)		3.8	3.7		ug	3.9	20	13-JAN-20
Selenium (Se)		<10	<10	RPD-NA	ug	N/A	20	13-JAN-20
Vanadium (V)		<5.0	<5.0	RPD-NA	ug	N/A	20	13-JAN-20
Zinc (Zn)		58.5	56.7		ug	3.1	20	13-JAN-20
WG3256997-2 LCS								
Arsenic (As)		94.5		%		80-120	13-JAN-20	
Cadmium (Cd)		97.8		%		80-120	13-JAN-20	
Cobalt (Co)		100.0		%		80-120	13-JAN-20	
Chromium (Cr)		95.5		%		80-120	13-JAN-20	
Copper (Cu)		104.0		%		80-120	13-JAN-20	
Iron (Fe)		96.8		%		80-120	13-JAN-20	
Manganese (Mn)		96.8		%		80-120	13-JAN-20	
Nickel (Ni)		95.4		%		80-120	13-JAN-20	
Lead (Pb)		98.2		%		80-120	13-JAN-20	
Selenium (Se)		99.2		%		80-120	13-JAN-20	
Vanadium (V)		95.7		%		80-120	13-JAN-20	
Zinc (Zn)		98.0		%		80-120	13-JAN-20	
WG3256997-1 MB								
Arsenic (As)		<3.0		ug		3	13-JAN-20	
Cadmium (Cd)		<2.0		ug		2	13-JAN-20	
Cobalt (Co)		<2.0		ug		2	13-JAN-20	
Chromium (Cr)		<5.0		ug		5	13-JAN-20	
Copper (Cu)		4.5	A	ug		4	13-JAN-20	
Iron (Fe)		<20		ug		20	13-JAN-20	
Manganese (Mn)		<1.0		ug		1	13-JAN-20	
Nickel (Ni)		<3.0		ug		3	13-JAN-20	
Lead (Pb)		<3.0		ug		3	13-JAN-20	

Quality Control Report

Workorder: L2400811

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-IO3.5-MS-BU	Filter							
Batch	R4971927							
WG3256997-1 MB								
Selenium (Se)			<10		ug		10	13-JAN-20
Vanadium (V)			<5.0		ug		10	13-JAN-20
Zinc (Zn)			<5.0		ug		5	13-JAN-20
COMMENTS: Cu observed in the method blank, above the LOR. Cu data may be biased high as a result of this background contribution. PE 17-Jan-2020								
WG3256997-4 MS		L2400811-1						
Arsenic (As)			80.4		%		75-125	13-JAN-20
Cadmium (Cd)			85.5		%		75-125	13-JAN-20
Cobalt (Co)			79.6		%		75-125	13-JAN-20
Chromium (Cr)			79.3		%		75-125	13-JAN-20
Copper (Cu)			N/A	MS-B	%		-	13-JAN-20
Iron (Fe)			N/A	MS-B	%		-	13-JAN-20
Manganese (Mn)			N/A	MS-B	%		-	13-JAN-20
Nickel (Ni)			79.6		%		75-125	13-JAN-20
Lead (Pb)			83.7		%		75-125	13-JAN-20
Selenium (Se)			85.4		%		75-125	13-JAN-20
Vanadium (V)			80.4		%		75-125	13-JAN-20
Zinc (Zn)			77.0		%		75-125	13-JAN-20
PART-HIVOL-GRAV-BU	Filter							
Batch	R4963848							
WG3254413-2 DUP		L2400811-1						
Total particulate		95700	95900		ug	0.2	25	08-JAN-20
WG3254413-1 MB								
Total particulate			<100		ug		100	08-JAN-20
PART-M212 F-GRAV-BU	Filter							
Batch	R4963848							
WG3254413-4 DUP		L2400811-12						
Total particulate		<15	<15	RPD-NA	ug	N/A	10	08-JAN-20
WG3254413-3 MB								
Total particulate			<15		ug		15	08-JAN-20
DUSTFALLS-ALL-DM2-VA	Dustfall							
Batch	R4973141							
WG3258958-1 MB								
Total Dustfall			<0.10		mg/dm ² .day		0.1	16-JAN-20
Total Insoluble Dustfall			<0.10		mg/dm ² .day		0.1	16-JAN-20
Total Soluble Dustfall			<0.10		mg/dm ² .day		0.1	16-JAN-20

Quality Control Report

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
DUSTFALLS-ALL-DM2-VA Dustfall								
Batch	R4973141							
WG3258958-1 MB								
Fixed Dustfall			<0.10		mg/dm ² .day		0.1	16-JAN-20
Fixed Insoluble Dustfall			<0.10		mg/dm ² .day		0.1	16-JAN-20
Fixed Soluble Dustfall			<0.10		mg/dm ² .day		0.1	16-JAN-20
Volatile Dustfall			<0.10		mg/dm ² .day		0.1	16-JAN-20
Volatile Insoluble Dustfall			<0.10		mg/dm ² .day		0.1	16-JAN-20
Volatile Soluble Dustfall			<0.10		mg/dm ² .day		0.1	16-JAN-20
MET-DUST(DM2)-MS-VA Dustfall								
Batch	R4959256							
WG3252071-3 DUP		L2400811-23						
Aluminum (Al)-Total	0.00418	0.00431			mg/dm ² .day	3.1	20	04-JAN-20
Antimony (Sb)-Total	<0.0000029	<0.0000029	RPD-NA		mg/dm ² .day	N/A	20	04-JAN-20
Arsenic (As)-Total	<0.00011	<0.00011	RPD-NA		mg/dm ² .day	N/A	20	04-JAN-20
Barium (Ba)-Total	0.0000289	0.0000310			mg/dm ² .day	7.1	20	04-JAN-20
Beryllium (Be)-Total	<0.000014	<0.000014	RPD-NA		mg/dm ² .day	N/A	20	04-JAN-20
Bismuth (Bi)-Total	<0.000014	<0.000014	RPD-NA		mg/dm ² .day	N/A	20	04-JAN-20
Boron (B)-Total	<0.00029	<0.00029	RPD-NA		mg/dm ² .day	N/A	20	04-JAN-20
Cadmium (Cd)-Total	<0.0000014	<0.0000014	RPD-NA		mg/dm ² .day	N/A	20	04-JAN-20
Calcium (Ca)-Total	0.00826	0.00835			mg/dm ² .day	1.1	20	04-JAN-20
Chromium (Cr)-Total	<0.000014	<0.000014	RPD-NA		mg/dm ² .day	N/A	20	04-JAN-20
Cobalt (Co)-Total	<0.0000029	<0.0000029	RPD-NA		mg/dm ² .day	N/A	20	04-JAN-20
Copper (Cu)-Total	<0.000017	0.000017	RPD-NA		mg/dm ² .day	N/A	20	04-JAN-20
Lead (Pb)-Total	0.0000069	0.0000062			mg/dm ² .day	10	20	04-JAN-20
Iron (Fe)-Total	0.00347	0.00346			mg/dm ² .day	0.2	20	04-JAN-20
Lithium (Li)-Total	<0.00014	<0.00014	RPD-NA		mg/dm ² .day	N/A	20	04-JAN-20
Magnesium (Mg)-Total	0.00271	0.00261			mg/dm ² .day	3.6	20	04-JAN-20
Manganese (Mn)-Total	0.000172	0.000172			mg/dm ² .day	0.0	20	04-JAN-20
Molybdenum (Mo)-Total	<0.0000014	<0.0000014	RPD-NA		mg/dm ² .day	N/A	20	04-JAN-20
Nickel (Ni)-Total	0.000017	<0.000014	RPD-NA		mg/dm ² .day	N/A	20	04-JAN-20
Phosphorus (P)-Total	<0.0014	<0.0014	RPD-NA		mg/dm ² .day	N/A	20	04-JAN-20
Potassium (K)-Total	<0.0014	<0.0014	RPD-NA		mg/dm ² .day	N/A	20	04-JAN-20
Selenium (Se)-Total	<0.000029	<0.000029	RPD-NA		mg/dm ² .day	N/A	20	04-JAN-20
Silicon (Si)-Total	0.0065	0.0061			mg/dm ² .day	5.6	20	04-JAN-20
Silver (Ag)-Total	<0.00000029	<0.0000002	RPD-NA		mg/dm ² .day	N/A	20	04-JAN-20
Sodium (Na)-Total	<0.0014	<0.0014	RPD-NA		mg/dm ² .day	N/A	20	04-JAN-20

Quality Control Report

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-DUST(DM2)-MS-VA	Dustfall							
Batch	R4959256							
WG3252071-3 DUP		L2400811-23						
Strontium (Sr)-Total		0.0000237	0.0000227		mg/dm ² .day	4.3	20	04-JAN-20
Thallium (Tl)-Total		<0.0000029	<0.0000029	RPD-NA	mg/dm ² .day	N/A	20	04-JAN-20
Tin (Sn)-Total		<0.0000029	<0.0000029	RPD-NA	mg/dm ² .day	N/A	20	04-JAN-20
Titanium (Ti)-Total		<0.00029	<0.00029	RPD-NA	mg/dm ² .day	N/A	20	04-JAN-20
Uranium (U)-Total		<0.00000029	<0.0000002	RPD-NA	mg/dm ² .day	N/A	20	04-JAN-20
Vanadium (V)-Total		<0.000029	<0.000029	RPD-NA	mg/dm ² .day	N/A	20	04-JAN-20
Zinc (Zn)-Total		0.000123	0.000103		mg/dm ² .day	18	20	04-JAN-20
WG3252071-1 MB								
Aluminum (Al)-Total		0.000138	B		mg/dm ² .day	0.000079	04-JAN-20	
Antimony (Sb)-Total		<0.0000026			mg/dm ² .day	0.0000026	04-JAN-20	
Arsenic (As)-Total		<0.00010			mg/dm ² .day	0.0001	04-JAN-20	
Barium (Ba)-Total		0.0000021	B		mg/dm ² .day	0.0000013	04-JAN-20	
Beryllium (Be)-Total		<0.000013			mg/dm ² .day	0.000013	04-JAN-20	
Bismuth (Bi)-Total		<0.000013			mg/dm ² .day	0.000013	04-JAN-20	
Boron (B)-Total		<0.00026			mg/dm ² .day	0.00026	04-JAN-20	
Cadmium (Cd)-Total		<0.0000013			mg/dm ² .day	0.0000013	04-JAN-20	
Calcium (Ca)-Total		<0.00052			mg/dm ² .day	0.00052	04-JAN-20	
Chromium (Cr)-Total		<0.000013			mg/dm ² .day	0.000013	04-JAN-20	
Cobalt (Co)-Total		<0.0000026			mg/dm ² .day	0.0000026	04-JAN-20	
Copper (Cu)-Total		0.000049	MB-LOR		mg/dm ² .day	0.000013	04-JAN-20	
Lead (Pb)-Total		<0.0000013			mg/dm ² .day	0.0000013	04-JAN-20	
Iron (Fe)-Total		<0.00079			mg/dm ² .day	0.00079	04-JAN-20	
Lithium (Li)-Total		<0.00013			mg/dm ² .day	0.00013	04-JAN-20	
Magnesium (Mg)-Total		<0.00013			mg/dm ² .day	0.00013	04-JAN-20	
Manganese (Mn)-Total		0.0000041	B		mg/dm ² .day	0.0000026	04-JAN-20	
Molybdenum (Mo)-Total		<0.0000013			mg/dm ² .day	0.0000013	04-JAN-20	
Nickel (Ni)-Total		<0.000013			mg/dm ² .day	0.000013	04-JAN-20	
Phosphorus (P)-Total		<0.0013			mg/dm ² .day	0.0013	04-JAN-20	
Potassium (K)-Total		<0.0013			mg/dm ² .day	0.0013	04-JAN-20	
Selenium (Se)-Total		<0.000026			mg/dm ² .day	0.000026	04-JAN-20	
Silicon (Si)-Total		<0.0013			mg/dm ² .day	0.0013	04-JAN-20	
Silver (Ag)-Total		<0.0000002			mg/dm ² .day	0.00000026	04-JAN-20	
Sodium (Na)-Total		<0.0013			mg/dm ² .day	0.0013	04-JAN-20	
Strontium (Sr)-Total		<0.0000026			mg/dm ² .day	0.0000026	04-JAN-20	

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-DUST(DM2)-MS-VA Dustfall								
Batch R4959256								
WG3252071-1 MB								
Thallium (Tl)-Total			<0.0000026		mg/dm ² .day		0.0000026	04-JAN-20
Tin (Sn)-Total			<0.0000026		mg/dm ² .day		0.0000026	04-JAN-20
Titanium (Ti)-Total			<0.00026		mg/dm ² .day		0.00026	04-JAN-20
Uranium (U)-Total			<0.0000002		mg/dm ² .day		0.00000026	04-JAN-20
Vanadium (V)-Total			<0.000026		mg/dm ² .day		0.000026	04-JAN-20
Zinc (Zn)-Total			<0.000079		mg/dm ² .day		0.000079	04-JAN-20
Batch R4966499								
WG3252071-2 LCS								
Aluminum (Al)-Total			103.0		%		80-120	10-JAN-20
Antimony (Sb)-Total			105.4		%		80-120	10-JAN-20
Arsenic (As)-Total			98.2		%		80-120	10-JAN-20
Barium (Ba)-Total			96.0		%		80-120	10-JAN-20
Beryllium (Be)-Total			99.9		%		80-120	10-JAN-20
Bismuth (Bi)-Total			110.5		%		80-120	10-JAN-20
Boron (B)-Total			106.7		%		80-120	10-JAN-20
Cadmium (Cd)-Total			97.7		%		80-120	10-JAN-20
Calcium (Ca)-Total			102.8		%		80-120	10-JAN-20
Chromium (Cr)-Total			102.8		%		80-120	10-JAN-20
Cobalt (Co)-Total			99.5		%		80-120	10-JAN-20
Copper (Cu)-Total			98.9		%		80-120	10-JAN-20
Lead (Pb)-Total			109.0		%		80-120	10-JAN-20
Iron (Fe)-Total			88.9		%		80-120	10-JAN-20
Lithium (Li)-Total			95.2		%		80-120	10-JAN-20
Magnesium (Mg)-Total			102.6		%		80-120	10-JAN-20
Manganese (Mn)-Total			102.4		%		80-120	10-JAN-20
Molybdenum (Mo)-Total			108.3		%		80-120	10-JAN-20
Nickel (Ni)-Total			99.8		%		80-120	10-JAN-20
Phosphorus (P)-Total			101.5		%		80-120	10-JAN-20
Potassium (K)-Total			98.2		%		80-120	10-JAN-20
Selenium (Se)-Total			99.3		%		80-120	10-JAN-20
Silicon (Si)-Total			99.1		%		80-120	10-JAN-20
Silver (Ag)-Total			103.0		%		80-120	10-JAN-20
Sodium (Na)-Total			106.0		%		80-120	10-JAN-20
Strontium (Sr)-Total			109.2		%		80-120	10-JAN-20

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Report Date: 21-JAN-20

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-DUST(DM2)-MS-VA Dustfall								
Batch R4966499								
WG3252071-2 LCS								
Thallium (Tl)-Total			109.7		%		80-120	10-JAN-20
Tin (Sn)-Total			99.4		%		80-120	10-JAN-20
Titanium (Ti)-Total			96.5		%		80-120	10-JAN-20
Uranium (U)-Total			110.6		%		80-120	10-JAN-20
Vanadium (V)-Total			102.2		%		80-120	10-JAN-20
Zinc (Zn)-Total			95.1		%		80-120	10-JAN-20

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Legend:

Limit	ALS Control Limit (Data Quality Objectives)
DUP	Duplicate
RPD	Relative Percent Difference
N/A	Not Available
LCS	Laboratory Control Sample
SRM	Standard Reference Material
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ADE	Average Desorption Efficiency
MB	Method Blank
IRM	Internal Reference Material
CRM	Certified Reference Material
CCV	Continuing Calibration Verification
CVS	Calibration Verification Standard
LCSD	Laboratory Control Sample Duplicate

Sample Parameter Qualifier Definitions:

Qualifier	Description
A	Method Blank exceeds ALS DQO. Refer to narrative comments for further information.
B	Method Blank exceeds ALS DQO. Associated sample results which are < Limit of Reporting or > 5 times blank level are considered reliable.
MB-LOR	Method Blank exceeds ALS DQO. Limits of Reporting have been adjusted for samples with positive hits below 5x blank level.
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Hold Time Exceedances:

All test results reported with this submission were conducted within ALS recommended hold times.

ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where available). For more information, please contact ALS.

The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide confidence in the accuracy of associated test results.

Please note that this report may contain QC results from anonymous Sample Duplicates and Matrix Spikes that do not originate from this Work Order.

Report To L2400811		Report Format / Distribution			Select Service Level Below (Rush Turnaround Time (TAT) is not available for all tests)		
Company:	New Gold Inc. Rainy River Project	Report Format	<input checked="" type="checkbox"/> PDF	<input type="checkbox"/> Excel	<input checked="" type="checkbox"/> EDD (Digital)	R <input type="checkbox"/> Regular (Standard TAT if received by 3pm - business day)	
Contact:	Amanda Jacobs / Carolyn Wink	Quality Control (QC) Report with Report	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	P <input type="checkbox"/> Priority (1-2 bus. days if received by 3pm; 50% surcharge - contact ALS to confirm TAT)		
Address:	24 Main Rd.	<input type="checkbox"/> Criteria on Report - provide details below if box checked			E <input type="checkbox"/> Emergency (1-2 bus. days if received by 3pm) 100% surcharge - contact ALS to confirm TAT		
City/Province:	Banfford, ON	Select Distribution:	<input checked="" type="checkbox"/> Email	<input type="checkbox"/> Mail	<input type="checkbox"/> Fax	E2 <input type="checkbox"/> Emergency (1-2 bus. days if received by 3pm) 100% surcharge - contact ALS to confirm TAT	
Postal Code:	P0W 1A0	Email 1 or Fax:	rainyriverlabresults@newgold.com			Date and Time Required for all E&P TATs:	
Phone:	807-482-0900 x8076 or x8046				For tests that can not be performed according to the service level selected, you will be contacted.		
		Email 2 yag.inviron@newgold.com			Analysis Request		
Invoice To	Same as Report? <input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Invoice Distribution			Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below	
Copy of Invoice with Report? <input type="checkbox"/> Yes		<input type="checkbox"/> No	Select Invoice Distribution: <input type="checkbox"/> Email <input type="checkbox"/> Mail <input type="checkbox"/> Fax				
Company:				Email 1 or Fax: rainyriverlabresults@newgold.com			Number of Crustations
Contact:				Email 2: Caleb.Vandenburgh@connectw.com			
Project Information				Oil and Gas Required Fields (client use)			
ALS Quote #				Approver ID:	Cost Center:		
Job #:	Air Quality			GL Account:	Routing Code:		
PO / AFE:	4500010023			Activity Code:			
LSD				Location:			
ALS Lab Work Order # (Lab use only)				ALS Contact:	Kyle Watkins	Sampler:	
Sample Ref (upload EDD)	Sample Identification and/or Coordinates Description will appear on the report	Filter ID		Date (dd-MMM-yy)	Time (hh:mm)	Sample Type	
123354	PM2.5 Travel Blank	22		2-Dec-19	12:00	Air	
123357	TSP Travel Blank	11		2-Dec-19	12:00	Air	X
123358	Dustfall - Tail Road (South)	24		2-Dec-19	12:00	Air	X
123359	Dustfall - Galtiger Road	23		2-Dec-19	12:00	Air	X
123361	PM 2.5	13	South-PM2.5-270	25-Nov-19	12:00	Air	X
123362	PM 2.5	12	North-PM2.5-270	25-Nov-19	12:00	Air	X
123363	PM 2.5	17	South-PM2.5-270	17-Nov-19	12:00	Air	X
123364	PM 2.5	21	South-PM2.5-274	29-Nov-19	12:00	Air	X
123365	PM 2.5	20	North-PM2.5-274	25-Nov-19	12:00	Air	X
123366	PM 2.5	18	North-PM2.5-273	23-Nov-19	12:00	Air	X
123367	PM 2.5	15	South-PM2.5-271	18-Nov-19	12:00	Air	X
123368	PM 2.5	19	South-PM2.5-273	23-Nov-19	12:00	Air	X
123369	PM 2.5	14	North-PM2.5-271	11-Nov-19	12:00	Air	X
123374	PM 2.5	16	North-PM2.5-270	17-Nov-19	12:00	Air	X
123390	TSP	4	South-TSP-271	18-Nov-19	12:00	Air	X
123391	TSP	2	South-TSP-273	25-Nov-19	12:00	Air	X
123392	TSP	1	North-TSP-270	25-Nov-19	12:00	Air	X
123393	TSP	8	South-TSP-273	23-Nov-19	12:00	Air	X
123394	TSP	3	North-TSP-271	18-Nov-19	12:00	Air	X
123395	TSP	5	North-TSP-272	17-Nov-19	12:00	Air	X
123396	TSP	6	South-TSP-272	17-Nov-19	12:00	Air	X
123397	TSP	7	North-TSP-273	23-Nov-19	12:00	Air	X
123398	TSP	10	South-TSP-273	23-Nov-19	12:00	Air	X
123399	TSP	9	North-TSP-272	23-Nov-19	12:00	Air	X
Drinking Water (DW) Samples* (client use)		Special Instructions / Specify Criteria to add on report (client use)			SAMPLE CONDITION AS RECEIVED (Lab use only)		
Are samples taken from a Regulated DW System?		MISA [Template NGSWMISA]			Frozen <input type="checkbox"/>	SIF Observations <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No				Ice packs <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Custody seal intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Are samples for human drinking water use?					Cooling Initiated <input type="checkbox"/>		
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No				INITIAL COOLER TEMPERATURES °C		FINAL COOLER TEMPERATURES °C
SHIPMENT RELEASE (Lab use only)		INITIAL SHIPMENT RECEIPT (Lab use only)			FINAL SHIPMENT RECEIPT (Lab use only)		
Released by: <i>Mr. Willsover</i>	Date: 2019-12-16	Time: 11:00am	Received by: <i>Arrow Burton</i>	Date: 30-Dec-2019	Time: 10:45	Received by:	Date:



New Gold Inc. Rainy River Project
ATTN: Amanda Jacobs / Twila Griffith
5967 Highway 11/71
P.O. Box 5
Emo ON POW 1E0

Date Received: 09-JAN-20
Report Date: 30-JAN-20 10:36 (MT)
Version: FINAL

Client Phone: 807-482-0900

Certificate of Analysis

Lab Work Order #: L2403754

Project P.O. #: 4500035097

Job Reference: NEW GOLD RRP

C of C Numbers:

Legal Site Desc:



Claire Kocharakkal, B.Sc.
Account Manager

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ADDRESS: 1435 Norjohn Court, Unit 1, Burlington, ON, L7L 0E6 Canada | Phone: +1 905 331 3111 | Fax: +1 905 331 4567
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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2403754-1	NORTH-TSP-275							
Sampled By:	Client on 05-DEC-19							
Matrix:	Hi Vol Filter							
Miscellaneous Parameters								
Total particulate		20900		2300	ug		14-JAN-20	R4970110
Metals on High Volume Filter by ICPMS								
Arsenic (As)		<3.0		3.0	ug	20-JAN-20	23-JAN-20	R4977248
Cadmium (Cd)		<2.0		2.0	ug	20-JAN-20	23-JAN-20	R4977248
Cobalt (Co)		<2.0		2.0	ug	20-JAN-20	23-JAN-20	R4977248
Chromium (Cr)		<5.0		5.0	ug	20-JAN-20	23-JAN-20	R4977248
Copper (Cu)		129		4.0	ug	20-JAN-20	23-JAN-20	R4977248
Iron (Fe)		540		20	ug	20-JAN-20	23-JAN-20	R4977248
Manganese (Mn)		12.3		1.0	ug	20-JAN-20	23-JAN-20	R4977248
Nickel (Ni)		<3.0		3.0	ug	20-JAN-20	23-JAN-20	R4977248
Lead (Pb)		<3.0		3.0	ug	20-JAN-20	23-JAN-20	R4977248
Selenium (Se)		<10		10	ug	20-JAN-20	23-JAN-20	R4977248
Vanadium (V)		<5.0		5.0	ug	20-JAN-20	23-JAN-20	R4977248
Zinc (Zn)		24.6		5.0	ug	20-JAN-20	23-JAN-20	R4977248
L2403754-2	SOUTH-TSP-275							
Sampled By:	Client on 05-DEC-19							
Matrix:	Hi Vol Filter							
Miscellaneous Parameters								
Total particulate		29700		2300	ug		14-JAN-20	R4970110
Metals on High Volume Filter by ICPMS								
Arsenic (As)		<3.0		3.0	ug	20-JAN-20	21-JAN-20	R4977248
Cadmium (Cd)		<2.0		2.0	ug	20-JAN-20	21-JAN-20	R4977248
Cobalt (Co)		<2.0		2.0	ug	20-JAN-20	21-JAN-20	R4977248
Chromium (Cr)		<5.0		5.0	ug	20-JAN-20	21-JAN-20	R4977248
Copper (Cu)		136		4.0	ug	20-JAN-20	21-JAN-20	R4977248
Iron (Fe)		680		20	ug	20-JAN-20	21-JAN-20	R4977248
Manganese (Mn)		15.5		1.0	ug	20-JAN-20	21-JAN-20	R4977248
Nickel (Ni)		<3.0		3.0	ug	20-JAN-20	21-JAN-20	R4977248
Lead (Pb)		<3.0		3.0	ug	20-JAN-20	21-JAN-20	R4977248
Selenium (Se)		<10		10	ug	20-JAN-20	21-JAN-20	R4977248
Vanadium (V)		<5.0		5.0	ug	20-JAN-20	21-JAN-20	R4977248
Zinc (Zn)		34.5		5.0	ug	20-JAN-20	21-JAN-20	R4977248
L2403754-3	NORTH-TSP-276							
Sampled By:	Client on 11-DEC-19							
Matrix:	Hi Vol Filter							
Miscellaneous Parameters								
Total particulate		100000		2300	ug		14-JAN-20	R4970110
Metals on High Volume Filter by ICPMS								
Arsenic (As)		<3.0		3.0	ug	20-JAN-20	21-JAN-20	R4977248
Cadmium (Cd)		<2.0		2.0	ug	20-JAN-20	21-JAN-20	R4977248
Cobalt (Co)		<2.0		2.0	ug	20-JAN-20	21-JAN-20	R4977248
Chromium (Cr)		<5.0		5.0	ug	20-JAN-20	21-JAN-20	R4977248
Copper (Cu)		122		4.0	ug	20-JAN-20	21-JAN-20	R4977248
Iron (Fe)		1470		20	ug	20-JAN-20	21-JAN-20	R4977248
Manganese (Mn)		46.4		1.0	ug	20-JAN-20	21-JAN-20	R4977248
Nickel (Ni)		<3.0		3.0	ug	20-JAN-20	21-JAN-20	R4977248
Lead (Pb)		<3.0		3.0	ug	20-JAN-20	21-JAN-20	R4977248
Selenium (Se)		<10		10	ug	20-JAN-20	21-JAN-20	R4977248
Vanadium (V)		<5.0		5.0	ug	20-JAN-20	21-JAN-20	R4977248
Zinc (Zn)		34.8		5.0	ug	20-JAN-20	21-JAN-20	R4977248

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2403754-4	SOUTH-TSP-276							
Sampled By:	Client on 11-DEC-19							
Matrix:	Hi Vol Filter							
Miscellaneous Parameters								
Total particulate		5500		2300	ug		14-JAN-20	R4970110
Metals on High Volume Filter by ICPMS								
Arsenic (As)		<3.0		3.0	ug	20-JAN-20	21-JAN-20	R4977248
Cadmium (Cd)		<2.0		2.0	ug	20-JAN-20	21-JAN-20	R4977248
Cobalt (Co)		<2.0		2.0	ug	20-JAN-20	21-JAN-20	R4977248
Chromium (Cr)		<5.0		5.0	ug	20-JAN-20	21-JAN-20	R4977248
Copper (Cu)		70.7		4.0	ug	20-JAN-20	21-JAN-20	R4977248
Iron (Fe)		109		20	ug	20-JAN-20	21-JAN-20	R4977248
Manganese (Mn)		2.9		1.0	ug	20-JAN-20	21-JAN-20	R4977248
Nickel (Ni)		<3.0		3.0	ug	20-JAN-20	21-JAN-20	R4977248
Lead (Pb)		<3.0		3.0	ug	20-JAN-20	21-JAN-20	R4977248
Selenium (Se)		<10		10	ug	20-JAN-20	21-JAN-20	R4977248
Vanadium (V)		<5.0		5.0	ug	20-JAN-20	21-JAN-20	R4977248
Zinc (Zn)		12.4		5.0	ug	20-JAN-20	21-JAN-20	R4977248
L2403754-5	NORTH-TSP-277							
Sampled By:	Client on 17-DEC-19							
Matrix:	Hi Vol Filter							
Miscellaneous Parameters								
Total particulate		19500		2300	ug		14-JAN-20	R4970110
Metals on High Volume Filter by ICPMS								
Arsenic (As)		<3.0		3.0	ug	20-JAN-20	21-JAN-20	R4977248
Cadmium (Cd)		<2.0		2.0	ug	20-JAN-20	21-JAN-20	R4977248
Cobalt (Co)		<2.0		2.0	ug	20-JAN-20	21-JAN-20	R4977248
Chromium (Cr)		<5.0		5.0	ug	20-JAN-20	21-JAN-20	R4977248
Copper (Cu)		85.1		4.0	ug	20-JAN-20	21-JAN-20	R4977248
Iron (Fe)		353		20	ug	20-JAN-20	21-JAN-20	R4977248
Manganese (Mn)		9.4		1.0	ug	20-JAN-20	21-JAN-20	R4977248
Nickel (Ni)		<3.0		3.0	ug	20-JAN-20	21-JAN-20	R4977248
Lead (Pb)		<3.0		3.0	ug	20-JAN-20	21-JAN-20	R4977248
Selenium (Se)		<10		10	ug	20-JAN-20	21-JAN-20	R4977248
Vanadium (V)		<5.0		5.0	ug	20-JAN-20	21-JAN-20	R4977248
Zinc (Zn)		19.2		5.0	ug	20-JAN-20	21-JAN-20	R4977248
L2403754-6	SOUTH-TSP-277							
Sampled By:	Client on 17-DEC-19							
Matrix:	Hi Vol Filter							
Miscellaneous Parameters								
Total particulate		12900		2300	ug		14-JAN-20	R4970110
Metals on High Volume Filter by ICPMS								
Arsenic (As)		<3.0		3.0	ug	20-JAN-20	21-JAN-20	R4977248
Cadmium (Cd)		<2.0		2.0	ug	20-JAN-20	21-JAN-20	R4977248
Cobalt (Co)		<2.0		2.0	ug	20-JAN-20	21-JAN-20	R4977248
Chromium (Cr)		<5.0		5.0	ug	20-JAN-20	21-JAN-20	R4977248
Copper (Cu)		121		4.0	ug	20-JAN-20	21-JAN-20	R4977248
Iron (Fe)		228		20	ug	20-JAN-20	21-JAN-20	R4977248
Manganese (Mn)		5.5		1.0	ug	20-JAN-20	21-JAN-20	R4977248
Nickel (Ni)		<3.0		3.0	ug	20-JAN-20	21-JAN-20	R4977248
Lead (Pb)		<3.0		3.0	ug	20-JAN-20	21-JAN-20	R4977248
Selenium (Se)		<10		10	ug	20-JAN-20	21-JAN-20	R4977248
Vanadium (V)		<5.0		5.0	ug	20-JAN-20	21-JAN-20	R4977248
Zinc (Zn)		13.7		5.0	ug	20-JAN-20	21-JAN-20	R4977248

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

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Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2403754-7	NORTH-TSP-278							
Sampled By:	Client on 23-DEC-19							
Matrix:	Hi Vol Filter							
Miscellaneous Parameters								
Total particulate		13200		2300	ug		14-JAN-20	R4970110
Metals on High Volume Filter by ICPMS								
Arsenic (As)		<3.0		3.0	ug	20-JAN-20	21-JAN-20	R4977248
Cadmium (Cd)		<2.0		2.0	ug	20-JAN-20	21-JAN-20	R4977248
Cobalt (Co)		<2.0		2.0	ug	20-JAN-20	21-JAN-20	R4977248
Chromium (Cr)		<5.0		5.0	ug	20-JAN-20	21-JAN-20	R4977248
Copper (Cu)		98.6		4.0	ug	20-JAN-20	21-JAN-20	R4977248
Iron (Fe)		207		20	ug	20-JAN-20	21-JAN-20	R4977248
Manganese (Mn)		5.0		1.0	ug	20-JAN-20	21-JAN-20	R4977248
Nickel (Ni)		<3.0		3.0	ug	20-JAN-20	21-JAN-20	R4977248
Lead (Pb)		<3.0		3.0	ug	20-JAN-20	21-JAN-20	R4977248
Selenium (Se)		<10		10	ug	20-JAN-20	21-JAN-20	R4977248
Vanadium (V)		<5.0		5.0	ug	20-JAN-20	21-JAN-20	R4977248
Zinc (Zn)		12.6		5.0	ug	20-JAN-20	21-JAN-20	R4977248
L2403754-8	SOUTH-TSP-278							
Sampled By:	Client on 23-DEC-19							
Matrix:	Hi Vol Filter							
Miscellaneous Parameters								
Total particulate		46500		2300	ug		14-JAN-20	R4970110
Metals on High Volume Filter by ICPMS								
Arsenic (As)		<3.0		3.0	ug	20-JAN-20	21-JAN-20	R4977248
Cadmium (Cd)		<2.0		2.0	ug	20-JAN-20	21-JAN-20	R4977248
Cobalt (Co)		<2.0		2.0	ug	20-JAN-20	21-JAN-20	R4977248
Chromium (Cr)		5.9		5.0	ug	20-JAN-20	21-JAN-20	R4977248
Copper (Cu)		126		4.0	ug	20-JAN-20	21-JAN-20	R4977248
Iron (Fe)		878		20	ug	20-JAN-20	21-JAN-20	R4977248
Manganese (Mn)		23.1		1.0	ug	20-JAN-20	21-JAN-20	R4977248
Nickel (Ni)		<3.0		3.0	ug	20-JAN-20	21-JAN-20	R4977248
Lead (Pb)		<3.0		3.0	ug	20-JAN-20	21-JAN-20	R4977248
Selenium (Se)		<10		10	ug	20-JAN-20	21-JAN-20	R4977248
Vanadium (V)		<5.0		5.0	ug	20-JAN-20	21-JAN-20	R4977248
Zinc (Zn)		23.9		5.0	ug	20-JAN-20	21-JAN-20	R4977248
L2403754-9	NORTH-TSP-279							
Sampled By:	Client on 29-DEC-19							
Matrix:	Hi Vol Filter							
Miscellaneous Parameters								
Total particulate		25800		2300	ug		14-JAN-20	R4970110
Metals on High Volume Filter by ICPMS								
Arsenic (As)		<3.0		3.0	ug	20-JAN-20	21-JAN-20	R4977248
Cadmium (Cd)		<2.0		2.0	ug	20-JAN-20	21-JAN-20	R4977248
Cobalt (Co)		<2.0		2.0	ug	20-JAN-20	21-JAN-20	R4977248
Chromium (Cr)		6.4		5.0	ug	20-JAN-20	21-JAN-20	R4977248
Copper (Cu)		110		4.0	ug	20-JAN-20	21-JAN-20	R4977248
Iron (Fe)		271		20	ug	20-JAN-20	21-JAN-20	R4977248
Manganese (Mn)		8.5		1.0	ug	20-JAN-20	21-JAN-20	R4977248
Nickel (Ni)		<3.0		3.0	ug	20-JAN-20	21-JAN-20	R4977248
Lead (Pb)		<3.0		3.0	ug	20-JAN-20	21-JAN-20	R4977248
Selenium (Se)		<10		10	ug	20-JAN-20	21-JAN-20	R4977248
Vanadium (V)		<5.0		5.0	ug	20-JAN-20	21-JAN-20	R4977248
Zinc (Zn)		39.5		5.0	ug	20-JAN-20	21-JAN-20	R4977248

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2403754-10	SOUTH-TSP-279							
Sampled By:	Client on 29-DEC-19							
Matrix:	Hi Vol Filter							
Miscellaneous Parameters								
Total particulate		19600		2300	ug		14-JAN-20	R4970110
Metals on High Volume Filter by ICPMS								
Arsenic (As)		<3.0		3.0	ug	20-JAN-20	21-JAN-20	R4977248
Cadmium (Cd)		<2.0		2.0	ug	20-JAN-20	21-JAN-20	R4977248
Cobalt (Co)		<2.0		2.0	ug	20-JAN-20	21-JAN-20	R4977248
Chromium (Cr)		<5.0		5.0	ug	20-JAN-20	21-JAN-20	R4977248
Copper (Cu)		113		4.0	ug	20-JAN-20	21-JAN-20	R4977248
Iron (Fe)		408		20	ug	20-JAN-20	21-JAN-20	R4977248
Manganese (Mn)		10.3		1.0	ug	20-JAN-20	21-JAN-20	R4977248
Nickel (Ni)		<3.0		3.0	ug	20-JAN-20	21-JAN-20	R4977248
Lead (Pb)		4.5		3.0	ug	20-JAN-20	21-JAN-20	R4977248
Selenium (Se)		<10		10	ug	20-JAN-20	21-JAN-20	R4977248
Vanadium (V)		<5.0		5.0	ug	20-JAN-20	21-JAN-20	R4977248
Zinc (Zn)		68.4		5.0	ug	20-JAN-20	21-JAN-20	R4977248
L2403754-11	TSP-BLANK							
Sampled By:	Client on 02-JAN-20							
Matrix:	Hi Vol Filter							
Miscellaneous Parameters								
Total particulate		<2300		2300	ug		14-JAN-20	R4970110
Metals on High Volume Filter by ICPMS								
Arsenic (As)		<3.0		3.0	ug	20-JAN-20	21-JAN-20	R4977248
Cadmium (Cd)		<2.0		2.0	ug	20-JAN-20	21-JAN-20	R4977248
Cobalt (Co)		<2.0		2.0	ug	20-JAN-20	21-JAN-20	R4977248
Chromium (Cr)		<5.0		5.0	ug	20-JAN-20	21-JAN-20	R4977248
Copper (Cu)		<4.0		4.0	ug	20-JAN-20	21-JAN-20	R4977248
Iron (Fe)		29		20	ug	20-JAN-20	21-JAN-20	R4977248
Manganese (Mn)		<1.0		1.0	ug	20-JAN-20	21-JAN-20	R4977248
Nickel (Ni)		<3.0		3.0	ug	20-JAN-20	21-JAN-20	R4977248
Lead (Pb)		<3.0		3.0	ug	20-JAN-20	21-JAN-20	R4977248
Selenium (Se)		<10		10	ug	20-JAN-20	21-JAN-20	R4977248
Vanadium (V)		<5.0		5.0	ug	20-JAN-20	21-JAN-20	R4977248
Zinc (Zn)		<5.0		5.0	ug	20-JAN-20	21-JAN-20	R4977248
L2403754-12	NORTH-PM2.5-275							
Sampled By:	Client on 05-DEC-19							
Matrix:	47mm Filter							
Miscellaneous Parameters								
Total particulate		57		15	ug		14-JAN-20	R4970110
L2403754-13	SOUTH-PM2.5-275							
Sampled By:	Client on 05-DEC-19							
Matrix:	47mm Filter							
Miscellaneous Parameters								
Total particulate		24		15	ug		14-JAN-20	R4970110
L2403754-14	NORTH-PM2.5-276							
Sampled By:	Client on 11-DEC-19							
Matrix:	47mm Filter							
Miscellaneous Parameters								
Total particulate		64		15	ug		14-JAN-20	R4970110

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2403754-15	SOUTH-PM2.5-276							
Sampled By:	Client on 11-DEC-19							
Matrix:	47mm Filter							
Miscellaneous Parameters								
Total particulate		33		15	ug		14-JAN-20	R4970110
L2403754-16	NORTH-PM2.5-277							
Sampled By:	Client on 17-DEC-19							
Matrix:	47mm Filter							
Miscellaneous Parameters								
Total particulate		<15		15	ug		14-JAN-20	R4970110
L2403754-17	SOUTH-PM2.5-277							
Sampled By:	Client on 17-DEC-19							
Matrix:	47mm Filter							
Miscellaneous Parameters								
Total particulate		76		15	ug		14-JAN-20	R4970110
L2403754-18	NORTH-PM2.5-278							
Sampled By:	Client on 23-DEC-19							
Matrix:	47mm Filter							
Miscellaneous Parameters								
Total particulate		63		15	ug		14-JAN-20	R4970110
L2403754-19	SOUTH-PM2.5-278							
Sampled By:	Client on 23-DEC-19							
Matrix:	47mm Filter							
Miscellaneous Parameters								
Total particulate		32		15	ug		14-JAN-20	R4970110
L2403754-20	NORTH-PM2.5-279							
Sampled By:	Client on 29-DEC-19							
Matrix:	47mm Filter							
Miscellaneous Parameters								
Total particulate		<15		15	ug		14-JAN-20	R4970110
L2403754-21	SOUTH-PM2.5-279							
Sampled By:	Client on 29-DEC-19							
Matrix:	47mm Filter							
Miscellaneous Parameters								
Total particulate		<15		15	ug		14-JAN-20	R4970110
L2403754-22	PM2.5-BLANK							
Sampled By:	Client on 02-JAN-20							
Matrix:	47mm Filter							
Miscellaneous Parameters								
Total particulate		<15		15	ug		14-JAN-20	R4970110
L2403754-23	NORTH-DUSTFALL							
Sampled By:	Client on 02-JAN-20							
Matrix:	Dustfall							
Dustfalls-Total, Soluble, Insoluble +FV								
Total Dustfall		0.38		0.10	mg/dm ² .day		21-JAN-20	R4975250
Total Insoluble Dustfall		0.36		0.10	mg/dm ² .day		21-JAN-20	R4975250
Total Soluble Dustfall		<0.10		0.10	mg/dm ² .day		21-JAN-20	R4975250
Fixed Dustfall		0.35		0.10	mg/dm ² .day		21-JAN-20	R4975250
Fixed Insoluble Dustfall		0.34		0.10	mg/dm ² .day		21-JAN-20	R4975250
Fixed Soluble Dustfall		<0.10		0.10	mg/dm ² .day		21-JAN-20	R4975250
Volatile Dustfall		<0.10		0.10	mg/dm ² .day		21-JAN-20	R4975250

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2403754-23 NORTH-DUSTFALL							
Sampled By:	Client on 02-JAN-20						
Matrix:	Dustfall						
Dustfalls-Total, Soluble, Insoluble +FV							
Total Dustfall	<0.10		0.10	mg/dm ² .day		21-JAN-20	R4975250
Total Insoluble Dustfall	<0.10		0.10	mg/dm ² .day		21-JAN-20	R4975250
Total Metals in Dustfalls by ICPMS							
Aluminum (Al)-Total	0.00902		0.000089	mg/dm ² .day	22-JAN-20	23-JAN-20	R4976769
Interval			1	days		20-JAN-20	R4973360
Interval			1	days		22-JAN-20	R4975348
Antimony (Sb)-Total	<0.0000030		0.0000030	mg/dm ² .day	22-JAN-20	23-JAN-20	R4976769
Arsenic (As)-Total	<0.00013	DLM	0.00013	mg/dm ² .day	22-JAN-20	23-JAN-20	R4976769
Barium (Ba)-Total	0.0000482		0.0000015	mg/dm ² .day	22-JAN-20	21-JAN-20	R4976769
Beryllium (Be)-Total	<0.000015		0.000015	mg/dm ² .day	22-JAN-20	23-JAN-20	R4976769
Bismuth (Bi)-Total	<0.000015		0.000015	mg/dm ² .day	22-JAN-20	23-JAN-20	R4976769
Boron (B)-Total	<0.00030		0.00030	mg/dm ² .day	22-JAN-20	23-JAN-20	R4976769
Cadmium (Cd)-Total	<0.0000015		0.0000015	mg/dm ² .day	22-JAN-20	23-JAN-20	R4976769
Calcium (Ca)-Total	0.0107		0.00060	mg/dm ² .day	22-JAN-20	23-JAN-20	R4976769
Chromium (Cr)-Total	<0.000015		0.000015	mg/dm ² .day	22-JAN-20	23-JAN-20	R4976769
Cobalt (Co)-Total	<0.0000030		0.0000030	mg/dm ² .day	22-JAN-20	23-JAN-20	R4976769
Copper (Cu)-Total	<0.000030	DLB	0.000030	mg/dm ² .day	22-JAN-20	23-JAN-20	R4976769
Lead (Pb)-Total	0.0000093		0.0000015	mg/dm ² .day	22-JAN-20	23-JAN-20	R4976769
Iron (Fe)-Total	0.00587		0.00089	mg/dm ² .day	22-JAN-20	23-JAN-20	R4976769
Lithium (Li)-Total	<0.00015		0.00015	mg/dm ² .day	22-JAN-20	23-JAN-20	R4976769
Magnesium (Mg)-Total	0.00367		0.00015	mg/dm ² .day	22-JAN-20	23-JAN-20	R4976769
Manganese (Mn)-Total	0.000191		0.0000030	mg/dm ² .day	22-JAN-20	23-JAN-20	R4976769
Molybdenum (Mo)-Total	<0.0000015		0.0000015	mg/dm ² .day	22-JAN-20	23-JAN-20	R4976769
Nickel (Ni)-Total	0.000028		0.000015	mg/dm ² .day	22-JAN-20	23-JAN-20	R4976769
Phosphorus (P)-Total	<0.0015		0.0015	mg/dm ² .day	22-JAN-20	23-JAN-20	R4976769
Potassium (K)-Total	0.0020		0.0015	mg/dm ² .day	22-JAN-20	23-JAN-20	R4976769
Selenium (Se)-Total	<0.000030		0.000030	mg/dm ² .day	22-JAN-20	23-JAN-20	R4976769
Silicon (Si)-Total	0.0135		0.0015	mg/dm ² .day	22-JAN-20	23-JAN-20	R4976769
Silver (Ag)-Total	<0.00000030		0.0000003	mg/dm ² .day	22-JAN-20	23-JAN-20	R4976769
Sodium (Na)-Total	0.0024		0.0015	mg/dm ² .day	22-JAN-20	23-JAN-20	R4976769
Strontium (Sr)-Total	0.0000465		0.0000030	mg/dm ² .day	22-JAN-20	23-JAN-20	R4976769
Thallium (Tl)-Total	<0.0000030		0.0000030	mg/dm ² .day	22-JAN-20	23-JAN-20	R4976769
Tin (Sn)-Total	<0.0000030		0.0000030	mg/dm ² .day	22-JAN-20	23-JAN-20	R4976769
Titanium (Ti)-Total	<0.00030		0.00030	mg/dm ² .day	22-JAN-20	23-JAN-20	R4976769
Uranium (U)-Total	<0.00000030		0.0000003	mg/dm ² .day	22-JAN-20	23-JAN-20	R4976769
Vanadium (V)-Total	<0.000030		0.000030	mg/dm ² .day	22-JAN-20	23-JAN-20	R4976769
Zinc (Zn)-Total	0.000315		0.000089	mg/dm ² .day	22-JAN-20	23-JAN-20	R4976769
L2403754-24 SOUTH-DUSTFALL							
Sampled By:	Client on 02-JAN-20						
Matrix:	Dustfall						
Dustfalls-Total, Soluble, Insoluble +FV							
Total Dustfall	0.34		0.10	mg/dm ² .day		21-JAN-20	R4975250
Total Insoluble Dustfall	0.31		0.10	mg/dm ² .day		21-JAN-20	R4975250
Total Soluble Dustfall	<0.10		0.10	mg/dm ² .day		21-JAN-20	R4975250
Fixed Dustfall	0.34		0.10	mg/dm ² .day		21-JAN-20	R4975250
Fixed Insoluble Dustfall	0.31		0.10	mg/dm ² .day		21-JAN-20	R4975250
Fixed Soluble Dustfall	<0.10		0.10	mg/dm ² .day		21-JAN-20	R4975250
Volatile Dustfall	<0.10		0.10	mg/dm ² .day		21-JAN-20	R4975250
Volatile Insoluble Dustfall	<0.10		0.10	mg/dm ² .day		21-JAN-20	R4975250

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2403754-24 SOUTH-DUSTFALL							
Sampled By: Client on 02-JAN-20							
Matrix: Dustfall							
Dustfalls-Total, Soluble, Insoluble +FV							
Volatile Soluble Dustfall	<0.10		0.10	mg/dm ² .day		21-JAN-20	R4975250
Total Metals in Dustfalls by ICPMS							
Aluminum (Al)-Total	0.00784		0.000079	mg/dm ² .day	22-JAN-20	23-JAN-20	R4976769
Interval			1	days		20-JAN-20	R4973360
Interval			1	days		22-JAN-20	R4975348
Antimony (Sb)-Total	<0.0000026		0.0000026	mg/dm ² .day	22-JAN-20	23-JAN-20	R4976769
Arsenic (As)-Total	<0.00016	DLM	0.00016	mg/dm ² .day	22-JAN-20	23-JAN-20	R4976769
Barium (Ba)-Total	0.0000436		0.0000013	mg/dm ² .day	22-JAN-20	23-JAN-20	R4976769
Beryllium (Be)-Total	<0.000013		0.000013	mg/dm ² .day	22-JAN-20	23-JAN-20	R4976769
Bismuth (Bi)-Total	<0.000013		0.000013	mg/dm ² .day	22-JAN-20	23-JAN-20	R4976769
Boron (B)-Total	<0.00026		0.00026	mg/dm ² .day	22-JAN-20	23-JAN-20	R4976769
Cadmium (Cd)-Total	<0.0000013		0.0000013	mg/dm ² .day	22-JAN-20	23-JAN-20	R4976769
Calcium (Ca)-Total	0.00839		0.00053	mg/dm ² .day	22-JAN-20	23-JAN-20	R4976769
Chromium (Cr)-Total	<0.000013		0.000013	mg/dm ² .day	22-JAN-20	23-JAN-20	R4976769
Cobalt (Co)-Total	<0.0000026		0.0000026	mg/dm ² .day	22-JAN-20	23-JAN-20	R4976769
Copper (Cu)-Total	0.000026	DLB	0.000026	mg/dm ² .day	22-JAN-20	23-JAN-20	R4976769
Lead (Pb)-Total	0.0000083		0.0000013	mg/dm ² .day	22-JAN-20	23-JAN-20	R4976769
Iron (Fe)-Total	0.00522		0.00079	mg/dm ² .day	22-JAN-20	23-JAN-20	R4976769
Lithium (Li)-Total	<0.00013		0.00013	mg/dm ² .day	22-JAN-20	23-JAN-20	R4976769
Magnesium (Mg)-Total	0.00317		0.00013	mg/dm ² .day	22-JAN-20	23-JAN-20	R4976769
Manganese (Mn)-Total	0.000171		0.0000026	mg/dm ² .day	22-JAN-20	23-JAN-20	R4976769
Molybdenum (Mo)-Total	<0.0000013		0.0000013	mg/dm ² .day	22-JAN-20	23-JAN-20	R4976769
Nickel (Ni)-Total	<0.000013		0.000013	mg/dm ² .day	22-JAN-20	23-JAN-20	R4976769
Phosphorus (P)-Total	<0.0013		0.0013	mg/dm ² .day	22-JAN-20	23-JAN-20	R4976769
Potassium (K)-Total	0.0014		0.0013	mg/dm ² .day	22-JAN-20	23-JAN-20	R4976769
Selenium (Se)-Total	<0.000026		0.000026	mg/dm ² .day	22-JAN-20	23-JAN-20	R4976769
Silicon (Si)-Total	0.0129		0.0013	mg/dm ² .day	22-JAN-20	23-JAN-20	R4976769
Silver (Ag)-Total	<0.00000026		0.00000026	mg/dm ² .day	22-JAN-20	23-JAN-20	R4976769
Sodium (Na)-Total	0.0018		0.0013	mg/dm ² .day	22-JAN-20	23-JAN-20	R4976769
Strontium (Sr)-Total	0.0000433		0.0000026	mg/dm ² .day	22-JAN-20	23-JAN-20	R4976769
Thallium (Tl)-Total	<0.0000026		0.0000026	mg/dm ² .day	22-JAN-20	23-JAN-20	R4976769
Tin (Sn)-Total	<0.0000026		0.0000026	mg/dm ² .day	22-JAN-20	23-JAN-20	R4976769
Titanium (Ti)-Total	<0.00026		0.00026	mg/dm ² .day	22-JAN-20	23-JAN-20	R4976769
Uranium (U)-Total	<0.00000026		0.00000026	mg/dm ² .day	22-JAN-20	23-JAN-20	R4976769
Vanadium (V)-Total	<0.000026		0.000026	mg/dm ² .day	22-JAN-20	23-JAN-20	R4976769
Zinc (Zn)-Total	0.000104		0.000079	mg/dm ² .day	22-JAN-20	23-JAN-20	R4976769

Reference Information

Sample Parameter Qualifier Key:

Qualifier	Description
B	Method Blank exceeds ALS DQO. Associated sample results which are < Limit of Reporting or > 5 times blank level are considered reliable.
DLB	Detection Limit Raised. Analyte detected at comparable level in Method Blank.
DLM	Detection Limit Adjusted due to sample matrix effects (e.g. chemical interference, colour, turbidity).
G	QC result did not meet ALS DQO. Refer to narrative comments for further information.
MB-LOR	Method Blank exceeds ALS DQO. Limits of Reporting have been adjusted for samples with positive hits below 5x blank level.
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
AIR VOLUME-HIVOL-BU	Filter	Air volume (m3)	USEPA IO3.1
AIR VOLUME-M212 F-BU	Filter	Air volume (m3)	EPA QA Guidance Document 2.12
DUSTFALLS-ALL-DM2-VA	Dustfall	Dustfalls-Total, Soluble, Insoluble +FV	BC LAB MANUAL - PARTICULATE
This analysis is carried out using procedures modified from British Columbia Environmental Manual "Particulate." Particulates or "Dustfalls" are determined gravimetrically. Total Insoluble and Soluble Dustfalls are determined by filtering a sample through a 0.45 um membrane filter and drying the filter and filtrate at 104 C, followed by ignition at 550 C. The remaining residue after 550 C represents the fixed portion and the weight lost on ignition represents the volatile portion. The sum of all fixed and volatile portions on both Insoluble and Soluble portions represents Total Dustfalls.			
MET+IC/SOLID-CALC-BU	Filter	Metals + Anions + Cations / Solids Ratio	Calculation
MET-DUST(DM2)-MS-VA	Dustfall	Total Metals in Dustfalls by ICPMS	EPA 6020A
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). Instrumental analysis is by inductively coupled plasma - mass spectrometry (EPA Method 6020A).			
MET-IO3.5-MS-BU	Filter	Metals on High Volume Filter by ICPMS	IO3.5
After weighing (if required), hivol filters are sub-sampled and leached with nitric acid to extract available metal analytes. After dilution, the extracts are submitted to the ICPMS instrument for analysis.			
PART-HIVOL-GRAV-BU	Filter	Particulate on High Volume Filter	USEPA IO3.1
PART-M212 F-GRAV-BU	Filter	PM via Gravimetric Analysis	EPA QA Guidance Document 2.12
The particulate matter collected onto tare-weighed 47mm Teflon Disc filter media is desiccated then brought to a constant weight on an analytical balance. Results are presented in ug (per filter). An air volume can be included to allow for reporting in ug/m3.			

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
BU	ALS ENVIRONMENTAL - BURLINGTON, ONTARIO, CANADA
VA	ALS ENVIRONMENTAL - VANCOUVER, BRITISH COLUMBIA, CANADA

Chain of Custody Numbers:

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
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GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.

mg/kg - milligrams per kilogram based on dry weight of sample

mg/kg wwt - milligrams per kilogram based on wet weight of sample

mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight

mg/L - unit of concentration based on volume, parts per million.

< - Less than.

D.L. - The reporting limit.

N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.

Quality Control Report

Workorder: L2403754

Report Date: 30-JAN-20

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Client: New Gold Inc. Rainy River Project
 5967 Highway 11/71 P.O. Box 5
 Emo ON P0W 1E0

Contact: Amanda Jacobs / Twila Griffith

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-IO3.5-MS-BU	Filter							
Batch	R4977248							
WG3261013-3 DUP		L2403754-1						
Arsenic (As)		<3.0	<3.0	RPD-NA	ug	N/A	20	21-JAN-20
Cadmium (Cd)		<2.0	<2.0	RPD-NA	ug	N/A	20	21-JAN-20
Cobalt (Co)		<2.0	<2.0	RPD-NA	ug	N/A	20	21-JAN-20
Chromium (Cr)		<5.0	<5.0	RPD-NA	ug	N/A	20	21-JAN-20
Copper (Cu)		129	145		ug	12	20	21-JAN-20
Iron (Fe)		540	680		ug	23	25	21-JAN-20
Manganese (Mn)		12.3	15.3	G	ug	22	20	21-JAN-20
Nickel (Ni)		<3.0	<3.0	RPD-NA	ug	N/A	20	21-JAN-20
Lead (Pb)		<3.0	<3.0	RPD-NA	ug	N/A	20	21-JAN-20
Selenium (Se)		<10	<10	RPD-NA	ug	N/A	20	21-JAN-20
Vanadium (V)		<5.0	<5.0	RPD-NA	ug	N/A	20	21-JAN-20
Zinc (Zn)		24.6	23.0		ug	6.6	20	21-JAN-20
COMMENTS: Mn RPD is outside ALS DQOs. This is likely due to inhomogeneity in the dispersion of this target analyte across the sampled filter surface. Data for this analyte may show higher-than-normal variability. PE 24-Jan-2020								
WG3261013-2 LCS								
Arsenic (As)		92.0		%		80-120	21-JAN-20	
Cadmium (Cd)		99.6		%		80-120	21-JAN-20	
Cobalt (Co)		93.0		%		80-120	21-JAN-20	
Chromium (Cr)		93.0		%		80-120	21-JAN-20	
Copper (Cu)		105.0		%		80-120	21-JAN-20	
Iron (Fe)		93.6		%		80-120	21-JAN-20	
Manganese (Mn)		89.4		%		80-120	21-JAN-20	
Nickel (Ni)		92.6		%		80-120	21-JAN-20	
Lead (Pb)		95.3		%		80-120	21-JAN-20	
Selenium (Se)		100.0		%		80-120	21-JAN-20	
Vanadium (V)		92.3		%		80-120	21-JAN-20	
Zinc (Zn)		94.5		%		80-120	21-JAN-20	
WG3261013-1 MB								
Arsenic (As)		<3.0		ug		3	21-JAN-20	
Cadmium (Cd)		<2.0		ug		2	21-JAN-20	
Cobalt (Co)		<2.0		ug		2	21-JAN-20	
Chromium (Cr)		<5.0		ug		5	21-JAN-20	
Copper (Cu)		<4.0		ug		4	21-JAN-20	
Iron (Fe)		<20		ug		20	21-JAN-20	
Manganese (Mn)		<1.0		ug		1	21-JAN-20	

Quality Control Report

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-IO3.5-MS-BU	Filter							
Batch	R4977248							
WG3261013-1 MB								
Nickel (Ni)			<3.0		ug		3	21-JAN-20
Lead (Pb)			<3.0		ug		3	21-JAN-20
Selenium (Se)			<10		ug		10	21-JAN-20
Vanadium (V)			<5.0		ug		10	21-JAN-20
Zinc (Zn)			<5.0		ug		5	21-JAN-20
WG3261013-4 MS		L2403754-1						
Arsenic (As)			75.6		%		75-125	23-JAN-20
Cadmium (Cd)			81.5		%		75-125	23-JAN-20
Cobalt (Co)			75.7		%		75-125	23-JAN-20
Chromium (Cr)			73.0	G	%		75-125	23-JAN-20
Copper (Cu)			N/A	MS-B	%		-	23-JAN-20
Iron (Fe)			N/A	MS-B	%		-	23-JAN-20
Manganese (Mn)			69.3	G	%		75-125	23-JAN-20
Nickel (Ni)			73.9	G	%		75-125	23-JAN-20
Lead (Pb)			77.4		%		75-125	23-JAN-20
Selenium (Se)			80.7		%		75-125	23-JAN-20
Vanadium (V)			74.3	G	%		75-125	23-JAN-20
Zinc (Zn)			72.7	G	%		75-125	23-JAN-20
COMMENTS: Zn, V, Ni, Mn, Cr recoveries in the MS are outside ALS DQOs. This is likely due to inhomogeneity in the dispersion of these targets analyte across the sampled filter surface. Data for these analytes may show higher-than-normal variability. PE 24-Jan-2020								
PART-HIVOL-GRAV-BU	Filter							
Batch	R4970110							
WG3257511-1 MB								
Total particulate			<100		ug		100	14-JAN-20
PART-M212 F-GRAV-BU	Filter							
Batch	R4970110							
WG3257511-4 DUP		L2403754-12						
Total particulate			57	58	ug	1.7	10	14-JAN-20
WG3257511-3 MB								
Total particulate			<15		ug		15	14-JAN-20
DUSTFALLS-ALL-DM2-VA	Dustfall							
Batch	R4975250							
WG3260931-1 MB								
Total Dustfall			<0.10		mg/dm ² .day		0.1	21-JAN-20

Quality Control Report

Workorder: L2403754

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
DUSTFALLS-ALL-DM2-VA Dustfall								
Batch R4975250								
WG3260931-1 MB								
Total Insoluble Dustfall			<0.10		mg/dm ² .day		0.1	21-JAN-20
Total Soluble Dustfall			<0.10		mg/dm ² .day		0.1	21-JAN-20
Fixed Dustfall			<0.10		mg/dm ² .day		0.1	21-JAN-20
Fixed Insoluble Dustfall			<0.10		mg/dm ² .day		0.1	21-JAN-20
Fixed Soluble Dustfall			<0.10		mg/dm ² .day		0.1	21-JAN-20
Volatile Dustfall			<0.10		mg/dm ² .day		0.1	21-JAN-20
Volatile Insoluble Dustfall			<0.10		mg/dm ² .day		0.1	21-JAN-20
Volatile Soluble Dustfall			<0.10		mg/dm ² .day		0.1	21-JAN-20
MET-DUST(DM2)-MS-VA Dustfall								
Batch R4976769								
WG3261650-2 LCS								
Aluminum (Al)-Total			101.8		%		80-120	23-JAN-20
Antimony (Sb)-Total			103.8		%		80-120	23-JAN-20
Arsenic (As)-Total			102.8		%		80-120	23-JAN-20
Barium (Ba)-Total			103.6		%		80-120	23-JAN-20
Beryllium (Be)-Total			99.3		%		80-120	23-JAN-20
Bismuth (Bi)-Total			98.4		%		80-120	23-JAN-20
Boron (B)-Total			98.8		%		80-120	23-JAN-20
Cadmium (Cd)-Total			98.5		%		80-120	23-JAN-20
Calcium (Ca)-Total			96.3		%		80-120	23-JAN-20
Chromium (Cr)-Total			97.5		%		80-120	23-JAN-20
Cobalt (Co)-Total			99.0		%		80-120	23-JAN-20
Copper (Cu)-Total			112.5		%		80-120	23-JAN-20
Lead (Pb)-Total			98.0		%		80-120	23-JAN-20
Iron (Fe)-Total			99.2		%		80-120	23-JAN-20
Lithium (Li)-Total			92.7		%		80-120	23-JAN-20
Magnesium (Mg)-Total			99.3		%		80-120	23-JAN-20
Manganese (Mn)-Total			101.5		%		80-120	23-JAN-20
Molybdenum (Mo)-Total			100.1		%		80-120	23-JAN-20
Nickel (Ni)-Total			96.4		%		80-120	23-JAN-20
Phosphorus (P)-Total			103.5		%		80-120	23-JAN-20
Potassium (K)-Total			97.3		%		80-120	23-JAN-20
Selenium (Se)-Total			112.5		%		80-120	23-JAN-20
Silicon (Si)-Total			107.4		%		80-120	23-JAN-20

Quality Control Report

Workorder: L2403754

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-DUST(DM2)-MS-VA Dustfall								
Batch	R4976769							
WG3261650-2 LCS								
Silver (Ag)-Total			94.6		%		80-120	23-JAN-20
Sodium (Na)-Total			105.5		%		80-120	23-JAN-20
Strontium (Sr)-Total			99.4		%		80-120	23-JAN-20
Thallium (Tl)-Total			99.9		%		80-120	23-JAN-20
Tin (Sn)-Total			96.8		%		80-120	23-JAN-20
Titanium (Ti)-Total			97.6		%		80-120	23-JAN-20
Uranium (U)-Total			97.1		%		80-120	23-JAN-20
Vanadium (V)-Total			100.1		%		80-120	23-JAN-20
Zinc (Zn)-Total			103.0		%		80-120	23-JAN-20
WG3261650-1 MB								
Aluminum (Al)-Total			0.000090	B	mg/dm2.day		0.000079	23-JAN-20
Antimony (Sb)-Total			<0.0000026		mg/dm2.day		0.0000026	23-JAN-20
Arsenic (As)-Total			0.00010	MB-LOR	mg/dm2.day		0.0001	23-JAN-20
Barium (Ba)-Total			0.0000030	MB-LOR	mg/dm2.day		0.0000013	23-JAN-20
Beryllium (Be)-Total			<0.000013		mg/dm2.day		0.000013	23-JAN-20
Bismuth (Bi)-Total			<0.000013		mg/dm2.day		0.000013	23-JAN-20
Boron (B)-Total			<0.00026		mg/dm2.day		0.00026	23-JAN-20
Cadmium (Cd)-Total			<0.0000013		mg/dm2.day		0.0000013	23-JAN-20
Calcium (Ca)-Total			<0.00052		mg/dm2.day		0.00052	23-JAN-20
Chromium (Cr)-Total			<0.000013		mg/dm2.day		0.000013	23-JAN-20
Cobalt (Co)-Total			<0.0000026		mg/dm2.day		0.0000026	23-JAN-20
Copper (Cu)-Total			0.000061	MB-LOR	mg/dm2.day		0.000013	23-JAN-20
Lead (Pb)-Total			<0.0000013		mg/dm2.day		0.0000013	23-JAN-20
Iron (Fe)-Total			<0.00079		mg/dm2.day		0.00079	23-JAN-20
Lithium (Li)-Total			<0.00013		mg/dm2.day		0.00013	23-JAN-20
Magnesium (Mg)-Total			<0.00013		mg/dm2.day		0.00013	23-JAN-20
Manganese (Mn)-Total			0.0000039	B	mg/dm2.day		0.0000026	23-JAN-20
Molybdenum (Mo)-Total			<0.0000013		mg/dm2.day		0.0000013	23-JAN-20
Nickel (Ni)-Total			<0.000013		mg/dm2.day		0.000013	23-JAN-20
Phosphorus (P)-Total			<0.0013		mg/dm2.day		0.0013	23-JAN-20
Potassium (K)-Total			<0.0013		mg/dm2.day		0.0013	23-JAN-20
Selenium (Se)-Total			<0.000026		mg/dm2.day		0.000026	23-JAN-20
Silicon (Si)-Total			<0.0013		mg/dm2.day		0.0013	23-JAN-20
Silver (Ag)-Total			<0.0000002		mg/dm2.day		0.00000026	23-JAN-20

Quality Control Report

Workorder: L2403754

Report Date: 30-JAN-20

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-DUST(DM2)-MS-VA Dustfall								
Batch	R4976769							
WG3261650-1 MB								
Sodium (Na)-Total			<0.0013		mg/dm ² .day		0.0013	23-JAN-20
Strontium (Sr)-Total			<0.0000026		mg/dm ² .day		0.0000026	23-JAN-20
Thallium (Tl)-Total			<0.0000026		mg/dm ² .day		0.0000026	23-JAN-20
Tin (Sn)-Total			<0.0000026		mg/dm ² .day		0.0000026	23-JAN-20
Titanium (Ti)-Total			<0.00026		mg/dm ² .day		0.00026	23-JAN-20
Uranium (U)-Total			<0.0000002		mg/dm ² .day		0.00000026	23-JAN-20
Vanadium (V)-Total			<0.000026		mg/dm ² .day		0.000026	23-JAN-20
Zinc (Zn)-Total			<0.000079		mg/dm ² .day		0.000079	23-JAN-20

Quality Control Report

Workorder: L2403754

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Legend:

Limit	ALS Control Limit (Data Quality Objectives)
DUP	Duplicate
RPD	Relative Percent Difference
N/A	Not Available
LCS	Laboratory Control Sample
SRM	Standard Reference Material
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ADE	Average Desorption Efficiency
MB	Method Blank
IRM	Internal Reference Material
CRM	Certified Reference Material
CCV	Continuing Calibration Verification
CVS	Calibration Verification Standard
LCSD	Laboratory Control Sample Duplicate

Sample Parameter Qualifier Definitions:

Qualifier	Description
B	Method Blank exceeds ALS DQO. Associated sample results which are < Limit of Reporting or > 5 times blank level are considered reliable.
G	QC result did not meet ALS DQO. Refer to narrative comments for further information.
MB-LOR	Method Blank exceeds ALS DQO. Limits of Reporting have been adjusted for samples with positive hits below 5x blank level.
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Hold Time Exceedances:

All test results reported with this submission were conducted within ALS recommended hold times.

ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where available). For more information, please contact ALS.

The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide confidence in the accuracy of associated test results.

Please note that this report may contain QC results from anonymous Sample Duplicates and Matrix Spikes that do not originate from this Work Order.

Report To			Report Format / Distribution			Select Service Level		Below (Rush Turnaround Time (TAT) is not available for all tests)				
Company	New Gold Inc Rainy River Mine		Report Format	<input checked="" type="checkbox"/> PDF	<input checked="" type="checkbox"/> Excel	<input checked="" type="checkbox"/> EDD (Digital)	R	<input checked="" type="checkbox"/>	Regular (Standard TAT if received by 3pm - business days)			
Contact	Amanda Jacobs / Twila Griffith		Quality Control (QC) Report with Report	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	P	<input checked="" type="checkbox"/>	Priority (24 bus. days if received by 3pm; 50% surcharge - contact ALS to confirm TAT)				
Address	24 Marr Rd		<input type="checkbox"/> Criteria on Report - provide details below for checked					E	<input checked="" type="checkbox"/>	Emergency, 1-2 bus. days if received by 3pm; 100% surcharge - contact ALS to confirm TAT		
City/Province	Barwick CN		Select Distribution	<input checked="" type="checkbox"/> Email	<input type="checkbox"/> Mail	<input type="checkbox"/> Fax	E2	<input checked="" type="checkbox"/>	Emergency, 1-2 bus. days if received by 3pm; 100% surcharge - contact ALS to confirm TAT			
Postal Code:	POW 1AO		Email 1 or Fax:	rainyriver.labresults@newgold.com					Date and Time Required for all E&P TATs			
Phone	807-482-0900 x8076 or x8064							For tests that can not be performed according to the service level selected, you will be contacted				
			Email 2	twila.griffith@newgold.com					Analysis Request			
Invoice To	Same as Report? <input checked="" type="checkbox"/> Yes		<input type="checkbox"/> No	Invoice Distribution					Indicate Filtered: <input type="checkbox"/> Preserved (P) or Filtered and Preserved (F/F) (See QW)			
Copy of Invoice with Report?	<input type="checkbox"/> Yes		<input type="checkbox"/> No	Select Invoice Distribution: <input checked="" type="checkbox"/> Email <input type="checkbox"/> Mail <input type="checkbox"/> Fax								
Company			Email 1 or Fax: rainyriver.labresults@newgold.com									
Contact			Email 2: twila.griffith@newgold.com									
Project Information			Oil and Gas Required Fields (client use)									
ALS Quote #			Approver ID		Cost Center							
Job #	Air Quality		GL Account:		Routing Code							
PO / AFE	4500035097		Activity Code:									
LSD			Location:									
ALS Lab Work Order # (Lab use only)			ALS Contact:	Kyle Watkins		Sampler:						
Sample Ref (upload EDD)	Sample Identification and/or Coordinates (Description will appear on the report)		Filter ID	Date (dd-MMM-yy)	Time (hh:mm)	Sample Type	TSP and Metals	EDDS	EDDS	EDDS	EDDS	
123412	PM2.5 Travel Blank			02-Jan-20	12:00	Air	X					
123413	TSP Travel Blank			02-Jan-20	12:00	Air	X					
123414	Dustfall - Galinger Road			02-Jan-20	12:00	Air		X				
123415	Dustfall - Tat Road (South)			02-Jan-20	12:00	Air		X				
123416	TSP		North-TSP-273	29-Dec-19	12:00	Air	X					
123417	TSP		North-TSP-273	23-Dec-19	12:00	Air	X					
123418	TSP		North-TSP-277	17-Dec-19	12:00	Air	X					
123419	TSP		North-TSP-275	11-Dec-19	12:00	Air	X					
123420	TSP		North-TSP-275	05-Dec-19	12:00	Air	X					
123421	TSP		South-TSP-279	29-Dec-19	12:00	Air	X					
123422	TSP		South-TSP-275	23-Dec-19	12:00	Air	X					
123423	TSP		South-TSP-277	17-Dec-19	12:00	Air	X					
123424	TSP		South-TSP-276	11-Dec-19	12:00	Air	X					
123425	TSP		South-TSP-275	05-Dec-19	12:00	Air	X					
123426	PM 2.5		North-PM2.5-275	29-Dec-19	12:00	Air	X					
123427	PM 2.5		North-PM2.5-275	23-Dec-19	12:00	Air	X					
123428	PM 2.5		North-PM2.5-277	17-Dec-19	12:00	Air	X					
123429	PM 2.5		North-PM2.5-276	11-Dec-19	12:00	Air	X					
123430	PM 2.5		North-PM2.5-275	05-Dec-19	12:00	Air	X					
123431	PM 2.5		South-PM2.5-275	29-Dec-19	12:00	Air	X					
123432	PM 2.5		South-PM2.5-276	23-Dec-19	12:00	Air	X					
123433	PM 2.5		South-PM2.5-277	17-Dec-19	12:00	Air	X					
123434	PM 2.5		South-PM2.5-276	11-Dec-19	12:00	Air	X					
123435	PM 2.5		South-PM2.5-275	05-Dec-19	12:00	Air	X					
Drinking Water (DW) Samples* (client use)			Special Instructions / Specify Criteria to add on report (client use)					SAMPLE CONDITION AS RECEIVED (lab use only)				
Are samples taken from a Regulated DW System?			MISA [Template NGSWMISA]					Frozen <input type="checkbox"/>	SIF Observations <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No								Ice packs <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Custody seal intact <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
Are samples for human drinking water use?								Cooling Initiated <input type="checkbox"/>	INITIAL COOLER TEMPERATURES °C FINAL COOLER TEMPERATURES °C			
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No								16.0°C				
SHIPMENT RELEASE (client use)				INITIAL SHIPMENT RECEIPT (lab use only)					FINAL SHIPMENT RECEIPT (lab use only)			
Released by	Date	Time	Received by	Date	Time	Received by	Date	Time	Received by	Date	Time	
Twila Griffith	2020-01-03	13:00 Hrs	ATTEN MURTON	2020-01-03	13:00 Hrs							



APPENDIX D

PQ200 & TE-5170 CALIBRATION SHEETS – Q4 2019



TE-5170 Calibration Worksheet

Site Information

Location: Rainy River Mine	Site ID: North	Date: 20-Nov-19
Sampler: E-5170 M FC	Serial No: 3150	Tech: Kelsea Kari

Site Conditions

Barometric Pressure (in Hg): 28.60	Corrected Pressure (mm Hg): 726
Temperature (deg F): 33	Temperature (deg K): 273
Average Press. (in Hg): 28.00	Corrected Average (mm Hg): 711
Average Temp. (deg F): 14	Average Temp. (deg K): 263

Calibration Orifice

Make: Tisch	Qstd Slope: 1.67950
Model: TE-5028A	Qstd Intercept: 0.02910
Serial#: 3662	Date Certified: 17-Jun-19

Calibration Information

Plate or Test #	H2O (in)	Qstd (m3/min)	I (chart)	IC (corrected)	Linear Regression
1	5.80	1.446	42.0	42.87	Slope: 26.1751
2	5.40	1.395	40.0	40.83	Intercept: 4.5423
3	4.80	1.314	38.0	38.79	Corr. Coeff: 0.9909
4	4.35	1.250	36.0	36.75	
5	3.60	1.136	34.0	34.70	# of Observations: 5

Calculations

$$Q_{std} = 1/m[\text{Sqrt}(H_2O(Pa/Pstd)(Tstd/Ta))-b]$$

$$IC = I[\text{Sqrt}(Pa/Pstd)(Tstd/Ta)]$$

Qstd = standard flow rate

IC = corrected chart response

I = actual chart response

m = calibrator Qstd slope

b = calibrator Qstd intercept

Ta = actual temperature during calibration (deg K)

Pa = actual pressure during calibration (mm Hg)

Tstd = 298 deg K

Pstd = 760 mm Hg

For subsequent calculation of sampler flow:

$$1/m((I)[\text{Sqrt}(298/Tav)(Pav/760)]-b)$$

m = sampler slope

b = sampler intercept

I = chart response

Tav = daily average temperature

Pav = daily average pressure

Average I (chart): 34.0

Average Flow Calculation m3/min

1.164015965

Average Flow Calculation in CFM

41.10140373

Sample Time (Hrs): 24.0

Total Flow in m3/min

1676.18299

Total Flow in CFM

59186.02137

NOTE: Ensure calibration orifice has been certified within 12 months of use

PQ200 Calibration Sheet

Calibrated By: Kelsea Hunsperger

Date: 2019/11/20

Site Name: New Gold Rainy River Mine

Site Location: Gallinger Road Station

PQ200 Serial Number: 1752

Calibrator Make: BGI

Calibrator Serial Number: 172457

NIST Certificate Expiry Date: April 30, 2020

System Clock Time:

Actual Time: 9:19

Displayed Time: 10:15

Displayed Year: 2019

Displayed Date: 20 Nov

Time Change (Y/N): Y

Ambient Temperature (°C):

PQ200 Reading: 1.7

Actual Reading: 1.7

Difference (+/- 2°C): 0

Temp Reset (Y/N): N

Inspection of Inlet/Seals/Filter:

Cleanliness of Inlet: Good

Glass Jar: Good

Glass Jar Gasket: Good

PM2.5 VSCC Inlet: Good

Filter Holder: Good

Filter Holder Seals: Good

Filter Tensioner: Good

Cleanliness of Fan Filter: Good

Comments/Recommendations:

Ambient Barometric Pressure (mmHg):

PQ200 Reading: 728

Actual Reading: 728

Difference (+/- 10mmHg): 0

Reset (Y/N): N

Flow Check (LPM):

Target Flow: 16.70

Measured Flow: 16.03

3 Point Flow Calibration (Y/N): Y

3 Point Flow Calibration:

Target: 15.0 LPM

Corrected Actual: 14.95 LPM

Target: 18.4 LPM

Corrected Actual: 18.39 LPM

Target: 16.70 LPM

Corrected Actual: 16.68

PQ200 Calibration Sheet

Calibrated By: Kelsea Hunsperger

Date: 2019/11/20

Site Name: New Gold Rainy River Mine

Site Location: Tait Road Station

PQ200 Serial Number: 1751

Calibrator Make: BGI

Calibrator Serial Number: 172457

NIST Certificate Expiry Date: April 30, 2020

System Clock Time:

Actual Time: 10:49

Displayed Time: 11:45

Displayed Year: 2019

Displayed Date: 20 Nov

Time Change (Y/N): Y

Ambient Temperature (°C):

PQ200 Reading: 1.1

Actual Reading: 1.0

Difference (+/- 2°C): 0.1

Temp Reset (Y/N): N

Inspection of Inlet/Seals/Filter:

Cleanliness of Inlet: Good

Glass Jar: Good

Glass Jar Gasket: Good

PM2.5 VSCC Inlet: Good

Filter Holder: Good

Filter Holder Seals: Good

Filter Tensioner: Good

Cleanliness of Fan Filter: Good

Comments/Recommendations:

Ambient Barometric Pressure (mmHg):

PQ200 Reading: 728

Actual Reading: 729

Difference (+/- 10mmHg): 1

Reset (Y/N): N

Flow Check (LPM):

Target Flow: 16.70

Measured Flow: 16.40

3 Point Flow Calibration (Y/N): Y

3 Point Flow Calibration:

Target: 15.0 LPM

Corrected Actual: 14.95 LPM

Target: 18.4 LPM

Corrected Actual: 18.39 LPM

Target: 16.70 LPM

Corrected Actual: 16.68 LPM



TE-5170 Calibration Worksheet

Site Information

Location: Rainy River Mine	Site ID: South	Date: 20-Nov-19
Sampler: E-5170 M FC	Serial No: 3151	Tech: Kelsea Kari

Site Conditions

Barometric Pressure (in Hg): 28.70	Corrected Pressure (mm Hg): 729
Temperature (deg F): 34	Temperature (deg K): 274
Average Press. (in Hg): 28.00	Corrected Average (mm Hg): 711
Average Temp. (deg F): 14	Average Temp. (deg K): 263

Calibration Orifice

Make: Tisch	Qstd Slope: 1.67950
Model: TE-5028A	Qstd Intercept: -0.02910
Serial#: 3662	Date Certified: 17-Jun-19

Calibration Information

Plate or Test #	H2O (in)	Qstd (m³/min)	I (chart)	IC (corrected)	Linear Regression
1	4.30	1.278	48.0	49.02	Slope: 34.5780
2	4.00	1.233	46.0	46.97	Intercept: 4.8170
3	3.40	1.138	44.0	44.93	Corr. Coeff: 0.9921
4	2.80	1.035	40.0	40.85	
5	2.60	0.998	38.0	38.80	# of Observations: 5

Calculations

$$Q_{std} = 1/m[\text{Sqrt}(H_2O(Pa/Pstd)(Tstd/Ta))-b]$$

$$IC = I[\text{Sqrt}(Pa/Pstd)(Tstd/Ta)]$$

Qstd = standard flow rate

IC = corrected chart response

I = actual chart response

m = calibrator Qstd slope

b = calibrator Qstd intercept

Ta = actual temperature during calibration (deg K)

Pa = actual pressure during calibration (mm Hg)

Tstd = 298 deg K

Pstd = 760 mm Hg

For subsequent calculation of sampler flow:

$$1/m((I)[\text{Sqrt}(298/Tav)(Pav/760)]-b)$$

m = sampler slope

b = sampler intercept

I = chart response

Tav = daily average temperature

Pav = daily average pressure

Average I (chart): 44.0

Average Flow Calculation m³/min

1.170995133

Average Flow Calculation in CFM

41.34783816

Sample Time (Hrs): 24.0

Total Flow in m³/min

1686.232992

Total Flow in CFM

59540.88695

NOTE: Ensure calibration orifice has been certified within 12 months of use



TE-5170 Calibration Worksheet

Site Information

Location: Rainy River Mine	Site ID: North	Date: 16-Sep-19
Sampler: E-5170 M FC	Serial No: 3105	Tech: Kelsea H KariL

Site Conditions

Barometric Pressure (in Hg):	Corrected Pressure (mm Hg): 724
Temperature (deg F): 28	Temperature (deg K): 301
Average Press. (in Hg):	Corrected Average (mm Hg): 724
Average Temp. (deg F):	Average Temp. (deg K): 273

Calibration Orifice

Make: Tisch	Qstd Slope: 1.67950
Model: TE-5028A	Qstd Intercept: -0.02910
Serial#: 3662	Date Certified: 17-Jun-19

Calibration Information

Plate or Test #	H2O (in)	Qstd (m3/min)	I (chart)	IC (corrected)	Linear Regression
1	7.35	1.584	50.0	48.53	Slope: 32.4549
2	7.00	1.546	48.0	46.59	Intercept: 0.3013
3	6.35	1.474	46.0	59.00	Corr. Coeff: 0.5609
4	5.30	1.348	44.0	42.71	
5	4.80	1.283	42.0	39.50	# of Observations: 5

Calculations

$$Q_{std} = 1/m[\text{Sqrt}(H_2O(Pa/P_{std})(T_{std}/T_a)) - b]$$

$$IC = I[\text{Sqrt}(Pa/P_{std})(T_{std}/T_a)]$$

Qstd = standard flow rate

IC = corrected chart response

I = actual chart response

m = calibrator Qstd slope

b = calibrator Qstd intercept

Ta = actual temperature during calibration (deg K)

Pa = actual pressure during calibration (mm Hg)

Tstd = 298 deg K

Pstd = 760 mm Hg

For subsequent calculation of sampler flow:

$$1/m((I)[\text{Sqrt}(298/Tav)(Pav/760)] - b)$$

m = sampler slope

b = sampler intercept

I = chart response

Tav = daily average temperature

Pav = daily average pressure

Average I (chart):

Average Flow Calculation m3/min

-0.009282523

Average Flow Calculation in CFM

-0.327765883

Sample Time (Hrs):

Total Flow in m3/min

0

Total Flow in CFM

0

NOTE: Ensure calibration orifice has been certified within 12 months of use



TE-5170 Calibration Worksheet

Site Information

Location: Rainy River Mine	Site ID: South	Date: 16-Sep-19
Sampler: E-5170 M FC	Serial No: 3150	Tech: Kelsea H

Site Conditions

Barometric Pressure (in Hg): 28.70	Corrected Pressure (mm Hg): 729
Temperature (deg F): 79	Temperature (deg K): 299
Average Press. (in Hg):	Corrected Average (mm Hg): 720
Average Temp. (deg F):	Average Temp. (deg K): 273

Calibration Orifice

Make: Tisch	Qstd Slope: 1.67950
Model: TE-5028A	Qstd Intercept: -0.02910
Serial#: 3662	Date Certified: 17-Jun-19

Calibration Information

Plate or Test #	H2O (in)	Qstd (m³/min)	I (chart)	IC (corrected)	Linear Regression
1	9.20	1.783	66.0	64.51	Slope: 30.2986
2	8.60	1.724	64.0	62.55	Intercept: 10.7174
3	6.80	1.535	59.0	59.00	Corr. Coeff: 0.9909
4	5.40	1.370	52.0	50.83	
5	3.40	1.090	45.0	43.98	# of Observations: 5

Calculations

$$Q_{std} = 1/m[\text{Sqrt}(H_2O(Pa/P_{std})(T_{std}/T_a)) - b]$$

$$IC = I[\text{Sqrt}(Pa/P_{std})(T_{std}/T_a)]$$

Qstd = standard flow rate

IC = corrected chart response

I = actual chart response

m = calibrator Qstd slope

b = calibrator Qstd intercept

Ta = actual temperature during calibration (deg K)

Pa = actual pressure during calibration (mm Hg)

Tstd = 298 deg K

Pstd = 760 mm Hg

For subsequent calculation of sampler flow:

$$1/m((I)[\text{Sqrt}(298/Tav)(Pav/760)] - b)$$

m = sampler slope

b = sampler intercept

I = chart response

Tav = daily average temperature

Pav = daily average pressure

Average I (chart): 43.0

Average Flow Calculation m³/min

1.089096864

Average Flow Calculation in CFM

38.45601028

Sample Time (Hrs): 24.0

Total Flow in m³/min

1567.646027

Total Flow in CFM

55353.5812

NOTE: Ensure calibration orifice has been certified within 12 months of use