

Memorandum

To: Arlene Stearman, Alexco Keno Hill Mining Corp.

From: Emilie Bouchard, Ensero Solutions Canada, Inc.

CC: Kai Woloshyn, Ensero Solutions Canada, Inc.

Date: March 30, 2022

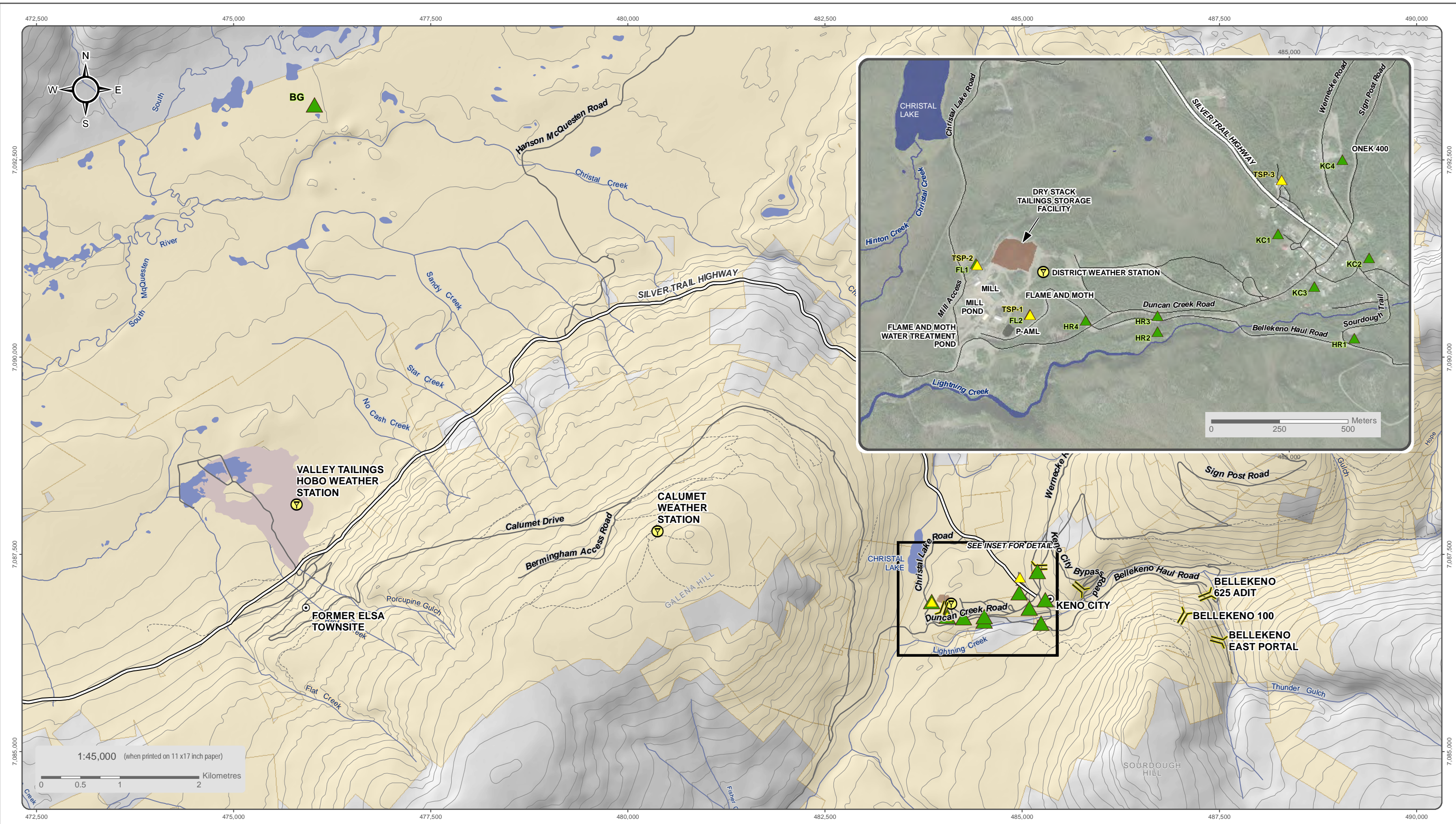
Re: Air Quality Monitoring Summary 2021, Keno, YT

Attachments: A1 to A5 – Results and Meteorological Data (2012-2021)
B – Statistical Tests Results

1 INTRODUCTION

Alexco Keno Hill Mining Corp. (AKHM) submitted a Dust Abatement and Monitoring Plan (AKHM, 2021) to the Yukon Government to fulfill conditions set out in Schedule B of Quartz Mining License QML-0009 (issued November 27, 2019). The air quality monitoring program was established in 2009, in accordance with recommendations (clause 68 to 70) stated in the Decision Document for the assessment of the Bellekeno Mine Project (YESAB File Number 2009-0030). Air quality was monitored using dustfall monitoring stations installed at four locations near the Keno District Mill site (2011). The monitoring program was amended in 2012 in accordance with the Decision Document (clauses 36 to 37) for the assessment of the Onek and Lucky Queen Deposit production (YESAB File Number 2011-0315). The amended program included measurement of total particulates per volume of air for select size fractions (total suspended particulates [TSP]). Additional sampling for coarse (PM₁₀) and fine (PM_{2.5}) fractions of particulate matter began in August 2015, following the revised Dust Abatement and Monitoring Plan required in the Decision Document (clause 19) for the assessment of the Flame & Moth Development and Production Program (YESAB file Number 2013-0161). Currently two air quality sampling stations are used for the project. This memorandum presents the results of the air quality monitoring program through 2021.

The goal of the monitoring program is to collect monthly samples from three locations (TSP-1, TSP-2, and TSP-3; Figure 1-1), to capture variability in air quality from various weather conditions. Potential dust sources include the DSTF, the crusher (building constructed over crusher in 2020), and unpaved access roads.



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Satellite Imagery obtained from Yukon Geomatics map service <http://mapservices.gov.yk.ca/ArcGIS/services/> on January 2021

Datum: NAD 83; Map Projection: UTM Zone 8N

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- ▲ Alexco TSP Monitoring Stations
- ▲ YG PM10 Monitoring Sites 2013
- Y Weather Station
- Adit
- Mine Feature Footprint
- Current DSTF
- Alexco/ERDC Quartz Claims
- Waterbody
- Watercourse
- Silver Trail Highway
- Other Road
- Limited-Use Road



ALEXCO KENO HILL MINING CORP.

FIGURE 1-1
METEOROLOGICAL AND
AIR QUALITY MONITORING STATIONS LOCATION

JANUARY 2021

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(Last revised by: amatt@alexco.com 2021-01-12 09:30 AM)

2 SITE ACTIVITIES

Underground mine development activities restarted at Bermingham and Flame & Moth in Q3 of 2020. In Q4 of 2020 ore production from Bellekeno resumed and the District Mill returned to operation, including the placement of tailings at the dry stack tailings facility (DSTF). Production from Bellekeno Mine continued until October 15, 2021 and the last of the Bellekeno ore was processed in the mill the same day. Underground development at Bermingham and Flame & Moth continued throughout 2021. Further details on construction activities in 2021 are described in the following sections.

2.1 MINE INFRASTRUCTURE

In 2021, the concrete foundation for the Flame & Moth ventilation raise was prepared and propane tank placed nearby. The footprint for the non-acid generating and/or metal leaching (N-AML) waste rock storage area was expanded by removing trees and overburden.

Surface construction activities at Bermingham included the construction of the temporary ore and potentially acid generating and/or metal leaching (P-AML) waste rock storage area; completion of one of two P-AML waste rock storage facilities, completion of the Bermingham vent raise and associated primary fan and heater and installation of a nearby propane tank. The Bermingham water treatment plant was upgraded to include an ammonia treatment plant. The site was connected to the regional electrical power grid and the diesel generator removed and a smaller backup generator installed.

2.2 ROAD CONSTRUCTION

In 2021 the Bermingham Haul Road was improved to safely accommodate ore haulage trucks. Improvements included grading and construction of run-away lanes, berms and widening to allow areas for light vehicles to pull off. No major upgrades occurred on the roads to Lucky Queen, Christal Lake Road, Keno City to Bellekeno Haul Road Bypass, or the Bellekeno Haul Road in 2021. Standard maintenance occurred throughout the year.

2.3 MILL SITE CONSTRUCTION

In 2021, a second office and dry facility were commissioned along with a warehouse and yard adjacent to the District Mill. The enclosure of the secondary crusher building, and dust suppression was completed and a new building to protect regrind mills from the elements constructed.

Ditches and culverts at the mill yard continued to be maintained to facilitate channeling melt water in the spring and storm events into to sediment basins. Organics from the construction of the warehouse yard were either stockpiled or used on the DSTF.

2.4 DRY STACK TAILINGS FACILITY

In 2021, liner was laid for additional tailings placement in accordance with the phase 1 DSTF design. Maintenance of the ditches and sumps were made in preparation for winter. Additional maintenance activities were completed in response to recommendations from the annual geotechnical inspection.

2.5 FLAT CREEK (ELSA) CAMP UPGRADES

The welcome center at the Flat Creek Camp was commissioned in 2021. Other upgrades included: the replacement and relocation of the propane tank; additional fire protection; and the demolition of an abandoned structure.

3 INSTRUMENTATION AND METHODOLOGY

Two BGI Omni Ambient Air Quality Samplers (Figure 3-1) were commissioned in August 2012, one to the east of the mill and crusher (TSP-1) and one at the toe of the dry stack tailings facility (TSP-2). A third sampler (TSP-3), located in Keno City, was commissioned in December 2014, in accordance with the revised Dust Abatement and Monitoring Plan required in the Decision Document for the assessment of the Flame & Moth Development and Production Program (YESAB file Number 2013-0161). In August 2018, the plan was further revised, TSP-1 was relocated to the DSTF phase 2 expansion area to characterize ambient concentrations closer to town, and TSP-3 was relocated to the Alexco house in Keno City. The air quality samplers are equipped with three jet sizes: TSP, PM₁₀, or PM_{2.5} inlets (Figure 3-2). In 2021 TSP-1 was damaged and removed from service.

Samples are collected following Ensero's standard operating procedure (Ambient Air Quality Installation and Standard Operating Procedure; Ensero, 2021) to comply with the 24-hr, gravimetric National Air Pollution Surveillance (NAPS) reference method. If the 24-hr run is interrupted (e.g., power loss) a minimum of 75% data completeness is required for comparison to the Standard (CCME, 2011). Filters that run for more than 18 hours are retained and sent to the laboratory for analysis.

On a monthly basis a total of nine samples are collected at each site (three samples for each filter inlet size), and sent to Bureau Veritas Laboratories (formerly Maxxam Analytics) for gravimetric analysis and inductively coupled plasma mass spectrometry (ICP-MS) for the metals in the TSP jet sample only. The monthly monitoring requirements are summarized as:

- Three (3) 24-hr runs with the TSP jet installed at each site: TSP-1, TSP-2, and TSP-3;
- Three (3) 24-hr runs with the PM_{2.5} jet installed at each site: TSP-1, TSP-2, and TSP-3; and
- Three (3) 24-hr runs with the PM₁₀ jet installed at each site: TSP-1, TSP-2, and TSP-3.

Occasionally monthly requirements cannot be met due to operating conditions. The air quality sampling equipment is not designed to operate below -20°C therefore, sampling is typically reduced during winter months. In 2021, one BGI Omni Ambient Air Quality Sampler was damaged and could not be repaired. Consequently, no samples were collected from the TSP-1 location. In May, no samples were collected at TSP-2 and only three PM₁₀ samples were collected at TSP-3. From July to September no samples were collected from TSP-2 and TSP-3. In October, only four PM_{2.5} samples were collected at TSP-2. Two PM_{2.5} samples and three TSP samples were missed at TSP-3 in October. Sampling errors and missed sampling coincide with power failures or time not recorded (i.e., runs were less than 18 hours).

The dust sampling program is completed concurrently with meteorological monitoring, particularly temperature, windspeed, and wind direction. This meteorological data is key in understanding where the prevailing winds move dust. The Keno District Mill weather station records hourly wind speed and direction (height of 10 meters).



Figure 3-1: BGI Omni Ambient Air Quality Sampler



Figure 3-2: Inlet Jet Sizes: TSP (grey), PM₁₀ (blue), and PM_{2.5} (red)

3.1 QUALITY ASSURANCE/QUALITY CONTROL

Field blanks were collected at a rate of one blank per month as a quality assurance and quality control measure. Once a month, while visiting a station, a blank filter is left inside the ambient air quality sampler housing while a regular run is occurring.

Collection of blanks began in December 2015. Each month the blank is sent to Bureau Veritas Laboratories with the full month of samples to be analysed for gravimetric analysis and ICP metals mass spectrometry. To date, 79 blanks have been collected, with most results measured as less than the detection limit. Results greater than two times the reported detection limit (RDL) are shown in Table 1. Note that blank results from September 29, 2017, were removed from the database as unusually elevated values indicated potential contamination of the filter.

Blanks provide information on potential sampler and monitor contamination, as well as ambient air conditions. The 2021 blanks showed results higher than Reported Detection Limits in March and May seen in Table 3-1 in blue. In March 2019, detection limits were revised for multiple parameters, and hence blanks would report more concentrations and insights into data.

Table 3-1: 2016 to 2021 Blanks with Results Greater Than Two Times the Reported Detection Limit (RDL)

Date	Parameters
29-Sep-2016	Cr, Sr
29-Dec-2016	Cr
29-Jan-2017	Cr
25-Mar-2017	Cr
25-May-2017	Cr, Fe, Zn
27-July-2017	Cr
21-Mar-2018	Cr
30-Oct-2018	Cr, Zn
27-Dec-2018	Fe
28-Mar-2019	Ni, Zn, Ca, As, Mn, Cr
30-Apr-2019	Na, Zn, Ca, Ba, Cd, K, Cr, Cu
28-May-2019	Cr
25-Jun-2019	Ni, Zn, Ca, Cr
30-Jul-2019	Zn, Ca, Cr
30-Aug-2019	Pb, Ni, Zn, Mn, Cr
27-Sep-2019	Pb, Zn, Cd, Mn, Cr
29-Oct-2019	As, Cr, Cu, Ni, Zn
28-Nov-2019	Ca, Cr, Zn
27-Dec-2019	Ca, Cr, Zn
31-Jan-2020	Cd, Ca, Cr, Mo
28-Feb-2020	Cr, Zn

Date	Parameters
31-Mar-2020	Ca, Cr, Pb, Mn, Zn
30-Apr-2020	Cd, Ca, Cr, Ni, Zn
30-May-2020	Ca, Cr
24-Jun-2020	Ba, Ca, Cr, Fe, Pb, Mn
29-Aug-2020	Cr, Cu
25-Sep-2020	Cd, Ca, Cr, Zn
24-Nov-2020	Ca, Cr, Pb
19-Mar-2021	Ba, Ca, Cr, Pb, Mn, Ni, Zn
19-May-2021	Cd, Cr, Fe, Ni

Note: cells highlighted blue are 2021 samples where blanks were greater than two times the Reported Detection Limit.

4 RESULTS

4.1 AMBIENT TSP, PM₁₀ AND PM_{2.5} CONCENTRATIONS

Results of the gravimetric analyses are converted into 24-hr average ambient concentrations based on the flow rate of the instruments. These are compared with the Yukon Ambient Air Quality Standard (YAAQS,2019; 24-hr average):

- 120 µg/m³ (60 µg/m³ annual average) for TSP;
- 50 µg/m³ for PM₁₀; and
- 27 µg/m³ (8.8 µg/m³ annual average) for PM_{2.5}.

4.1.1 2021 Sample Results

Summary statistics for January 2021 to December 2021 are presented in Table 4-1 below for the two sampling locations (TSP-2 and TSP-3). When results were below the detection limit, half the detection limit was used to calculate the summary statistics.

For the 2021 monitoring period, all results met standards for YAAQS, except for one fine particulate matter (PM_{2.5}) reading of 31.4 µg/m³ recorded on June 22. The greatest average TSP concentration was measured at TSP-3 (4.0 µg/m³) and the lowest average at TSP-2 (3.4 µg/m³). The difference between TSP concentrations were not statistically significant and concentrations are less than the YAAQS (120 µg/m³). Additionally, TSP average annual concentrations (TSP-2: 3.4 µg/m³, TSP-3: 4.0 µg/m³) are also well below the YAAQS annual average (60 µg/m³).

For coarse particulate matter (PM₁₀), the greatest average concentration was recorded at TSP-2 (7.0 µg/m³) and the lowest average at TSP-3 (4 µg/m³). PM₁₀ concentrations between stations were not significant and were below the YAAQS (50 µg/m³). For fine particulate matter (PM_{2.5}), the greatest average concentration was recorded at TSP-2 (5.7 µg/m³) and the lowest average at TSP-3 (3.7 µg/m³). PM_{2.5} concentrations between stations were not significant and were below the YAAQS (27 µg/m³) except for one TSP-2 concentration of 31.4 µg/m³ recorded on June 22. The PM_{2.5} average annual concentrations (TSP-2: 5.7 µg/m³, TSP-3: 3.7 µg/m³) are also below the YAAQS (8.8 µg/m³).

Table 4-1: Total Suspended Particulates, Coarse and Fine Particulate Matter Summary Statistics 2021 ($\mu\text{g}/\text{m}^3$)

	TSP ($\mu\text{g}/\text{m}^3$)		PM ₁₀ ($\mu\text{g}/\text{m}^3$)		PM _{2.5} ($\mu\text{g}/\text{m}^3$)	
Yukon Ambient Air Quality Standards	120		50		27	
Sampling Location	TSP-2	TSP-3	TSP-2	TSP-3	TSP-2	TSP-3
Average	3.4	4.0	7.0	4.0	5.7	3.7
Count	18	18	22	18	23	21
Minimum	2.8	2.8	2.8	2.8	2.8	2.8
Maximum	11.5	7.1	28.5	7.1	31.4	8.7
Geometric Mean	3.2	3.7	4.9	3.7	4.3	3.4
Count <DL	0	0	0	0	0	0
Standard Deviation	2.1	1.7	7.5	1.7	6.4	1.9
1st Quartile	2.8	2.8	2.8	2.8	2.8	2.8
Median	2.8	2.8	2.8	2.8	2.8	2.8
3rd Quartile	2.8	5.8	8.2	5.8	6.2	2.8
99 Percentile	10.5	7.1	28.4	7.1	27.8	8.4
Count Over Standard	0	0	0	0	1	0
% Over Standard	0	0	0	0	4.3	0

Note: bold = exceedance of YAAQS

4.1.2 Cumulative 2012-2021 Results

Summary statistics for 2012-2021 are presented in Table 4-2 for the three sampling locations (TSP-1, TSP-2, and TSP-3), and the complete results are presented in Attachment A1 and A2. When results were below the detection limit, half the detection limit was used to calculate the summary statistics.

Most results met standards for YAAQS, apart from one PM₁₀ exceedance at TSP-3 on July 23, 2020, and two PM_{2.5} exceedances at TSP-1 and TSP-2 on July 9, 2019, and June 22, 2021, respectively.

The sample collected on July 14, 2017 is considered an outlier as it was an order of magnitude higher than historic TSP-3 and TSP-1 results, and results for TSP-2 from samples collected on the same day. The air quality monitoring results on the same day for TSP-1 for PM_{2.5} was 7.9 $\mu\text{g}/\text{m}^3$ and for TSP-2 PM₁₀ was 9.2 $\mu\text{g}/\text{m}^3$. Both TSP-1 and TSP-2 are closer to the District Mill and DSTF area and could explain the exceedance. The TSP-3 PM_{2.5} outlier result from July 14, 2017 may be due to laboratory error or filter contamination between being provided by the lab and being analysed in the lab. No trends in the TSP, PM₁₀, and PM_{2.5} data before, on, or after this date validate this outlier result. Note that over half of the results for each of the three parameters are below the detection limit at all three stations.

The air quality monitors located on site are 160 m (TSP-1) and 46 m (TSP-2) away from the DSTF, and 163 m (TSP-1) and 240 m (TSP-2) away from the crusher, two of the main potential dust sources. The nearest residence is 710 m

from the DSTF and 860 m from the crusher. As shown in the Windrose plots for 2011-2021 and 2021 (see Section 3.3) the prevailing winds measured by the District Mill weather station come from the east. Since the DSTF and crusher are west and downwind of Keno City, this lowers the potential contribution of dust laden air to Keno City. TSP levels experienced at the nearest residence are better approximated by levels observed at air quality monitor TSP-3, located in Keno City (950 m from the DSTF and 1,240 m from the crusher). Note that the mine announced a temporary closure as of September 4, 2013, and operations were limited to water treatment, inspections, and monitoring until the commencement of underground development at Flame & Moth in May 2018. Therefore, the crusher and DSTF would not have contributed to fugitive dust emissions from September 2013 to May 2018.

Table 4-2: Total Suspended Particulates, Coarse, and Fine Particulate Matter Summary Statistics 2012–2021 ($\mu\text{g}/\text{m}^3$)

	TSP ($\mu\text{g}/\text{m}^3$)			PM ₁₀ ($\mu\text{g}/\text{m}^3$)			PM _{2.5} ($\mu\text{g}/\text{m}^3$)		
Yukon Ambient Air Quality 24 hour Standards	120			50			28		
Sampling Location	TSP-1*	TSP-2	TSP-3	TSP-1	TSP-2	TSP-3	TSP-1	TSP-2	TSP-3*
Average	5.2	6	5.1	4.7	4.8	4.5	3.9	4.3	4.2
Count	293	301	210	180	190	199	175	197	196
Minimum	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
Maximum	53.2	62.2	68.1	46	38.1	65.7	28.2	31.4	21.2
Geometric Mean	4	4.4	4	3.7	3.7	3.6	3.4	3.6	3.6
Count <DL	0	0	0	0	0	0	0	0	0
Standard Deviation	5.4	6.9	6.2	5.6	5.4	5.3	3.1	3.9	2.8
1 st Quartile	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
Median	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
3 rd Quartile	6.1	6.9	6.1	2.8	2.8	2.8	2.8	2.8	2.8
99 Percentile	22.3	34.9	22.6	36.3	29.2	18.7	15.9	20.9	13.6
Count Over Standard	0	0	0	0	0	1	1	1	0
% Over Standard	0	0	0	0	0	0.5	0.6	0.5	0

Note: bold = exceedance of YAAQS

* Two outliers removed (TSP-1 976.4 $\mu\text{g}/\text{m}^3$ on July 1, 2015; TSP-3 65 $\mu\text{g}/\text{m}^3$ on July 14, 2017)

The greatest average TSP concentration was measured at TSP-2 (6.0 $\mu\text{g}/\text{m}^3$) and the lowest average at TSP-3 (5.1 $\mu\text{g}/\text{m}^3$). No significant differences were detected between locations and all concentrations were less than the YAAQS. For coarse particulate matter (PM₁₀), the greatest average concentration was recorded at TSP-2 (4.8 $\mu\text{g}/\text{m}^3$) while TSP-3 had the lowest measured average (4.2 $\mu\text{g}/\text{m}^3$); however, the difference is not statistically significant, and concentrations are less than the YAAQS, except for one exceedance at TSP-3. For fine particulate matter (PM_{2.5}), the greatest average concentration was recorded at TSP-2 (4.3 $\mu\text{g}/\text{m}^3$) and the lowest average at TSP-1 (3.9 $\mu\text{g}/\text{m}^3$). No significant differences were seen between sites for PM_{2.5}; however, there were two exceedances recorded at TSP-1 and TSP-2.

Most 2021 results were approximately 1.0 $\mu\text{g}/\text{m}^3$ less than the cumulative 2012-2021 average. Average coarse particulate matter was slightly greater than the 2012-2021 average at TSP-2 and average fine particulate matter was

slightly greater than the 2012-2021 average at TSP-2. Exceedances were recorded for TSP concentration at monitoring location TSP-1 (July 1, 2015); however, this was determined to be an outlier as all other results were less than the YAAQS.

4.2 METAL SPECIATION

There are no ambient air quality standards for metals in Yukon; however, the Ontario Ministry of Environment has developed a comprehensive list of Ambient Air Quality Criteria (AAQC) that includes 24-hr average concentrations for metals (Ontario Ministry of Environment, 2012). These are referenced in the following discussion for information (context) only.

4.2.1 2021 Metal Speciation Results

Table 4-3 presents the summary statistics for January 2021 to December 2021 for metal concentrations from samples TSP-2 and TSP-3. When results were below the detection limit, a value of half the detection limit was used to calculate the statistics. All parameters in 2021 met AAQC criteria except for cadmium at TSP-3, which exceeded standards 5% of the time.

Table 4-3: Metal Concentrations Summary Statistics (24-hr) for 2021

	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	P	K	Se	Si	Ag	Na	Sr	S	Sn	Ti	V	Zn	Zr
Ontario Ambient Air Quality Criteria (µg/m ³)	n/a	25	0.3	10	0.01	120	0.025	n/a	0.5	0.1	50	4	0.5	n/a	0.4	120	2	n/a	n/a	10	n/a	1	n/a	120	n/a	10	120	2	120	n/a
TSP-2																														
Average	0.036	0.00083	0.00083	0.0020	0.00035	0.021	0.00051	0.335	0.0804	0.00035	0.003	0.119	0.04464	0.035	0.011	0.00023	0.00190	0.056	0.040	0.00035	0.204	0.00052	0.116	0.00081	69.4	0.00114	0.014	0.014	0.0504	0.003
Count	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21
Minimum	0.014	0.00035	0.00035	0.0003	0.00035	0.021	0.00007	0.069	0.0421	0.00035	0.001	0.021	0.00035	0.021	0.001	0.00021	0.00096	0.056	0.035	0.00035	0.139	0.00014	0.069	0.00035	69.4	0.00035	0.014	0.014	0.0035	0.003
Maximum	0.175	0.00560	0.00533	0.0085	0.00035	0.021	0.00182	0.917	0.1224	0.00035	0.010	0.642	0.20556	0.158	0.077	0.00062	0.00856	0.056	0.079	0.00035	0.736	0.00185	0.208	0.00200	69.4	0.01667	0.014	0.014	0.1958	0.003
Geometric Mean	0.027	0.00054	0.00056	0.0014	0.00035	0.021	0.00029	0.260	0.0777	0.00035	0.002	0.089	0.01452	0.029	0.005	0.00022	0.00160	0.056	0.039	0.00035	0.171	0.00032	0.105	0.00072	69.4	0.00044	0.014	0.014	0.0351	0.003
Count <DL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Standard Deviation	0.036	0.00118	0.00111	0.0019	0.00000	0.000	0.00055	0.204	0.0214	0.00000	0.002	0.129	0.05694	0.031	0.016	0.00009	0.00163	0.000	0.014	0.00000	0.168	0.00054	0.054	0.00041	0.0	0.00356	0.000	0.000	0.0448	0.000
1st Quartile	0.014	0.00035	0.00035	0.0009	0.00035	0.021	7.00E-05	0.153	0.0658	0.00035	0.001	0.058	0.00342	0.021	0.002	0.00021	0.00111	0.056	0.035	0.00035	0.139	0.00014	0.069	0.00035	69.4	0.00035	0.014	0.014	0.0208	0.003
Median	0.029	0.00035	0.00035	0.0012	0.00035	0.021	0.00029	0.361	0.0736	0.00035	0.002	0.078	0.02028	0.021	0.006	0.00021	0.0014	0.056	0.035	0.00035	0.139	0.00014	0.069	0.00081	69.4	0.00035	0.014	0.014	0.0424	0.003
3rd Quartile	0.036	0.00096	0.00106	0.0025	0.00035	0.021	0.00074	0.444	0.0943	0.00035	0.003	0.137	0.06139	0.044	0.015	0.00021	0.00186	0.056	0.035	0.00035	0.139	0.00064	0.153	0.00104	69.4	0.00035	0.014	0.014	0.0568	0.003
Count exceeding standard	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% exceeding standard	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TSP-3																														
Average	0.036	0.00088	0.00040	0.0016	0.00035	0.021	0.00851	0.309	0.0826	0.00035	0.002	0.079	0.00876	0.027	0.003	0.00022	0.00164	0.056	0.045	0.00035	0.278	0.00018	0.147	0.00082	69.4	0.00048	0.014	0.014	0.0285	0.003
Count	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21
Minimum	0.014	0.00035	0.00035	0.0003	0.00035	0.021	0.00007	0.069	0.0603	0.00035	0.000	0.050	0.00081	0.021	0.001	0.00021	0.00079	0.056	0.035	0.00035	0.139	0.00014	0.069	0.00035	69.4	0.00035	0.014	0.014	0.0035	0.003
Maximum	0.119	0.00803	0.00138	0.0042	0.00035	0.021	0.17361	0.528	0.1269	0.00035	0.005	0.299	0.06903	0.050	0.017	0.00049	0.00528	0.056	0.122	0.00035	1.611	0.00057	0.250	0.00192	69.4	0.00162	0.014	0.014	0.0864	0.003
Geometric Mean	0.029	0.00047	0.00037	0.0013	0.00035	0.021	0.00027	0.250	0.0805	0.00035	0.002	0.071	0.00364	0.025	0.002	0.00022	0.00149	0.056	0.041	0.00035	0.198	0.00016	0.130	0.00074	69.4	0.00043	0.014	0.014	0.0202	0.003
Count <DL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Standard Deviation	0.025	0.00175	0.00022	0.0011	0.00000	0.000	0.03783	0.154	0.0197	0.00000	0.001	0.054	0.01718	0.011	0.003	0.00006	0.00094	0.000	0.026	0.00000	0.343	0.00012	0.071	0.00036	0.0	0.00032	0.000	0.000	0.0239	0.000
1st Quartile	0.014	0.00035	0.00035	0.0009	0.00035	0.021	0.00015	0.153	0.0694	0.00035	0.001	0.054	0.002	0.021	0.001	0.00021	0.00125	0.056	0.035	0.00035	0.139	0.00014	0.069	0.00071	69.4	0.00035	0.014	0.014	0.0121	0.003
Median	0.032	0.00035	0.00035	0.0011	0.00035	0.021	0.00019	0.361	0.0749	0.00035	0.001	0.065	0.00279	0.021	0.002	0.00021	0.00147	0.056	0.035	0.00035	0.139	0.00014	0.139	0.00089	69.4	0.00035	0.014	0.014	0.0174	0.003
3rd Quartile	0.043	0.00035	0.00035	0.0028	0.00035	0.021	0.00029	0.417	0.0972	0.00035	0.002	0.079	0.00539	0.021	0.002	0.00021	0.00167	0.056	0.035	0.00035	0.139	0.00014	0.208	0.00099	69.4	0.00035	0.014	0.014	0.04	0.003
Count exceeding standard	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% exceeding standard	0.0	0.0	0.0	0.0	0.0	0.0	4.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Note: bold = exceeded standard

"n/a" was used to signify when no Ontario Ambient Air Quality Criteria (µg/m³) exists for specific metals.

4.2.2 Cumulative 2012-2021 Metal Speciation Results

Table 4-4 presents the summary statistics for 2012 to 2021 for metal concentrations from samples TSP-1, TSP-2, and TSP-3, while the complete result tables are presented in Attachment A3 to A5. When results were below the detection limit a value of half the detection limit was used to calculate the statistics.

All parameters met AAQC criteria except for cadmium (TSP-2 – 0.7% of samples; TSP-3 – 0.9% of samples), lead (TSP-1 – 0.7% of samples; TSP-2 – 0.3% of samples), and manganese (TSP-2 – 1.3% of samples).

Table 4-4: Metal Concentrations Summary Statistics (24-hour) 2012 – 2021

	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	P	K	Se	Si	Ag	Na	Sr	S	Sn	Ti	V	Zn	Zr	
Ontario Ambient Air Quality Criteria (µg/m³)	n/a	25	0.3	10	0.01	120	0.025	n/a	0.5	0.1	50	4	0.5	n/a	0.4	120	2	n/a	n/a	10	n/a	1	n/a	120	n/a	10	120	2	120	n/a	
TSP-1*																															
Average	0.168	0.1099	0.0441	0.0025	0.0045	0.023	0.0110	0.335	0.0769	0.0275	0.028	0.183	0.0521	0.034	0.010	0.0275	0.0278	0.176	0.557	0.0278	0.375	0.0166	0.240	0.0029	14.1	0.0449	0.014	0.020	0.0345	0.028	
Count	296	296	296	296	296	296	296	296	294	296	296	296	296	296	296	296	296	296	296	296	230	292	294	296	293	296	296	296	296	296	
Minimum	<0.20	<0.0050	<0.0050	<0.0050	<0.0050	<0.30	<0.0010	<1.0	<0.30	<0.0050	<0.0050	<0.30	<0.0050	<0.30	<0.0050	<0.0030	<0.0050	<0.80	<0.50	<0.0050	<2.0	<0.0020	<1.0	<0.0050	<2.0	<0.0050	<0.20	<0.20	<0.050	<0.050	
Maximum	5.292	0.1389	0.0556	0.0222	0.0056	0.264	0.0139	8.722	0.1458	0.0347	0.035	2.528	1.0833	0.429	0.301	0.0347	0.0347	0.208	0.694	0.0792	3.875	0.0208	2.444	0.0410	69.4	0.1931	0.042	0.021	0.8167	0.035	
Geometric Mean	0.110	0.0403	0.0205	0.0021	0.0031	0.021	0.0055	0.214	0.0723	0.0133	0.019	0.106	0.0294	0.027	0.006	0.0124	0.0177	0.158	0.379	0.0133	0.257	0.0075	0.206	0.0021	0.4	0.0199	0.014	0.019	0.0206	0.021	
Count <DL	238	293	287	214	296	292	255	185	15	296	238	45	235	236	206	290	235	296	289	294	181	291	235	213	270	289	295	296	184	296	
Standard Deviation	0.433	0.0565	0.0223	0.0025	0.0021	0.020	0.0056	0.744	0.0240	0.0140	0.013	0.244	0.0784	0.042	0.025	0.0140	0.0136	0.062	0.266	0.0146	0.545	0.0084	0.201	0.0036	27.8	0.0252	0.002	0.003	0.0689	0.013	
1st Quartile	0.139	0.1389	0.0556	0.0021	0.0056	0.021	0.0139	0.139	0.0639	0.0347	0.035	0.051	0.0556	0.021	0.006	0.0347	0.0347	0.208	0.694	0.0347	0.208	0.0208	0.208	0.0021	0.1	0.0556	0.014	0.021	0.0139	0.035	
Median	0.139	0.1389	0.0556	0.0021	0.0056	0.021	0.0139	0.139	0.075	0.0347	0.035	0.09	0.0556	0.021	0.006	0.0347	0.0347	0.208	0.694	0.0347	0.208	0.0208	0.208	0.0021	0.1	0.0556	0.014	0.021	0.0139	0.035	
3rd Quartile	0.139	0.1389	0.0556	0.0021	0.0056	0.021	0.0139	0.389	0.0917	0.0347	0.035	0.302	0.0556	0.021	0.006	0.0347	0.0347	0.208	0.694	0.0347	0.208	0.0208	0.208	0.0021	0.3	0.0556	0.014	0.021	0.0319	0.035	
Count Over Standard	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Over Standard	0	0	0	0	0	0	0	0	0	0	0	0	0.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TSP-2																															
Average	0.127	0.10055	0.04048	0.0025	0.00412	0.022	0.01032	0.288	0.0783	0.0252	0.026	0.231	0.05556	0.038	0.022	0.02518	0.02579	0.166	0.515	0.02519	0.35	0.01523	0.209	0.00241	18.8	0.04033	0.014	0.019	0.045	0.026	
Count	303	303.0000	303.0000	303	303.0000	303.0000	303.0000	303	303.0000	303	303.0000	303.0000	303	303.0000	303.0000	303.0000	303	303.0000	303	303.0000	243.0000	301	303.0000	303.0000	300.0000	303	303.0000	303	303.0000	303.0000	
Minimum	0.014	0.0004	0.0004	0.0003	0.0004	0.021	0.0001	0.069	0.0208	0.00035	0.0000	0.0210	0.00035	0.0210	0	0.0002	0.00082	0.056	0.035	0.0004	0.1390	0.00014	0.0690	0.00035	0.1000	0.00035	0.014	0.014	0.0035	0.0030	
Maximum	1.625	0.1389	0.0556	0.0476	0.0056	0.099	0.0403	3.472	0.1889	0.03472	0.0350	2.7780	0.73611	0.4680	0.651	0.0347	0.06417	0.208	0.694	0.0347	5.0280	0.02083	1.1250	0.03167	69.4000	0.05556	0.032	0.021	0.4819	0.0350	
Geometric Mean	0.095	0.0284	0.0159	0.002	0.0026	0.021	0.0046	0.221	0.073	0.00975	0.0160	0.1310	0.03171	0.0300	0.008	0.0088	0.01487	0.145	0.319	0.0097	0.2380	0.00583	0.1890	0.00185	0.7000	0.01416	0.014	0.019	0.0264	0.0180	
Count <DL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Standard Deviation	0.137	0.06201	0.02441	0.0033	0.00234	0.006	0.00645	0.297	0.0262	0.0154	0.015	0.281	0.06411	0.041	0.065	0.01544	0.01489	0.068	0.29	0.01541	0.533	0.00917	0.114	0.00267	30.8	0.02465	0.001	0.003	0.0607	0.014	
1st Quartile	0.112	0.0013	0.0033	0.0021	0.0004	0.021	0.0010	0.139	0.0625	0.00035	0.0050	0.0600	0.05556	0.0210	0.006	0.0005	0.0027	0.0560	0.083	0.0004	0.1390	0.00082	0.2080	0.002	0.1000	0.00035	0.0140	0.014	0.0139	0.0030	
Median	0.139	0.1389	0.0556	0.0021	0.0056	0.021	0.0139	0.139	0.0775	0.03472	0.0350	0.1240	0.05556	0.0210	0.006	0.0347	0.03472	0.208	0.694	0.0347	0.2080	0.02083	0.2080	0.00208	0.1000	0.05556	0.014	0.021	0.0139	0.0350	
3rd Quartile	0.139	0.1389	0.0556	0.0021	0.0056	0.021	0.0139	0.41	0.0958	0.03472	0.0350	0.3460	0.05556	0.0440	0.012	0.0347	0.03472	0.208	0.694	0.0347	0.2080	0.02083	0.2080	0.00208	69.4000	0.05556	0.014	0.021	0.0510	0.0350	
Count Over Standard	0	0.0000	0.0000	0	0.0000	0	2.0000	0	0	0	0.0000	0.0000	1	0.0000	4	0.0000	0	0	0	0.0000	0.0000	0	0.0000	0	0.0000	0	0	0	0.0000	0.0000	
% Over Standard	0	0	0	0	0	0	0.7	0	0	0	0	0	0.3	0	1.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TSP-3																															
Average	0.141	0.08572	0.03442	0.0022	0.00356	0.024	0.00969	0.362	0.0764	0.02151	0.022	0.093	0.03553	0.037	0.005	0.02148	0.02196	0.15	0.446	0.02151	0.252	0.01288	0.203	0.00455	25.8	0.03444	0.014	0.018	0.0385	0.023	
Count	216	216.0000	216.0000	216	216.0000	216.0000	216	216.0000	216.0000	216	216.0000	216.0000	216	216.0000	216.0000	216	216.0000	216.0000	216	216.0000	204.0000	216	216.0000	216.0000	213	216.0000	216.0000	216	216.0000	216.0000	
Minimum	0.014	0.0004	0.0004	0.0003	0.0004	0.021	0.00007	0.0690	0.0208	0.00035	0.0000	0.021	0.00035	0.0210	0.0000	0.00021	0.0008	0.056	0.035	0.0004	0.1390	0.00014	0.0690	0.00035	0.1	0.0004	0.0140	0.014	0.0035	0.003	
Maximum	2.778	0.1389	0.0556	0.0236	0.0056	0.218	0.17361	6.4170	0.1583	0.03472	0.0350	0.514	0.06903	0.5530	0.0700	0.03472	0.0347	0.208	0.694	0.0347	1.6110	0.02083	1.4720	0.175	69.4	0.0556	0.0140	0.021	0.6472	0.035	
Geometric Mean	0.083	0.0146	0.0083	0.0018	0.0019	0.022	0.00273	0.2320	0.0730	0.00593	0.0110	0.066	0.01403	0.0270	0.0040	0.00511	0.0102	0.126	0.235	0.0059	0.2120	0.00308	0.1790	0.00169	1.2	0.0086	0.0140	0.018	0.0209	0.014	
Count <DL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Standard Deviation	0.309	0.0675	0.0268	0.0025	0.0025	0.021	0.01308	0.7330	0.0222	0.01676	0.0160	0.088	0.02604	0.0610	0.0060	0.0168	0.0162	0.074	0.316	0.0168	0.2270	0.01008	0.1250	0.019	33.5	0.0268	0.0000	0.003	0.0713	0.016	
1st Quartile	0.04	0.0004	0.0004	0.0014	0.0004	0.021	0.00019	0.1390	0.0635	0.00035	0.0020	0.044	0.002	0.0210	0.0020	0.00021	0.0015	0.056	0.035	0.0004	0.1390	0.00014	0.1810	0.00093	0.1	0.0004	0.0140	0.014	0.0139	0.003	
Median	0.139	0.1389	0.0556	0.0021	0.0056	0.021	0.01389	0.1460	0.0763	0.03472	0.0350	0.065	0.05556	0.0210	0.0060	0.03472	0.0347	0.208	0.694	0.0347	0.2080	0.02083	0.2080	0.00208	0.1	0.0556	0.0140	0.021	0.0139	0.035	
3rd Quartile	0.139	0.1389	0.0556	0.0021	0.0056	0.021	0.01389	0.4170	0.0875	0.03472	0.0350	0.097	0.05556	0.0210	0.0060	0.03472	0.0347	0.208	0.694	0.0347	0.208										

	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	P	K	Se	Si	Ag	Na	Sr	S	Sn	Ti	V	Zn	Zr	
Ontario Ambient Air Quality Criteria ($\mu\text{g}/\text{m}^3$)	n/a	25	0.3	10	0.01	120	0.025	n/a	0.5	0.1	50	4	0.5	n/a	0.4	120	2	n/a	n/a	10	n/a	1	n/a	120	n/a	10	120	2	120	n/a	
Count Over Standard	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Over Standard	0	0.0000	0.0000	0	0.0000	0.000	0.9	0.0000	0.0000	0	0.0000	0.000	0	0.0000	0.0000	0	0.0000	0.000	0	0.0000	0.0000	0	0.0000	0.000	0	0.0000	0.0000	0	0.0000	0.000	

Note: bold = exceeded standard

* Two outliers removed (TSP-1 976.4 $\mu\text{g}/\text{m}^3$ on July 1, 2015; TSP-3 65 $\mu\text{g}/\text{m}^3$ on July 14, 2017)

"n/a" was used to signify when no Ontario Ambient Air Quality Criteria ($\mu\text{g}/\text{m}^3$) exists for specific metals.

Half the RDL was used to calculate averages for samples that were below the RDL. As the samples were not normally distributed and variances were not equal, non-parametric tests (Kruskal-Wallis and Mann-Whitney) were used for statistical comparisons of the sample medians of 2021 data only and medians of data from all years (2012 – 2021) at a significance level (p) of 0.05 (Attachment B). The concentrations of total metals were significantly different ($p < 0.05$) for silver between TSP-2 and TSP-3 in 2021. Slight differences ($0.01 < p < 0.05$) in metal concentrations were also detected between stations for arsenic, copper, lead, and manganese. No detectable differences were found for all other analytes in 2021. Concentrations of total metals measured at TSP-1, TSP-2, and TSP-3 from 2012 to 2021 were significantly different ($p < 0.05$) for aluminum, antimony, arsenic, beryllium, cadmium, cobalt, copper, iron, lead, manganese, molybdenum, nickel, phosphorous, potassium, selenium, silicon, silver, strontium, sulfur, tin, vanadium, zinc, and zirconium. Dunn's pairwise post-hoc test was used to determine between which stations (TSP-1, TSP-2, or TSP-3) analytes significantly differed. Usually, concentrations of total metals were greater at TSP-1 (located closest to mining activity) compared to TSP-3 (located furthest from mining activity). Slight differences ($0.01 < p < 0.05$) were detected for barium, magnesium, and sodium, and no detectable differences were seen for boron, chromium, and titanium.

Dust originating from the DSTF may contain arsenic, aluminum, calcium, iron, magnesium, manganese, lead, and zinc, based on metal characterization analyses of the tailings conducted from 2012 to 2013. From the wind direction distribution, TSP-2 is more frequently located downwind of the DSTF than TSP-1 and may record concentrations of the previously listed metals. The current average concentrations of these parameters remain below recommended standards (Ontario AAQC).

When TSP levels were above average and exceeded Ontario AAQCs (lead at TSP-1), winds were generally blowing from the northeast and from the east (October 23, 2012, and June 18, 2013). Site activities occurring in October 2012 and June 2013 included active mining at Bellekeno, development at Lucky Queen and Onek, milling at the Keno District Mill, and explorations activities at Flame & Moth. Unpaved roads may have contributed ambient dust on these occasions. Roads near TSP stations include mine and public roads (including Duncan Creek Road).

When metal concentrations exceeded the Ontario AAQCs (cadmium, lead, and manganese) at TSP-2, winds were generally blowing from the north-northeast (August 23, 2012). Dust from unpaved roads could have triggered these events. On days where TSP levels were higher than average and/or where exceedances of the Ontario AAQCs were observed for manganese at TSP-2, winds were generally blowing from the northeast (March 23-24, 2013, and August 9, 2017) and from the east (April 7, 2013). On these occasions, the DSTF could have been a source of TSP at TSP-2. Similarly, on days where exceedances of the Ontario AAQCs were observed for cadmium at TSP-2 (September 28, 2013, and October 21, 2015), winds were generally from the northeast or north-northeast suggesting possible contributions of dust from the DSTF and/or from unpaved roads. Site activities occurring in August 2012, March 2013, and April 2013 included mining at Bellekeno, development at Lucky Queen (LQ) and Onek, and milling at the Keno District Mill. Between September 2013 and December 2018, only care and maintenance activities took place (mining and milling activities were superseded) with exception of collaring Flame and Moth Portal in 2016 and the preparation of the Flame and Moth Pond. Detailed meteorological conditions and site activities associated with each ambient air quality sampling event are provided with the complete tabular data in Attachment A1.

4.3 WIND ANALYSIS

Hourly wind speed and direction was recorded between November 2011 and December 2021, at the Keno District Mill weather station (Attachment A1). The wind rose plot shown in Figure 4-1 depicts this information based on 36 wind direction categories. The average wind speed is 1.21 m/s and winds are calm 24% of the time. Note that the wind sensor experienced occasional icing during the winter months and extended periods of zero wind speed were excluded from this analysis. Also, winter wind speeds may occasionally be underestimated due to the presence of ice on the sensor, but these occurrences cannot be detected in the data record. Wind speed and direction frequency distribution are compiled in Table 4-5 below, and are based on eight wind direction categories, and six wind speed categories.

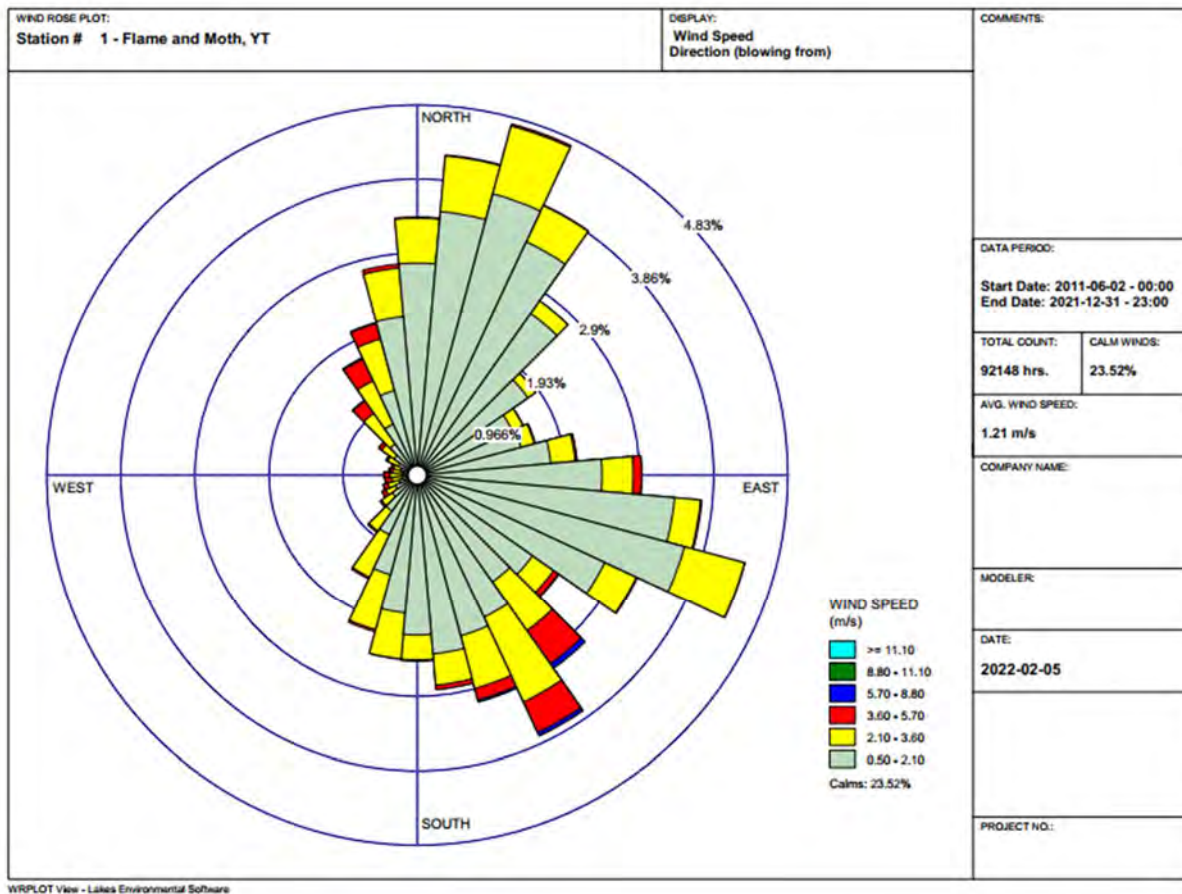


Figure 4-1: Wind Rose (direction blowing from), Keno District Mill Weather Station, June 2011 – December 2021

Table 4-5: Wind Frequency Distribution Keno District Mill, November 2011 – December 2021

Directions / Wind Classes (m/s)	0.50 - 2.10	2.10 - 3.60	3.60 - 5.70	5.70 - 8.80	8.80 - 11.10	>= 11.10	Total (%)
N	12.19	3.19	0.25	0.01	0.00	0.00	15.64
NE	10.17	1.21	0.02	0.00	0.00	0.00	11.40
E	11.46	1.84	0.16	0.00	0.00	0.00	13.46
SE	9.54	3.19	1.13	0.12	0.00	0.00	13.99
S	8.90	2.40	0.18	0.02	0.00	0.00	11.51
SW	2.48	1.43	0.16	0.00	0.00	0.00	4.07
W	0.93	0.60	0.28	0.02	0.00	0.00	1.84
NW	2.21	1.67	0.66	0.04	0.00	0.00	4.57
Sub-Total	57.87	15.54	2.84	0.22	0.01	0.00	76.47
						Calm	23.52
						Total	100

The dominant wind direction is from the north (approximately 16% of the time), followed by the southeast (approximately 14%). When the predominant wind direction is from the northeast, air quality stations TSP-1 and TSP-2 are located downwind of the DSTF and the crusher. When the wind blows from the southeast those same stations are upwind from the DSTF and crusher. Given these generalities TSP-1 and TSP-2 may capture influences from facilities when the wind is from the northeast but are otherwise not downwind. Air quality station TSP-3, located on the outskirts of Keno City, is east of these potential dust sources. Based on Table 4-5, westerly winds only occur about 2% of the time (or roughly 10% of the time when combining northwest, west, and southwest), so the DSTF and crusher are expected to have very limited influence on air quality in Keno City (TSP-3).

4.3.1 2021 Wind Analysis

Hourly wind speed and direction was collected between January 2021 and December 2021, at the Keno District Mill weather station. The wind rose plot in Figure 4-2 depicts this information based on 36 wind direction categories. The average wind speed is 1.29 m/s and winds are calm roughly 22% of the time. Note that the wind sensor experienced occasional icing during the winter months and extended periods of zero wind speed were excluded from this analysis. Also, winter wind speeds may occasionally be underestimated due to the presence of ice on the sensor, but these occurrences cannot be detected in the data record. Wind speed and direction frequency distribution are compiled in Table 4-6 below and are based on eight wind direction categories and six wind speed categories.

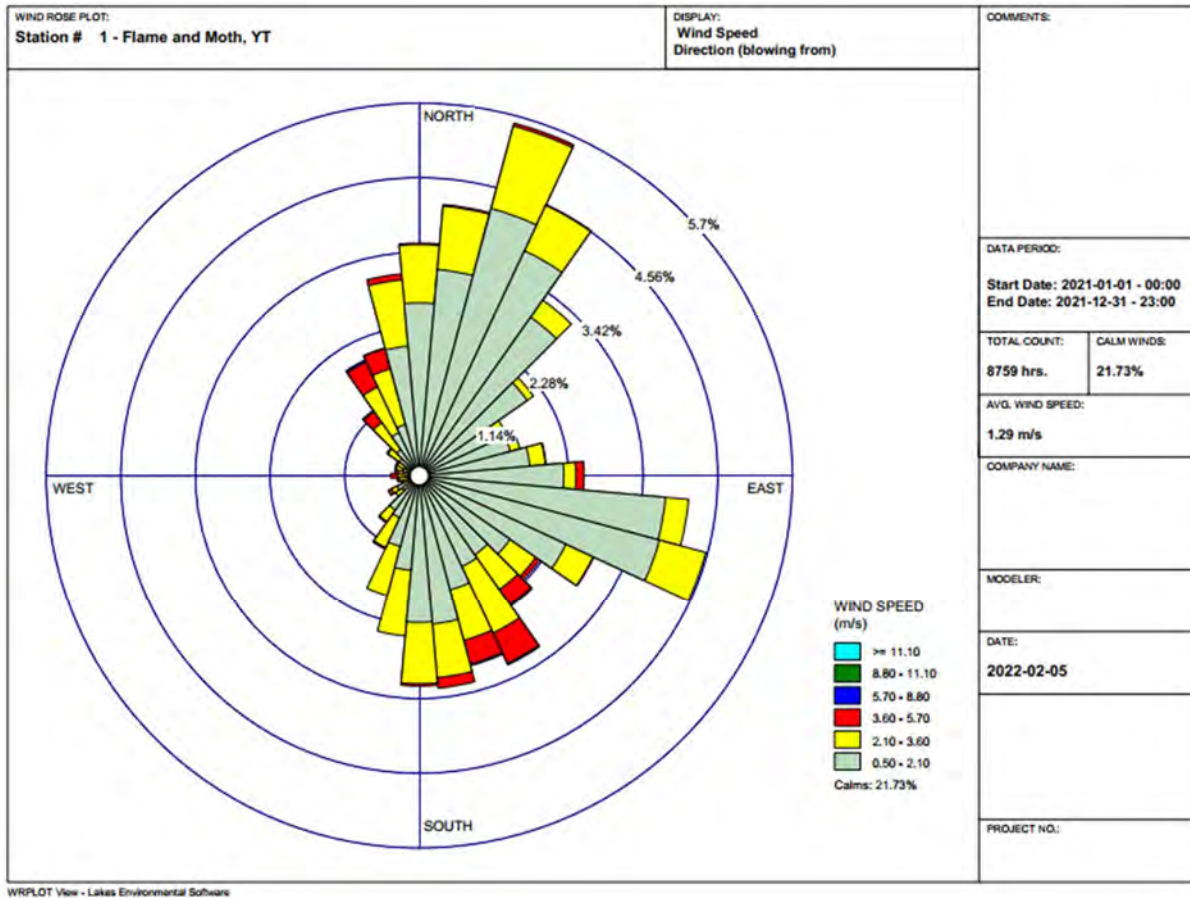


Figure 4-2: Wind Rose (direction blowing from), Keno District Mill Weather Station, January 2021 – December 2021

Table 4-6: Wind Frequency Distribution Keno District Mill, January 2021 – December 2021

Directions / Wind Classes (m/s)	0.50 - 2.10	2.10 - 3.60	3.60 - 5.70	5.70 - 8.80	8.80 - 11.10	>= 11.10	Total (%)
N	11.86	4.61	0.46	0.01	0.00	0.00	16.94
NE	11.25	1.62	0.02	0.00	0.00	0.00	12.89
E	11.90	1.45	0.14	0.00	0.00	0.00	13.48
SE	8.29	3.24	1.04	0.05	0.00	0.00	12.62
S	8.20	3.88	0.41	0.02	0.00	0.00	12.51
SW	2.25	1.07	0.11	0.00	0.00	0.00	3.44
W	0.80	0.63	0.22	0.00	0.00	0.00	1.64
NW	2.11	1.87	0.70	0.07	0.00	0.00	4.75
Sub-Total	56.65	18.38	3.09	0.15	0.00	0.00	78.27
						Calm	21.73
						Total	100

In 2021, the dominant wind direction was from the north (Figure 4-2). These results do not greatly deviate from the June 2011 to December 2021 results.

5 PM₁₀ SAMPLING BY YUKON GOVERNMENT

Independent PM₁₀ sampling was conducted by Yukon Government in 2013 at the locations shown in Figure 1-1. The station labelled BG represents background (8 km outside of Keno), stations labelled KC are in Keno City, stations labelled HR are along the Bellekeno Haul Road and stations labelled FL are fence line stations and correspond to TSP-1 and TSP-2 locations. Five-minute data averaged over the different sampling periods are presented in Table 5-1 below. The sampling period varies between sites (ranges from about 14 to 53 hours) but for comparison purposes, the average results are all below the 24-hr YAAQS of 50 µg/m³. Note that in some cases the measured background PM₁₀ concentration is higher than that measured at some of the receptors. For example, during the July 15-17 sampling event site HR1 measured coarse particulate matter at 5.2 µg/m³ and the background at 10.2 µg/m³. This suggests there is some variability in the data and that the difference between background and receptors sites may not be significant. Results are generally comparable to the PM₁₀ concentrations measured by AKHM at stations TSP-1, TSP-2, and TSP-3 (August 2015 to December 2021).

Table 5-1: Average Coarse Particulate Matter (PM₁₀) Concentrations

Site Locations	PM ₁₀ (µg/m ³)		
	June 11-13, 2013	July 15-17, 2013	August 21-22, 2013
BG	2.8	10.2	3.8
KC1	6.2	NS	NS
KC2	3.8	NS	NS
KC3	8.3	NS	NS
KC4	2.1	NS	NS

HR1	NS	5.2	NS
HR2	NS	2.1	NS
HR3	NS	13.8	NS
HR4	NS	16.4	NS
FL1	NS	NS	0.8
FL2	NS	NS	39.3

Source: Yukon Government, 2014

NS: Not Sampled

Data presented in Table 5-1 were obtained from Yukon Government and not collected by AKHM and, therefore, details of the collection have not been presented within this report. The data is assumed to be accurate and valid, but potentially not representative of all conditions observed over a year, due to the limited dataset.

6 RECOMMENDATIONS

As outlined in the Dust Abatement and Monitoring Plan (AKHM, 2021), AKHM will make the following changes to its air quality monitoring program in 2022:

- A new sampler should be purchased to replace the missing sampler at the TSP-1 location. The sampler located at TSP-1 should be relocated to the western limit of Keno City to characterize ambient concentrations at sensitive receptors in Keno City. Of the six discrete receptors used in the model, receptor R05 (located at the western end of Keno City) is where the highest concentrations were estimated;
- The sampler located at TSP-3 will be relocated to the eastern end of Keno City to provide an understanding of how ambient concentrations vary throughout town;
- The sampler located at TSP-2 remains in operation at the same location to provide information on ambient concentrations within the Project area and to provide data continuity as this site has been monitored for TSP since August 2012; and
- Monitoring will be increased from running for 9 days a month to 18 days per month for one year and a statistical analysis will be completed to evaluate the appropriate monitoring frequency.

7 CONCLUSION

- All TSP samples collected to date near the District Mill, DSTF, and Keno City were below the Yukon air quality standard for TSP, except for one sample collected at TSP-1 (July 1, 2015) which was determined to be an outlier.
- All PM₁₀ and PM_{2.5} samples collected to date at the three monitoring locations are less than their respective YAAQS, except for three samples: a TSP-3 PM_{2.5} sample recorded on July 15, 2017 (determined to be outlier), a PM_{2.5} sample recorded on July 9, 2019, and a PM_{2.5} sample recorded on June 22, 2021. The 2019 result may be due to the Shanghai Creek wildfire. The wildfire was near Elsa and Keno City in July and August causing poor air quality conditions.

- In 2021, all parameters met AAQC criteria except for one cadmium exceedance of 0.1736 µg/m³ recorded at TSP-3 on May 19, 2021.
- Air quality samples will continue to be collected per the current monitoring schedule to identify if these infrequent events are associated with any trends or patterns.
- Blanks will continue to be collected along with regular samples to ensure that no sample contamination is occurring during handling, transportation, or lab analysis.

8 REFERENCES

AKHM (Alexco Keno Hill Mining Corp.). (2021). *Keno Hill Silver District Mining Operations Dust Abatement and Monitoring Plan*. October 2021.

Ensero (Ensero Solutions Canada, Inc.). (2021). *Field Protocol: Ambient Air Quality Installation and Standard Operating Procedure*. Prepared for Alexco Keno Hill Mining Corp. March 15, 2021.

Ontario Ministry of Environment. (2012). *Ontario's Ambient Air Quality Criteria. Standards Development Branch*. PIBS#6570e01. April 2012.

Yukon Environment. (2019). *Yukon Ambient Air Quality Standards*. April 2010, updated October 2019.

Attachment A:

Results and Meteorological Data (2012-2021)

Includes Sub-attachments:

- A1: 24-Hour Average TSP Results, Meteorological Conditions, and Site Activities, Aug. 2012 – Dec. 2021
- A2: Average PM10 and PM2.5 Results (24-Hour), Aug. 2015 – Dec. 2021
- A3: Metal Concentrations (24-Hour), TSP-1, Aug. 2012 – Dec. 2020
- A4: Metal Concentrations (24-Hour), TSP-2, Aug. 2012 – Dec. 2021
- A5: Metal Concentrations (24-Hour), TSP-3, December 2014 – Dec. 2021

ATTACHMENT A1

**24-HOUR AVERAGE TOTAL PARTICULATES RESULTS, METEOROLOGICAL CONDITIONS, AND SITE
ACTIVITIES, AUG. 2012 – DEC. 2021**

ATTACHMENT A1

24-HOUR AVERAGE TOTAL PARTICULATES RESULTS, METEOROLOGICAL CONDITIONS, AND SITE ACTIVITIES, AUG. 2012 – DEC. 2021

Sample Date	TSP-1 (µg/m ³)	TSP-2 (µg/m ³)	TSP-3 (µg/m ³)	Maximum Air Temperature (°C)	Mean Air Temperature (°C)	Minimum Air Temperature (°C)	Average Relative Humidity (%)	Total Rain* (mm)	Average Wind Speed (m/s)	Average Wind Direction (°)	Maximum Wind Speed (m/s)	Direction of Maximum Wind Speed (°)	Activities at site
8/23/2012	10.1	12.8		13.11	10.25	6.84	75.31	0	0.68	29.5	3.42	6.6	Mining at Bellekeno and development at LQ and Onek, Milling at the Keno District Mill
9/27/2012	<5.6	<5.6		8.18	5.23	2.42	62.53	4.5	4.28	124.7	14.27	145.1	Mining at Bellekeno and development at LQ and Onek, Milling at the Keno District Mill
9/29/2012	<5.6	<5.6		5.69	4.28	2.27	60.46	0	2.33	129.7	8.48	155.9	Mining at Bellekeno and development at LQ and Onek, Milling at the Keno District Mill
10/16/2012	5.8	-		1.65	0.24	-2.12	89.17	0.8	0.9	32.6	6.26	75.9	Mining at Bellekeno and development at LQ and Onek, Milling at the Keno District Mill
10/17/2012	<5.6	-		-0.04	-2.84	-8.45	76.89	0.1	1.26	58.8	7.19	159.2	Mining at Bellekeno and development at LQ and Onek, Milling at the Keno District Mill
10/23/2012	53.2	-		-9.97	-14.04	-17.54	78.41	0	0.66	43.2	3.28	17	Mining at Bellekeno and development at LQ and Onek, Milling at the Keno District Mill
12/15/2012	<5.6	13.6		-13.59	-15.89	-19.29	88.8	0	0.2	357.4	1.85	5.7	Mining at Bellekeno and development at LQ and Onek, Milling at the Keno District Mill
1/14/2013	<5.6	-		-3.02	-8.34	-11.78	95.04	0	0.28	284.8	1.43	189.92	Mining at Bellekeno and development at LQ and Onek, Milling at the Keno District Mill
1/16/2013	<5.6	<5.6		-15.96	-18.61	-20.79	84.83	0	1.26	70.2	4.52	36.1	Mining at Bellekeno and development at LQ and Onek, Milling at the Keno District Mill
3/23/2013	<5.6	18.2		-3.01	-10.79	-18.99	51.87	0	1.65	28.3	7.48	148.5	Mining at Bellekeno and development at Onek, Milling at the Keno District Mill
3/24/2013	<5.6	23.2		0.17	-4.17	-9.93	57.7	0.2	2.61	78.3	11.11	131.7	Mining at Bellekeno and development at Onek, Milling at the Keno District Mill
3/25/2013	<5.6	13.5		3.26	-0.18	-1.98	60.02	0.2	3.57	83.1	12.47	135.8	Mining at Bellekeno and development at Onek, Milling at the Keno District Mill
3/26/2013	9.6	11.1		-1.96	-7.27	-17.97	64.66	0.1	3.53	29	10.49	152.2	Mining at Bellekeno and development at Onek, Milling at the Keno District Mill
4/7/2013	-	17.1		3.46	-3.18	-12.29	65.38	2.2	2.96	94.8	10.32	145	Mining at Bellekeno and development at Onek, Milling at the Keno District Mill
4/10/2013	5.7	7.2		-2.04	-6.54	-11.32	67.42	2.6	2.51	256.1	8.09	199.2	Mining at Bellekeno and development at Onek, Milling at the Keno District Mill

* Starting October 15, 2013, total precipitation is reported rather than total rain

Note: - indicates no data recorded; n/a = not applicable/not available

ATTACHMENT A1

24-HOUR AVERAGE TOTAL PARTICULATES RESULTS, METEOROLOGICAL CONDITIONS, AND SITE ACTIVITIES, AUG. 2012 – DEC. 2021

Sample Date	TSP-1 (µg/m ³)	TSP-2 (µg/m ³)	TSP-3 (µg/m ³)	Maximum Air Temperature (°C)	Mean Air Temperature (°C)	Minimum Air Temperature (°C)	Average Relative Humidity (%)	Total Rain* (mm)	Average Wind Speed (m/s)	Average Wind Direction (°)	Maximum Wind Speed (m/s)	Direction of Maximum Wind Speed (°)	Activities at site
4/13/2013	<5.6	6.9		-5.93	-12.43	-19.03	45.43	0	1.96	10.6	6.29	26.6	Mining at Bellekeno and development at Onek, Milling at the Keno District Mill
4/15/2013	6.5	6.5		-1.9	-7.18	-13.58	53.95	0	2.18	42.3	7.95	103.5	Mining at Bellekeno and development at Onek, Milling at the Keno District Mill
4/16/2013	7.2	6.4		0.44	-3.52	-8.62	69.65	0.1	2.14	64.3	7.03	73.8	Mining at Bellekeno and development at Onek, Milling at the Keno District Mill
5/28/2013	6.8	-		19.47	14.39	9.06	49.38	1.6	1.74	23.9	6.95	353.5	Mining at Bellekeno and development at Onek, Milling at the Keno District Mill, Exploration activities at Flame & Moth
6/16/2013	8.2	-		23.38	17.3	11.35	47.8	3.4	1.94	7.2	12.71	357.9	Mining at Bellekeno and development at Onek, Milling at the Keno District Mill, Exploration activities at Flame & Moth
6/17/2013	-	<5.6		14.07	10.7	7.39	50.03	0	3.05	16.8	10.87	344	Mining at Bellekeno and development at Onek, Milling at the Keno District Mill, Exploration activities at Flame & Moth
6/18/2013	47.2	6.3		21.94	15.07	7.66	47.63	0	1.65	97.3	6.13	136.7	Mining at Bellekeno and development at Onek, Milling at the Keno District Mill, Exploration activities at Flame & Moth
6/21/2013	7.2	<5.6		17.66	13.9	10.38	79.66	6.6	1.42	344.9	6.83	177	Mining at Bellekeno and development at Onek, Milling at the Keno District Mill, Exploration activities at Flame & Moth
6/23/2013	-	<5.6		18.44	12.68	7.82	76.09	9.4	1.65	23.7	9.54	306.5	Mining at Bellekeno and development at Onek, Milling at the Keno District Mill, Exploration activities at Flame & Moth
6/24/2013	<5.6	-		23.85	15.91	6.54	59.11	0	1.72	15.1	5.33	336.8	Mining at Bellekeno and development at Onek, Milling at the Keno District Mill, Exploration activities at Flame & Moth
6/28/2013	-	62.2		23.98	18.36	12.73	65.86	10.5	1.67	51.2	10.37	140.4	Mining at Bellekeno and development at Onek, Milling at the Keno District Mill, Exploration activities at Flame & Moth
7/19/2013	5.6	<5.6		20.14	14.74	9.64	65.78	0.1	1.42	2.3	6.15	196.5	Mining at Bellekeno and development at Onek, Milling at the Keno District Mill, Exploration activities at Flame & Moth

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ATTACHMENT A1

24-HOUR AVERAGE TOTAL PARTICULATES RESULTS, METEOROLOGICAL CONDITIONS, AND SITE ACTIVITIES, AUG. 2012 – DEC. 2021

Sample Date	TSP-1 (µg/m ³)	TSP-2 (µg/m ³)	TSP-3 (µg/m ³)	Maximum Air Temperature (°C)	Mean Air Temperature (°C)	Minimum Air Temperature (°C)	Average Relative Humidity (%)	Total Rain* (mm)	Average Wind Speed (m/s)	Average Wind Direction (°)	Maximum Wind Speed (m/s)	Direction of Maximum Wind Speed (°)	Activities at site
7/20/2013	12.2	<5.6		17.94	12.89	7.1	72.14	0.8	1.66	27.6	6.36	304.1	Mining at Bellekeno and development at Onek, Milling at the Keno District Mill, Exploration activities at Flame & Moth
7/21/2013	<5.6	<5.6		15.94	13.17	11.18	70.77	0.6	1.57	41.9	5.25	11.6	Mining at Bellekeno and development at Onek, Milling at the Keno District Mill, Exploration activities at Flame & Moth
7/22/2013	<5.6	10.1		20.87	15.55	11.04	56.74	0	1.57	18.9	5.79	209.89	Mining at Bellekeno and development at Onek, Milling at the Keno District Mill, Exploration activities at Flame & Moth
8/22/2013	<5.6	<5.6		14.14	7.63	1.62	69.1	0	1.76	7.6	6.41	245.32	Mining at Bellekeno and development at Onek, Milling at the Keno District Mill, Exploration activities at Flame & Moth
8/23/2013	<5.6	-		8.68	6.55	4.21	91.68	6.6	0.85	17.8	3.18	108.3	Mining at Bellekeno and development at Onek, Milling at the Keno District Mill, Exploration activities at Flame & Moth
8/24/2013	<5.6	-		8.03	5.92	3.43	75.82	0.3	2.61	60.9	8.73	87.5	Mining at Bellekeno and development at Onek, Milling at the Keno District Mill, Exploration activities at Flame & Moth
8/25/2013	<5.6	<5.6		8.4	5.09	1.8	75.02	0	1.29	16.8	4.03	17.2	Mining at Bellekeno and development at Onek, Milling at the Keno District Mill, Exploration activities at Flame & Moth
8/26/2013	-	<5.6		10.85	6.73	3.85	82.06	1	1.36	41.4	5.22	324.4	Mining at Bellekeno and development at Onek, Milling at the Keno District Mill, Exploration activities at Flame & Moth
8/28/2013	-	7.2		17.01	8.66	1.14	61.42	0	1.38	73.5	6.5	145.7	Mining at Bellekeno and development at Onek, Milling at the Keno District Mill, Exploration activities at Flame & Moth
8/31/2013	-	<5.6		9.51	7.68	5.12	91.35	4.7	1.01	22.5	4.9	191.41	Mining at Bellekeno and development at Onek, Milling at the Keno District Mill, Exploration activities at Flame & Moth
9/21/2013	-	<5.6		2.64	0.6	-0.96	96.45	6.6	0.92	356.8	3.41	27.7	No mining operations, Exploration activities at Flame & Moth
9/24/2013	<5.6	<5.6		1.7	0.38	-2.3	89.58	0	1.68	17.2	6.2	220.9	No mining operations, Care and Maintenance

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24-HOUR AVERAGE TOTAL PARTICULATES RESULTS, METEOROLOGICAL CONDITIONS, AND SITE ACTIVITIES, AUG. 2012 – DEC. 2021

Sample Date	TSP-1 ($\mu\text{g}/\text{m}^3$)	TSP-2 ($\mu\text{g}/\text{m}^3$)	TSP-3 ($\mu\text{g}/\text{m}^3$)	Maximum Air Temperature (°C)	Mean Air Temperature (°C)	Minimum Air Temperature (°C)	Average Relative Humidity (%)	Total Rain* (mm)	Average Wind Speed (m/s)	Average Wind Direction (°)	Maximum Wind Speed (m/s)	Direction of Maximum Wind Speed (°)	Activities at site
9/27/2013	<5.6	<5.6		6.66	3.26	1.15	84.55	2.8	1.25	50.8	7.66	137.4	No mining operations, Care and Maintenance
9/28/2013	<5.6	<5.6		7.32	3.73	0.07	69.19	0	1.14	55.2	5.51	78.8	No mining operations, Care and Maintenance
9/29/2013	<5.6	-		6.77	3.58	1.28	60.97	0	2.18	63.6	7.7	92.1	No mining operations, Care and Maintenance
9/30/2013	-	6		6.19	3.22	1	63.34	0	1.64	49.8	5.32	84.6	No mining operations, Care and Maintenance
10/24/2013	-	<5.6		-4.58	-6.99	-10.1	95.67	0	0.77	48.1	3.78	238.21	No mining operations, Care and Maintenance
10/25/2013	7.6	<5.6		-3.58	-5.09	-7.52	96.9	0	0.47	43.3	2.99	31.6	No mining operations, Care and Maintenance
10/26/2013	<5.6	<5.6		-0.68	-4.9	-8.64	95.13	1.2	1.19	79.3	4.02	152.5	No mining operations, Care and Maintenance
10/27/2013	6.8	<5.6		-5.73	-7.6	-9.98	95.57	0	0.71	44.1	2.77	15.1	No mining operations, Care and Maintenance
10/28/2013	<5.6	-		0.21	-3.79	-5.96	97.83	0	0.97	19.7	5.27	25.8	No mining operations, Care and Maintenance
11/28/2013	7.8	8.8		-5.9	-10.14	-15.55	91.67	2.3	1.53	22.8	8.22	202.58	No mining operations, Care and Maintenance
11/29/2013	7.6	7.5		-16.84	-22.52	-27.23	81.85	0.1	1.04	111.6	3.7	159.4	No mining operations, Care and Maintenance
11/30/2013	8.9	8.5		-25.99	-27.76	-29.67	77.52	0	0.37	75.8	1.95	97.3	No mining operations, Care and Maintenance
12/1/2013	6.7	7.2		-29.46	-30.57	-32.06	74.69	0	0.54	103.8	3.58	114.7	No mining operations, Care and Maintenance
1/3/2014	13.2	11.8		-20.82	-24.67	-28.26	80.16	0	n/a	n/a	n/a	n/a	No mining operations, Care and Maintenance
1/4/2014	12.6	9.3		-23.86	-27.58	-29.03	77.62	0	n/a	n/a	n/a	n/a	No mining operations, Care and Maintenance
1/5/2014	18.6	11.4		-11.47	-15.47	-22.96	88.97	0	n/a	n/a	n/a	n/a	No mining operations, Care and Maintenance
1/6/2014	11.9	11		-10.08	-10.91	-11.81	92.77	2.3	0	239.5	0.17	239.47	No mining operations, Care and Maintenance
2/1/2014	9.7	11.9		-13.87	-15.42	-16.72	89.15	0	0.17	68.5	1.26	41.1	No mining operations, Care and Maintenance
2/2/2014	<5.6	<5.6		-10.84	-13.88	-16.51	90.43	0	0.7	54.6	2.99	45.8	No mining operations, Care and Maintenance
2/3/2014	<5.6	<5.6		-13.05	-16.23	-18.55	88.38	0	0.71	8.2	4.06	12.8	No mining operations, Care and Maintenance
2/4/2014	<5.6	6.4		-16.81	-19.32	-20.81	85.64	0	0.31	66.7	2.22	19.1	No mining operations, Care and Maintenance
3/5/2014	<5.6	<5.6		-13.83	-18.81	-21.99	54.48	0	1.1	59.6	3.62	124	No mining operations, Care and Maintenance

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ATTACHMENT A1

24-HOUR AVERAGE TOTAL PARTICULATES RESULTS, METEOROLOGICAL CONDITIONS, AND SITE ACTIVITIES, AUG. 2012 – DEC. 2021

Sample Date	TSP-1 ($\mu\text{g}/\text{m}^3$)	TSP-2 ($\mu\text{g}/\text{m}^3$)	TSP-3 ($\mu\text{g}/\text{m}^3$)	Maximum Air Temperature (°C)	Mean Air Temperature (°C)	Minimum Air Temperature (°C)	Average Relative Humidity (%)	Total Rain* (mm)	Average Wind Speed (m/s)	Average Wind Direction (°)	Maximum Wind Speed (m/s)	Direction of Maximum Wind Speed (°)	Activities at site
3/6/2014	<5.6	<5.6		-14.55	-20.5	-26.02	61.57	0	1.24	36.8	4.91	117.7	No mining operations, Care and Maintenance
3/7/2014	<5.6	<5.6		-15.31	-21.47	-26.79	62.8	0	0.84	38.6	3.17	5.5	No mining operations, Care and Maintenance
3/25/2014	<5.6	<5.6		-1.15	-9.04	-16.37	41.09	0	2.09	39.8	5.68	79.2	No mining operations, Care and Maintenance
4/12/2014	<5.6	<5.6		1.63	-6.67	-14.67	40.6	0	1.38	23.9	4.11	241.38	Exploration activities at Flame & Moth
4/13/2014	6.8	8.1		5.29	-0.4	-6.75	39.56	0.4	1.16	34.5	4.06	355.5	Exploration activities at Flame & Moth
4/14/2014	18.8	20.3		8.44	3.51	-0.45	45.57	0.1	1.43	56.6	5.66	15.6	Exploration activities at Flame & Moth
4/15/2014	15.7	14.4		8.6	3.21	-1.58	56.03	0	1.46	31.1	6.69	133.6	Exploration activities at Flame & Moth
5/11/2014	21.9	23.2		13.32	7.67	2.564	40.33	0.4	1.81	3.5	6.44	302.1	Exploration activities at Flame & Moth
5/12/2014	14.4	10		15.92	9.23	1.645	40.14	0.2	1.55	10.5	6.13	209.7	Exploration activities at Flame & Moth
5/13/2014	<5.6	18.6		17.93	11.47	4.408	47.25	0.2	2.2	335.7	8.58	194.22	Exploration activities at Flame & Moth
5/29/2014	17.1	<5.6		17.05	10.5	2.236	58.36	1.2	1.64	3.6	7.38	314.9	Exploration activities at Flame & Moth
6/26/2014	<5.6			15.56	11.04	5.062	48.68	0.4	2.02	79.7	7.96	150.5	Exploration activities at Flame & Moth
6/27/2014	<5.6	5.6		18.11	12.96	8.05	48.56	0	1.42	34.9	5.67	322.6	Exploration activities at Flame & Moth
6/28/2014		<5.6		23.06	16.15	6.332	38.97	0.4	2.11	328.2	7.94	285.6	Exploration activities at Flame & Moth
6/29/2014	<5.6	<5.6		24.93	17.07	7.576	40.23	0.2	1.9	35	6.44	336.1	Exploration activities at Flame & Moth
6/30/2014	<5.6	<5.6		17.12	14.37	12.5	67.69	0	1.12	47.7	6.95	92.8	Exploration activities at Flame & Moth
7/8/2014	<5.6	<5.6		16.39	12.98	8.98	63.26	0	1.57	326.4	6.45	223.65	Exploration activities at Flame & Moth
7/27/2014	<5.6	<5.6		16.61	11.39	8.41	83.5	2.8	1.11	228.9	5.3	334.3	Exploration activities at Flame & Moth
7/28/2014	<5.6	<5.6		18.93	12.56	7.43	68.18	0.6	1.36	220.2	6.31	151.2	Exploration activities at Flame & Moth
7/29/2014	<5.6	<5.6		15.18	12.05	9.11	79.4	3.4	1.69	211.1	6.9	320.3	Exploration activities at Flame & Moth
8/22/2014	<5.6	<5.6		14.95	10.31	6.149	76.43	0	1.35	44.2	5.99	16.6	Exploration activities at Flame & Moth
8/23/2014	6.9	16.7		16.65	10.05	4.659	78.54	1.5	1.37	59.5	4.99	143.45	Exploration activities at Flame & Moth

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ATTACHMENT A1

24-HOUR AVERAGE TOTAL PARTICULATES RESULTS, METEOROLOGICAL CONDITIONS, AND SITE ACTIVITIES, AUG. 2012 – DEC. 2021

Sample Date	TSP-1 (µg/m ³)	TSP-2 (µg/m ³)	TSP-3 (µg/m ³)	Maximum Air Temperature (°C)	Mean Air Temperature (°C)	Minimum Air Temperature (°C)	Average Relative Humidity (%)	Total Rain* (mm)	Average Wind Speed (m/s)	Average Wind Direction (°)	Maximum Wind Speed (m/s)	Direction of Maximum Wind Speed (°)	Activities at site
8/24/2014	<5.6	5.6		14.83	9.69	5.429	74.6	0	1.6	55.6	5.76	354.8	Exploration activities at Flame & Moth
8/25/2014	<5.6			12.09	9.4	7.071	86.62	1.1	0.73	18.6	3.96	354	Exploration activities at Flame & Moth
8/26/2014		<5.6		11.48	8.22	5.645	91.57	16	0.65	51.2	4.1	193.15	Exploration activities at Flame & Moth
9/20/2014	<5.6	<5.6		8.42	6.1	4.174	77.89	0	1	58.8	5.53	94.3	Exploration activities at Flame & Moth
9/23/2014	5.6	6.9		4.986	0.95	-1.977	88.36	0.7	1.51	271.1	7.22	194.91	Exploration activities at Flame & Moth
9/24/2014	5.6	6.9		4.955	-0.44	-3.427	76.34	0.4	1.28	22.7	4.81	221.03	Exploration activities at Flame & Moth
9/27/2014	5.6	<5.6		4.42	0.96	-1.406	89.84	3.5	1.42	32.8	8.05	166	Exploration activities at Flame & Moth
10/15/2014	9.7	18.1		-0.86	-3.51	-5.65	87.21	0.1	0.88	25.4	3.51	30.7	Exploration activities at Flame & Moth
10/16/2014	<5.6	<5.6		-0.581	-1.62	-3.093	89.96	0	1.1	28.4	4.97	25.6	Exploration activities at Flame & Moth
10/23/2014	<5.6	<5.6		-3.667	-4.97	-5.752	89.54	0	0.93	30.2	4.95	34.6	Exploration activities at Flame & Moth
10/24/2014	<5.6	<5.6		-2.715	-4.57	-5.456	95.21	0	0.79	39.2	3.81	171.6	Exploration activities at Flame & Moth
11/19/2014	10			-2.206	-3.73	-5.562	97.74	0	0.45	50.3	2.98	187.456	No mining operations, Care and Maintenance
11/20/2014	<5.6			-4.7	-10	-15.01	93.46	0	0.49	124.5	2.75	117	No mining operations, Care and Maintenance
11/22/2014		<5.6		-18.86	-19.79	-21.6	85.38	0.2	0.22	12.2	1.61	29.1	No mining operations, Care and Maintenance
11/23/2014		5.8		-17.53	-19.71	-22.09	85.39	0.1	0.15	14.1	2.55	17	No mining operations, Care and Maintenance
11/24/2014	<5.6			-14.55	-16.44	-18.21	88.27	0.1	0.18	45	1.58	28.1	No mining operations, Care and Maintenance
11/25/2014	10.4	8.1		-11.02	-12.48	-13.85	91.5	0	0.18	30.3	1.31	40.8	No mining operations, Care and Maintenance
12/12/2014	10.3	7.8		-11.81	-14.01	-16.65	90.33	0	n/a	n/a	n/a	n/a	No mining operations, Care and Maintenance
12/13/2014	5.8	11.7	16	-11.22	-14.47	-17.02	89.88	0	n/a	n/a	n/a	n/a	No mining operations, Care and Maintenance
12/14/2014		5.6	<5.6	-2.637	-10.17	-15.75	93.13	0.1	n/a	n/a	0.04	46.8	No mining operations, Care and Maintenance
12/15/2014	<5.6	<5.6	<5.6	-0.904	-1.88	-4.157	85.83	0	0.78	48.5	8.87	155.1	No mining operations, Care and Maintenance
12/17/2014	<5.6			-5.392	-6.76	-8.51	94.93	0	0.55	69.5	3.02	38.6	No mining operations, Care and Maintenance

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24-HOUR AVERAGE TOTAL PARTICULATES RESULTS, METEOROLOGICAL CONDITIONS, AND SITE ACTIVITIES, AUG. 2012 – DEC. 2021

Sample Date	TSP-1 (µg/m ³)	TSP-2 (µg/m ³)	TSP-3 (µg/m ³)	Maximum Air Temperature (°C)	Mean Air Temperature (°C)	Minimum Air Temperature (°C)	Average Relative Humidity (%)	Total Rain* (mm)	Average Wind Speed (m/s)	Average Wind Direction (°)	Maximum Wind Speed (m/s)	Direction of Maximum Wind Speed (°)	Activities at site
1/10/2015	5.6	<5.6		-9.46	-10.34	-10.97	93.47	0	0.09	251.9	1.42	10.3	No mining operations, Care and Maintenance
1/11/2015	<5.6	<5.6		-9.37	-10.03	-10.63	93.32	0	0.11	65.4	1.26	33.4	No mining operations, Care and Maintenance
1/12/2015			<5.6	-9.68	-10.29	-11.46	93.2	0	n/a	n/a	n/a	n/a	No mining operations, Care and Maintenance
1/13/2015	<5.6	<5.6		-6.068	-8.44	-11.23	94.59	0	n/a	n/a	n/a	n/a	No mining operations, Care and Maintenance
1/15/2015	6.1	<5.6	<5.6	-0.888	-5.06	-9.68	96.82	0	0.22	356.6	3.7	38.4	No mining operations, Care and Maintenance
1/16/2015			<5.6	-0.335	-2.85	-7.954	98.1	0	1.14	346.9	4.48	187.95	No mining operations, Care and Maintenance
1/18/2015			<5.6	-3.823	-6.18	-8.51	96	0.2	0.69	60.2	4.21	170.8	No mining operations, Care and Maintenance
2/12/2015		6.3	8.6	-11.62	-13.95	-15.81	89.23	0	0.37	19.4	3.26	272	No mining operations, Care and Maintenance
2/13/2015	<5.6	<5.6		-6.289	-8.23	-11.42	93.9	0	0.52	24.5	4.93	37.9	No mining operations, Care and Maintenance
2/15/2015	7.1	<5.6	8.8	-3.145	-6.33	-9.71	92.52	7.3	0.73	98.5	3.04	97.7	No mining operations, Care and Maintenance
2/16/2015	<5.6	<5.6	7.9	-2.157	-7.74	-11.49	93.95	0.7	0.85	15.9	4.61	30.5	No mining operations, Care and Maintenance
2/18/2015	<5.6		11.5	-0.889	-2.64	-4.515	96.48	0	0.42	29.1	3.69	7.9	No mining operations, Care and Maintenance
3/6/2015	7.1	7.8	<5.6	-0.298	-3.66	-5.577	86.59	0.1	1.37	322.7	6.53	188.22	No mining operations, Care and Maintenance
3/7/2015	<5.6	<5.6	<5.6	0.932	-2.44	-4.272	78.47	0.2	1.42	30.5	6.22	180.242	No mining operations, Care and Maintenance
3/16/2015	6.7	<5.6	9	-12.89	-19.53	-26.15	73.31	0	0.89	14.5	3.84	17	No mining operations, Care and Maintenance
3/17/2015	<5.6	<5.6	16.5	-1.807	-9.23	-13.81	72.37	0.3	0.93	28.9	4.24	24	No mining operations, Care and Maintenance
4/2/2015	<5.6	<5.6	<5.6	4.032	-1.57	-5.899	66.26	0	1.7	27.7	4.94	71	No mining operations, Care and Maintenance
4/3/2015	<5.6	<5.6	<5.6	2.002	-2.72	-7.184	58.66	0	2.35	16.5	7.17	88.7	No mining operations, Care and Maintenance
4/4/2015	<5.6	<5.6	5.7	3.513	-3.7	-10.48	61.55	0	1.53	71	6.57	152.2	No mining operations, Care and Maintenance
4/5/2015	<5.6	<5.6	5.8	3.213	-2.1	-5.496	84.15	0	1.2	345.9	7.63	247.74	No mining operations, Care and Maintenance
5/21/2015			<5.6	23.83	16.28	7.585	34.05	0	1.73	13	5.17	238.3	No mining operations, Care and Maintenance
5/22/2015			<5.6	25.09	17.82	10.28	29.16	0	1.71	25.5	6.02	300.9	No mining operations, Care and Maintenance

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24-HOUR AVERAGE TOTAL PARTICULATES RESULTS, METEOROLOGICAL CONDITIONS, AND SITE ACTIVITIES, AUG. 2012 – DEC. 2021

Sample Date	TSP-1 (µg/m ³)	TSP-2 (µg/m ³)	TSP-3 (µg/m ³)	Maximum Air Temperature (°C)	Mean Air Temperature (°C)	Minimum Air Temperature (°C)	Average Relative Humidity (%)	Total Rain* (mm)	Average Wind Speed (m/s)	Average Wind Direction (°)	Maximum Wind Speed (m/s)	Direction of Maximum Wind Speed (°)	Activities at site
5/23/2015			8.8	26.43	19.79	12.86	26.79	0	1.36	18.1	9.86	184.223	No mining operations, Care and Maintenance
5/24/2015			9.9	26.51	19.2	11.59	32.85	0	1.79	91.6	7.59	167.6	No mining operations, Care and Maintenance
5/25/2015	15.8	18.9		25.12	17.97	10.28	38.93	0	2.05	1.8	8.18	180.742	No mining operations, Care and Maintenance
5/26/2015	22.2	26.4		21.73	15.55	9.78	53.49	0	1.79	32.8	9.22	90.9	No mining operations, Care and Maintenance
5/27/2015	15.8	15		22.99	16.43	11.38	52.67	0	2.18	351.8	8.63	24	No mining operations, Care and Maintenance
5/28/2015	6.3	5.8		20.98	14.38	8.42	62.4	0	1.94	333.9	10.63	269	No mining operations, Care and Maintenance
6/16/2015	<5.6	<5.6	<5.6	19.74	13.76	6.668	51.79	0.9	1.75	21.2	10.14	354.4	No mining operations, Care and Maintenance
6/17/2015	<5.6	9.3	<5.6	15.41	11.36	6.976	63.5	0	2.66	357.7	9.73	337.9	No mining operations, Care and Maintenance
6/18/2015	<5.6	<5.6	<5.6	18.34	11.65	4.589	42.59	0	2.27	349.6	7.18	316.9	No mining operations, Care and Maintenance
7/1/2015		<5.6	68.1	15.59	11.07	7.143	76.46	1.4	1.58	304.9	7.87	205.51	No mining operations, Care and Maintenance
7/8/2015	15.4	32.1	43.8	17.01	12.85	10.73	80.11	3.2	1.68	276.1	11.49	257.07	No mining operations, Care and Maintenance
7/11/2015	<5.6	7.6	<5.6	14.04	12.35	10.35	75.27	9.5	1.01	39	5.52	152.4	No mining operations, Care and Maintenance
7/20/2015	9.6	5.7	13.1	17.42	11.86	4.725	62.55	0	2.03	2	9.09	318.7	No mining operations, Care and Maintenance
8/13/2015	6.8	10.4		14.48	7.56	0.308	64.18	0	1.56	4.2	6.06	322.4	No mining operations, Care and Maintenance
8/14/2015	11.4	<5.6	9.7	16.49	9.14	3.399	70.07	0	1.67	34.3	6.71	224.49	No mining operations, Care and Maintenance
8/15/2015	7.4	9	6.4	18.97	11.31	4.551	63.45	0	1.67	1.3	5.93	215.3	No mining operations, Care and Maintenance
8/16/2015	11	8.6	6.5	16.31	11.81	8.21	64.84	0	1.52	298.6	6.48	207.91	No mining operations, Care and Maintenance
9/17/2015	5.7	<5.6		8.56	5.26	3.57	83.42	4.4	1.69	121.4	6.94	142.7	No mining operations, Care and Maintenance
10/20/2015	6	<5.6	5.6	3.167	1.32	-1.097	89.12	0	0.99	90.8	5.45	120.4	No mining operations, Care and Maintenance
10/21/2015	<5.6	8.2	<5.6	2.824	0.27	-1.349	89.93	0	0.7	23.8	5.71	140.6	No mining operations, Care and Maintenance
11/13/2015	21.4	14	16	-11.46	-12.67	-14.95	91.27	2.4	n/a	n/a	n/a	n/a	No mining operations, Care and Maintenance
11/15/2015	10.3	10	8.5	-14.97	-16.71	-19.11	88	1	n/a	n/a	0.09	205.82	No mining operations, Care and Maintenance

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24-HOUR AVERAGE TOTAL PARTICULATES RESULTS, METEOROLOGICAL CONDITIONS, AND SITE ACTIVITIES, AUG. 2012 – DEC. 2021

Sample Date	TSP-1 (µg/m ³)	TSP-2 (µg/m ³)	TSP-3 (µg/m ³)	Maximum Air Temperature (°C)	Mean Air Temperature (°C)	Minimum Air Temperature (°C)	Average Relative Humidity (%)	Total Rain* (mm)	Average Wind Speed (m/s)	Average Wind Direction (°)	Maximum Wind Speed (m/s)	Direction of Maximum Wind Speed (°)	Activities at site
11/16/2015	10.8	12.2	6.9	-14.95	-16.51	-18.04	88.14	0.2	0.36	19.4	2.93	26	No mining operations, Care and Maintenance
11/17/2015	17.8	20.8		-17.84	-18.96	-22.21	85.9	0.3	0.69	20.9	2.99	20.7	No mining operations, Care and Maintenance
11/18/2015	9.7	17.4		-22.09	-25.52	-29.1	79.53	0	n/a	n/a	n/a	n/a	No mining operations, Care and Maintenance
12/16/2015	<5.6		<5.6	-15.9	-17.77	-21.21	87.08	0	n/a	n/a	n/a	n/a	No mining operations, Care and Maintenance
12/17/2015	<5.6		<5.6	-12.54	-17.25	-19.91	87.61	0	n/a	n/a	n/a	n/a	No mining operations, Care and Maintenance
12/18/2015	<5.6		<5.6	-10.93	-11.8	-12.91	91.85	0.1	n/a	n/a	n/a	n/a	No mining operations, Care and Maintenance
12/19/2015	<5.6		<5.6	-11.73	-12.75	-14.99	90.93	0	n/a	n/a	n/a	n/a	No mining operations, Care and Maintenance
1/5/2016	<5.6		<5.6	-12.1	-14.93	-16.42	89.23	0	0.41	49.4	2.1	76.3	No mining operations, Care and Maintenance
1/6/2016	<5.6		<5.6	-14.12	-15.06	-15.93	85.37	0	0.21	47.1	1.59	30.3	No mining operations, Care and Maintenance
1/7/2016			<5.6	-14.34	-15.65	-16.56	79.81	4	0.33	64.8	2.2	36.4	No mining operations, Care and Maintenance
1/8/2016	<5.6			-15.34	-16.32	-17.01	79.46	0	0.51	88.9	2.41	140.3	No mining operations, Care and Maintenance
2/26/2016	<5.6		<5.6	-2.88	-6.39	-9.04	89.98	0	0.83	44.7	3.82	14.3	No mining operations, Care and Maintenance
2/27/2016	<5.6		<5.6	-0.499	-3.86	-5.51	89.43	0.2	0.9	18.1	5.08	341.7	No mining operations, Care and Maintenance
2/28/2016	<5.6		<5.6	-0.842	-2.71	-5.93	76.81	0	1.14	30.8	6.79	139.1	No mining operations, Care and Maintenance
3/12/2016	<5.6	<5.6	<5.6	3.148	-2.98	-7.6	62.41	0.2	1.07	68.3	4.02	90.3	No mining operations, Care and Maintenance
3/14/2016	<5.6	<5.6	<5.6	-4.622	-6.39	-9.43	83.42	0	1.14	17.3	3.71	21.7	No mining operations, Care and Maintenance
3/15/2016	<5.6	<5.6	<5.6	-3.963	-6.65	-9.78	91.08	0.1	0.77	25.8	3.96	45.1	No mining operations, Care and Maintenance
4/19/2016	<5.6	<5.6	<5.6	4.494	0.18	-5.34	60.59	0	1.58	13.4	6.15	318.7	No mining operations, Care and Maintenance
4/23/2016	<5.6	<5.6	<5.6	12.14	5.94	0.67	67.36	0.5	1.25	74.3	5.66	111.3	No mining operations, Care and Maintenance
4/24/2016	<5.6	<5.6	<5.6	13.5	7.5	2.87	59.67	0	1.27	32.3	5.58	64.8	No mining operations, Care and Maintenance
5/23/2016	<5.6	<5.6	<5.6	15.41	10.35	2.5	55.84	0	1.95	10.5	6.47	319.6	No mining operations, Care and Maintenance
5/25/2016	10.6	<5.6	<5.6	9.99	7.54	5.79	64.33	0.2	2.36	359.9	8.15	339.7	No mining operations, Care and Maintenance

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24-HOUR AVERAGE TOTAL PARTICULATES RESULTS, METEOROLOGICAL CONDITIONS, AND SITE ACTIVITIES, AUG. 2012 – DEC. 2021

Sample Date	TSP-1 ($\mu\text{g}/\text{m}^3$)	TSP-2 ($\mu\text{g}/\text{m}^3$)	TSP-3 ($\mu\text{g}/\text{m}^3$)	Maximum Air Temperature (°C)	Mean Air Temperature (°C)	Minimum Air Temperature (°C)	Average Relative Humidity (%)	Total Rain* (mm)	Average Wind Speed (m/s)	Average Wind Direction (°)	Maximum Wind Speed (m/s)	Direction of Maximum Wind Speed (°)	Activities at site
6/13/2016	<5.6	<5.6	<5.6	14.65	10.54	6.45	73.67	1.1	1.33	26.6	4.77	339	No mining operations, Care and Maintenance
6/17/2016	<5.6	<5.6	<5.6	21.96	15.16	8.18	37.44	0	1.9	8.8	7.63	317.6	No mining operations, Care and Maintenance
6/19/2016	9.7	22.6	6.1	25.98	18.97	9.57	35.04	0	2.41	292.5	9.21	198.7	No mining operations, Care and Maintenance
7/28/2016	<5.6	<5.6	<5.6	18.66	14.78	10.16	67.43	1.7	1.57	61.8	7.73	236.2	No mining operations, Care and Maintenance
7/29/2016	<5.6	<5.6	<5.6	15.55	11.73	7.72	88.27	2.7	0.95	61.3	4.2	238.4	No mining operations, Care and Maintenance
7/30/2016	<5.6	<5.6	<5.6	15.5	12.59	9.46	78.82	0.6	1.44	285.4	6.19	233.8	No mining operations, Care and Maintenance
8/9/2016	<5.6	<5.6	<5.6	12.96	11.51	9.52	93.48	8.5	1.17	302.7	5.5	194.6	No mining operations, Care and Maintenance
8/10/2016	<5.6	<5.6	<5.6	11.59	9.94	8.94	91.5	2.9	1.31	355.7	7.75	255.8	No mining operations, Care and Maintenance
8/11/2016	<5.6	<5.6	<5.6	16.77	11.59	7.05	75.82	0.1	0.87	337.9	5.6	228.3	No mining operations, Care and Maintenance
9/28/2016	<5.6	<5.6	<5.6	5.192	0.46	-2.5	67.44	0	1.38	79.8	5.88	178.1	No mining operations, Care and Maintenance
9/29/2016	<5.6	<5.6	<5.6	3.332	0.51	-3.57	67.16	0.2	2.12	349.2	8.03	309.6	No mining operations, Care and Maintenance
9/30/2016	<5.6	<5.6	<5.6	3.833	-1.67	-6.18	65.93	0	1.35	48.9	4.13	209.7	No mining operations, Care and Maintenance
10/5/2016	8.8	6.7	5.7	1.857	-4.62	-8.16	70.26	0	1.36	59.1	3.94	111.7	No mining operations, Care and Maintenance
10/7/2016	<5.6		<5.6	1.909	-4.42	-8.66	67.82	0	1.41	74.1	3.65	126.2	No mining operations, Care and Maintenance
10/10/2016	<5.6		13.5	0.07	-5.24	-9.03	75.16	0	1.27	74.9	3.26	102.4	No mining operations, Care and Maintenance
10/27/2016		<5.6		-5.793	-8.05	-10.39	89.97	0.3	0.96	39.1	3.35	16.5	No mining operations, Care and Maintenance
11/26/2016	<5.6	<5.6	<5.6	-8.12	-13.62	-17.72	89.97	0	0.45	20.1	3.97	23.1	No mining operations, Care and Maintenance
11/27/2016	<5.6	6.1	7.6	-6.422	-6.91	-8.06	95.25	0	0.45	39.6	3.59	37.4	No mining operations, Care and Maintenance
11/28/2016	<5.6	<5.6	<5.6	-6.707	-8.32	-13.37	94.16	1.3	0.34	119.1	4.63	179.3	No mining operations, Care and Maintenance
12/27/2016	<5.6	<5.6	<5.6	-11.02	-11.92	-14.1	91.65	0	0.05	51	1.2	63.8	No mining operations, Care and Maintenance
12/29/2016	<5.6	<5.6	<5.6	-14.61	-16.92	-19.94	87.48	0	0.12	147.9	1.53	184.4	No mining operations, Care and Maintenance
12/30/2016	<5.6	<5.6	<5.6	-14.31	-16.67	-18.52	87.67	0	n/a	n/a	n/a	n/a	No mining operations, Care and Maintenance

* Starting October 15, 2013, total precipitation is reported rather than total rain

Note: - indicates no data recorded; n/a = not applicable/not available

ATTACHMENT A1

24-HOUR AVERAGE TOTAL PARTICULATES RESULTS, METEOROLOGICAL CONDITIONS, AND SITE ACTIVITIES, AUG. 2012 – DEC. 2021

Sample Date	TSP-1 (µg/m ³)	TSP-2 (µg/m ³)	TSP-3 (µg/m ³)	Maximum Air Temperature (°C)	Mean Air Temperature (°C)	Minimum Air Temperature (°C)	Average Relative Humidity (%)	Total Rain* (mm)	Average Wind Speed (m/s)	Average Wind Direction (°)	Maximum Wind Speed (m/s)	Direction of Maximum Wind Speed (°)	Activities at site
1/28/2017	<5.6	<5.6	<5.6	-2.812	-4.68	-6.23	77.47	0	1.36	19.2	5.45	23.8	No mining operations, Care and Maintenance
1/29/2017	<5.6	<5.6	<5.6	-3.933	-7.42	-12.29	93.13	0	1.41	335.4	5.89	193.2	No mining operations, Care and Maintenance
1/30/2017	<5.6	<5.6	<5.6	-12.36	-16.09	-19.73	84.55	0	1.06	96.9	3.83	112.3	No mining operations, Care and Maintenance
2/2/2017		<5.6		-20.22	-21.79	-23.16	83.14	0	0.35	7.5	2.25	90.9	No mining operations, Care and Maintenance
2/14/2017	<5.6	<5.6		4.767	3.12	0.27	62.56	18.1	3.42	108.6	11.61	138.2	No mining operations, Care and Maintenance
2/18/2017	8.8	6.5	<5.6	-9.24	-14.62	-16.86	79.32	0	0.73	53.2	3.41	96.2	No mining operations, Care and Maintenance
2/19/2017	<5.6	<5.6	<5.6	-10.69	-15.61	-17.89	78.99	0	0.68	59.2	3.7	108.8	No mining operations, Care and Maintenance
2/20/2017			<5.6	-11.48	-15.99	-18.31	80.63	0	0.69	49.4	2.89	98.1	No mining operations, Care and Maintenance
3/23/2017		<5.6		-5.982	-12.3	-16.98	74.85	0	1.23	21.8	3.92	350.1	No mining operations, Care and Maintenance
3/25/2017	<5.6			-9.14	-13.94	-17.87	73.19	0	2.52	14.7	5.84	336.3	No mining operations, Care and Maintenance
3/27/2017	<5.6	<5.6		-1.321	-8.92	-16.19	68.59	0.1	1.43	55.2	7.7	92	No mining operations, Care and Maintenance
3/28/2017	<5.6	<5.6		2.596	-2.91	-7.28	78.33	0.7	1.72	57.2	6.25	169.5	No mining operations, Care and Maintenance
4/14/2017	5.7	<5.6		5.503	-1.28	-8.49	58.58	0	1.52	8.3	7.33	262.9	No mining operations, Care and Maintenance
4/18/2017	<5.6	6.5		-1.935	-8.36	-15.36	40.66	0	2.07	39.7	10.23	343.8	No mining operations, Care and Maintenance
4/20/2017	<5.6	5.7		-3.151	-8.49	-14.59	42.05	0	2.66	1.5	6.63	321.3	No mining operations, Care and Maintenance
5/25/2017	<5.6	<5.6		13.56	8.74	4.31	59.86	0	1.61	31.2	7.19	254.5	No mining operations, Care and Maintenance
5/26/2017	<5.6	<5.6		7.391	3.62	0.76	80.44	5.6	2.19	281	10.29	249.3	No mining operations, Care and Maintenance
5/30/2017	<5.6	11.1		17.42	12.48	8.6	46.99	0	2.4	347.7	8.74	206.5	No mining operations, Care and Maintenance
6/1/2017	<5.6	<5.6		12.23	9.09	5.07	60.89	0	2.38	63.3	6.83	94.3	No mining operations, Care and Maintenance
6/8/2017	<5.6	6.1		25.34	20.56	14.96	29.44	0.5	2.07	76.2	7.33	85.1	No mining operations, Care and Maintenance
6/9/2017	<5.6	<5.6		24.13	19.01	12.95	45.12	0	1.78	11.4	9.34	287.6	No mining operations, Care and Maintenance
6/13/2017	<5.6	<5.6		10.14	4.91	-0.9	38.16	0	2.18	42.5	13.32	335.6	No mining operations, Care and Maintenance

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24-HOUR AVERAGE TOTAL PARTICULATES RESULTS, METEOROLOGICAL CONDITIONS, AND SITE ACTIVITIES, AUG. 2012 – DEC. 2021

Sample Date	TSP-1 ($\mu\text{g}/\text{m}^3$)	TSP-2 ($\mu\text{g}/\text{m}^3$)	TSP-3 ($\mu\text{g}/\text{m}^3$)	Maximum Air Temperature (°C)	Mean Air Temperature (°C)	Minimum Air Temperature (°C)	Average Relative Humidity (%)	Total Rain* (mm)	Average Wind Speed (m/s)	Average Wind Direction (°)	Maximum Wind Speed (m/s)	Direction of Maximum Wind Speed (°)	Activities at site
6/15/2017			<5.6	14.9	10.39	2.94	38.74	0	1.27	70.2	5.5	79.5	No mining operations, Care and Maintenance
6/16/2017			<5.6	16.56	11.43	4.81	50.45	0	1.59	15.8	8.91	311.5	No mining operations, Care and Maintenance
6/20/2017			9.9	20.64	14.23	8.78	51.8	0	1.68	321.7	9.28	206.9	No mining operations, Care and Maintenance
7/4/2017		8.5		20.37	15.89	9.55	42.58	0	2	16.7	7.96	338.3	No mining operations, Care and Maintenance
7/5/2017		7.6		24.54	17.32	8.12	39.77	0.8	1.52	31.5	5.25	331.7	No mining operations, Care and Maintenance
7/7/2017		10.6		27.18	20.31	11.61	38.51	0.1	1.62	53.7	6.76	178.4	No mining operations, Care and Maintenance
7/18/2017	8.5		9.7	20.81	13.1	8.32	82.36	1.9	1.37	46.2	13.65	349.3	No mining operations, Care and Maintenance
7/20/2017			6	20.7	15.78	9.53	63.3	0.2	1.79	11.1	9.43	284.1	No mining operations, Care and Maintenance
7/21/2017			<5.6	17.26	13.2	10.8	79.06	1	1.43	29.5	10.42	253.4	No mining operations, Care and Maintenance
7/25/2017	12.5			20.81	16.42	11.24	60.04	0	1.71	35.7	8.58	335.3	No mining operations, Care and Maintenance
7/27/2017	<5.6			14.94	11.75	8.44	77.83	0	1.71	47.7	5.46	96.9	No mining operations, Care and Maintenance
8/2/2017	8.8		6.1	21.73	15.44	9.3	60.75	0	1.8	354.7	7.21	193.4	No mining operations, Care and Maintenance
8/4/2017	<5.6		<5.6	19.12	15.31	10.51	60.32	0	1.72	1.9	6.17	203.7	No mining operations, Care and Maintenance
8/6/2017	11.7		6.1	24.03	16.57	9.37	49.23	0	1.48	25.7	6.35	222.8	No mining operations, Care and Maintenance
8/9/2017		41.1		28.31	19.3	11.34	45.48	0	1.75	39.7	5.73	219.6	No mining operations, Care and Maintenance
8/11/2017		17.8		22.04	16.94	12.9	50.64	0	1.76	99.7	8.07	163.6	No mining operations, Care and Maintenance
8/15/2017		<5.6		12.01	7.92	4.54	81.39	0.3	1.27	341	5.75	199.9	No mining operations, Care and Maintenance
9/20/2017	7.6	7.2	7.1	10.76	7.23	4.57	75.59	0	0.88	23.8	4.29	345.6	No mining operations, Care and Maintenance
9/26/2017		<5.6	<5.6	6.973	3.16	-0.17	81.17	0.1	1.37	46.7	4.24	12.2	No mining operations, Care and Maintenance
9/27/2017	7.1			9.4	4.85	2.43	85.17	1.4	1.72	55.6	9.86	143.6	No mining operations, Care and Maintenance
9/29/2017	6.7	<5.6	<5.6	8.55	3.54	-0.46	84.7	0.4	1.14	71	3.71	352.7	No mining operations, Care and Maintenance
10/3/2017	<5.6	<5.6	<5.6	6.991	4.19	1.17	66.06	0	0.9	63.5	3.47	6.4	No mining operations, Care and Maintenance

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24-HOUR AVERAGE TOTAL PARTICULATES RESULTS, METEOROLOGICAL CONDITIONS, AND SITE ACTIVITIES, AUG. 2012 – DEC. 2021

Sample Date	TSP-1 (µg/m ³)	TSP-2 (µg/m ³)	TSP-3 (µg/m ³)	Maximum Air Temperature (°C)	Mean Air Temperature (°C)	Minimum Air Temperature (°C)	Average Relative Humidity (%)	Total Rain* (mm)	Average Wind Speed (m/s)	Average Wind Direction (°)	Maximum Wind Speed (m/s)	Direction of Maximum Wind Speed (°)	Activities at site
10/5/2017	<5.6	<5.6	<5.6	9	4.97	2.37	80.66	4.7	1.56	112.6	6.03	154.4	No mining operations, Care and Maintenance
10/6/2017	<5.6	<5.6	<5.6	6.152	3.33	-0.21	86.92	0.3	1.19	353.3	6.01	347.3	No mining operations, Care and Maintenance
11/2/2017	<5.6			-10.4	-11.79	-14.32	90.97	0	n/a	n/a	n/a	n/a	No mining operations, Care and Maintenance
11/16/2017	<5.6			-19.45	-20.55	-21.31	83.8	0	0.22	26.7	2.28	120.7	No mining operations, Care and Maintenance
11/17/2017	<5.6			-19.7	-21	-23.24	83.29	0	0.3	29.3	2.08	36.9	No mining operations, Care and Maintenance
11/30/2017		<5.6	<5.6	-9.73	-11.89	-13.8	91.4	0	n/a	n/a	n/a	n/a	No mining operations, Care and Maintenance
12/5/2017		<5.6	<5.6	-5.088	-6.78	-8.39	94.24	0.8	n/a	n/a	n/a	n/a	No mining operations, Care and Maintenance
12/7/2017		<5.6	<5.6	3.777	0.39	-1.82	90.97	3.7	1.94	113.9	11.65	142.3	No mining operations, Care and Maintenance
12/12/2017		<5.6	<5.6	-3.688	-6.4	-8.45	86.7	0	1.15	100.2	4.75	168.2	No mining operations, Care and Maintenance
12/13/2017	<5.6			-5.324	-8.94	-12.34	94.1	0.4	0.89	43.8	4.35	43.4	No mining operations, Care and Maintenance
12/15/2017	<5.6			-0.017	-2.54	-6.63	98.31	2.7	0.65	n/a	2.4	166.2	No mining operations, Care and Maintenance
12/19/2017	<5.6			-10.78	-13.18	-15.23	90.91	0	n/a	n/a	n/a	n/a	No mining operations, Care and Maintenance
12/20/2017	<5.6		<5.6	-10.64	-13.18	-15.75	90.9	0	0	n/a	0	n/a	No mining operations, Care and Maintenance
12/21/2017		<5.6		-12.8	-14.28	-16.66	90.1	0	0	n/a	0	n/a	No mining operations, Care and Maintenance
12/24/2017		<5.6	<5.6	-20.24	-21.89	-23.4	83.5	0	0	n/a	0	n/a	No mining operations, Care and Maintenance
12/26/2017		<5.6		-14	-16.83	-20.1	87.8	0	0	n/a	0	n/a	No mining operations, Care and Maintenance
12/28/2017			<5.6	-22.05	-23.34	-25.35	81.7	0	0	n/a	0	n/a	No mining operations, Care and Maintenance
12/29/2017	<5.6			-23.53	-24.69	-25.99	80.5	0	0	n/a	0	n/a	No mining operations, Care and Maintenance
1/2/2018	<5.6	<5.6	<5.6	-17.77	-21.06	-24.85	83.8	0	0	n/a	0	n/a	No mining operations, Care and Maintenance
1/3/2018	<5.6	<5.6	<5.6	-8.86	-12	-17.82	91.6	0	0	n/a	0	n/a	No mining operations, Care and Maintenance
1/4/2018	<5.6	<5.6	<5.6	-3.568	-6.759	-10.68	95.5	0	0	n/a	0	n/a	No mining operations, Care and Maintenance
1/11/2018	<5.6	<5.6	<5.6	-29.94	-32.17	-34.3	72.05	0	0	n/a	0	n/a	No mining operations, Care and Maintenance

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24-HOUR AVERAGE TOTAL PARTICULATES RESULTS, METEOROLOGICAL CONDITIONS, AND SITE ACTIVITIES, AUG. 2012 – DEC. 2021

Sample Date	TSP-1 (µg/m ³)	TSP-2 (µg/m ³)	TSP-3 (µg/m ³)	Maximum Air Temperature (°C)	Mean Air Temperature (°C)	Minimum Air Temperature (°C)	Average Relative Humidity (%)	Total Rain* (mm)	Average Wind Speed (m/s)	Average Wind Direction (°)	Maximum Wind Speed (m/s)	Direction of Maximum Wind Speed (°)	Activities at site
1/18/2018	<5.6	<5.6	<5.6	2.077	-3.636	-9.47	70.06	0	0.79	220.9	3.254	293.6	No mining operations, Care and Maintenance
1/23/2018	<5.6	<5.6	<5.6	-16.02	-18.05	-19.86	86.4	0	0	n/a	0	n/a	No mining operations, Care and Maintenance
1/31/2018	<5.6	<5.6	<5.6	-20.77	-23.8	-26.18	77.53	0	2.81	192.4	7.213	194.5	No mining operations, Care and Maintenance
2/7/2018	<5.6	<5.6	<5.6	-23.2	-27.88	-30.68	76.39	0	0.407	219.8	2.519	192.2	No mining operations, Care and Maintenance
2/9/2018	<5.6	<5.6	<5.6	-21.7	-24.92	-27.68	75.69	0	0.346	202.2	1.862	329.1	No mining operations, Care and Maintenance
2/10/2018	<5.6	<5.6	<5.6	-21.9	-26.24	-29.05	76.55	0	0.285	233.1	2.283	209	No mining operations, Care and Maintenance
2/14/2018	<5.6	<5.6	7.2	-10.29	-14.59	-17.29	87.7	0	0.985	229.6	2.754	271.3	No mining operations, Care and Maintenance
2/15/2018	<5.6	<5.6	<5.6	-14.19	-17.94	-20.59	83.6	0	0.258	198.1	1.999	199.1	No mining operations, Care and Maintenance
2/20/2018	<5.6	<5.6	<5.6	-13.48	-16.68	-19.24	85.5	0	0.981	190	7.801	53.28	No mining operations, Care and Maintenance
2/21/2018	<5.6	<5.6	<5.6	-7.666	-12.93	-16.87	87.7	0	2.24	206.8	7.556	57.43	No mining operations, Care and Maintenance
2/22/2018	<5.6	<5.6	<5.6	-5.597	-11.28	-16.38	76.97	0	0.654	227.1	3.567	296.9	No mining operations, Care and Maintenance
2/23/2018	<5.6	<5.6	<5.6	-10.39	-12.79	-15.82	88.2	0	1.17	254.8	7.605	75.33	No mining operations, Care and Maintenance
2/27/2018	<5.6	<5.6	<5.6	-12.56	-16.81	-19.73	82.2	0	0.623	233.4	3.508	322.5	No mining operations, Care and Maintenance
3/1/2018	<5.6	<5.6	<5.6	-14.97	-18.85	-22.31	67.1	0	1.304	219.9	4.606	201	No mining operations, Care and Maintenance
3/2/2018	<5.6	<5.6	<5.6	-13.68	-22.47	-26.45	64.83	0	1.001	235.6	3.861	209	No mining operations, Care and Maintenance
3/6/2018	<5.6	<5.6	<5.6	-11.09	-17.24	-21.55	75.15	0.2	0.955	200.4	3.371	282.6	No mining operations, Care and Maintenance
3/8/2018	<5.6	<5.6	<5.6	-9.8	-14.65	-18.45	75.38	0.4	1.424	237.7	5.047	259.7	No mining operations, Care and Maintenance
3/13/2018	<5.6	<5.6	<5.6	2.905	-1.687	-5.331	52.33	0.6	1.566	199.7	4.782	201.2	No mining operations, Care and Maintenance
3/15/2018	<5.6	8.7	<5.6	11.19	2.594	-1.832	62.47	0.7	1.284	217.3	6.203	110.4	No mining operations, Care and Maintenance
3/16/2018	<5.6	<5.6	<5.6	8.27	1.377	-2.342	73.8	0.1	0.971	222.6	4.008	187.7	No mining operations, Care and Maintenance
3/20/2018	<5.6	<5.6	<5.6	2.731	-2.026	-6.887	70.84	0	2.006	227.3	8.16	225.8	No mining operations, Care and Maintenance
3/21/2018	<5.6	<5.6	<5.6	-2.753	-5.636	-9.05	64.22	0	3.028	240.6	9.13	257.7	No mining operations, Care and Maintenance

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24-HOUR AVERAGE TOTAL PARTICULATES RESULTS, METEOROLOGICAL CONDITIONS, AND SITE ACTIVITIES, AUG. 2012 – DEC. 2021

Sample Date	TSP-1 (µg/m ³)	TSP-2 (µg/m ³)	TSP-3 (µg/m ³)	Maximum Air Temperature (°C)	Mean Air Temperature (°C)	Minimum Air Temperature (°C)	Average Relative Humidity (%)	Total Rain* (mm)	Average Wind Speed (m/s)	Average Wind Direction (°)	Maximum Wind Speed (m/s)	Direction of Maximum Wind Speed (°)	Activities at site
4/3/2018	<5.6	<5.6	12.6	-8.43	-11.97	-16.8	46.03	0	1.974	227.6	7.742	272.8	No mining operations, Care and Maintenance
4/4/2018	<5.6	<5.6	<5.6	-7.616	-14.89	-20.62	46.75	0	1.567	232.8	7.134	293	No mining operations, Care and Maintenance
4/5/2018	<5.6	<5.6	<5.6	-4.383	-13.63	-21.68	49.47	0	1.468	248.5	7.664	327.4	No mining operations, Care and Maintenance
4/10/2018		6.8	<5.6	3.482	-4.219	-11.3	46.21	0	2.111	235.5	9.28	273.2	No mining operations, Care and Maintenance
4/11/2018		<5.6	<5.6	5.638	-0.33	-8.02	50.97	0	1.739	264.9	6.948	315.3	No mining operations, Care and Maintenance
4/12/2018	<5.6	<5.6	<5.6	9.78	2.492	-1.88	52.16	0	1.008	240.5	4.077	327.7	No mining operations, Care and Maintenance
4/17/2018	<5.6	<5.6	<5.6	-1.369	-10.33	-17.82	37.8	0	1.407	219.1	4.792	162.3	No mining operations, Care and Maintenance
4/19/2018	<5.6	<5.6	<5.6	4.731	-5.377	-12.12	44.68	0	1.64	201.5	5.517	160.1	No mining operations, Care and Maintenance
4/20/2018	<5.6			1.881	-4.589	-12.95	48	0	1.605	205.7	8.79	6.711	No mining operations, Care and Maintenance
4/24/2018	<5.6			6.318	2.829	0.45	64.47	0	2.319	268.3	8.58	329.8	No mining operations, Care and Maintenance
4/26/2018	<5.6	<5.6	<5.6	9.08	4.068	-0.925	46.54	0	1.372	222.2	5.733	105.2	No mining operations, Care and Maintenance
5/1/2018	<5.6	<5.6	<5.6	8.74	3.581	-1.079	61.55	0	1.321	166.8	6.605	44.72	No mining operations, Care and Maintenance
5/3/2018	<5.6	<5.6	<5.6	1.493	-0.761	-4.476	92.8	8.5	1.435	247.8	6.458	333.9	No mining operations, Care and Maintenance
5/8/2018	<5.6	<5.6	<5.6	6.926	2.424	-1.006	70.64	2.8	1.604	275.1	5.811	300	No mining operations, Care and Maintenance
5/9/2018		<5.6		13.97	4.963	-3.265	51.91	1.5	1.286	220.4	5.782	302.9	No mining operations, Care and Maintenance
5/10/2018			<5.6	16.93	9.41	1.081	40.14	0	1.957	271.6	7.664	332.5	No mining operations, Care and Maintenance
5/15/2018	<5.6	<5.6	<5.6	8.09	2.989	0.68	91.2	6.7	0.833	224.5	4.684	180.5	No mining operations, Care and Maintenance
5/22/2018	<5.6	<5.6	<5.6	12.9	8.59	4.599	66.06	1.5	2.908	279.8	8.91	3.516	Flame and Moth development and Care and Maintenance at other sites
5/24/2018	<5.6	2.8	<5.6	14.14	8.17	3.204	56.99	0	1.255	195	9.56	344.4	Flame and Moth development and Care and Maintenance at other sites
5/26/2018	<5.6		<5.6	14.29	6.597	2.294	68.15	0.2	1.584	200.4	6.713	140	Flame and Moth development and Care and Maintenance at other sites

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24-HOUR AVERAGE TOTAL PARTICULATES RESULTS, METEOROLOGICAL CONDITIONS, AND SITE ACTIVITIES, AUG. 2012 – DEC. 2021

Sample Date	TSP-1 (µg/m ³)	TSP-2 (µg/m ³)	TSP-3 (µg/m ³)	Maximum Air Temperature (°C)	Mean Air Temperature (°C)	Minimum Air Temperature (°C)	Average Relative Humidity (%)	Total Rain* (mm)	Average Wind Speed (m/s)	Average Wind Direction (°)	Maximum Wind Speed (m/s)	Direction of Maximum Wind Speed (°)	Activities at site
5/27/2018		5.7	<5.6	12.95	6.717	0.28	63.54	3.4	1.528	132.6	7.379	187.7	Flame and Moth development and Care and Maintenance at other sites
6/5/2018	<5.6		<5.6	17.56	11.68	6.132	58.24	0	1.356	228.7	7.722	271.6	Flame and Moth development and Care and Maintenance at other sites
6/6/2018	<5.6		<5.6	15.27	9.47	6.681	73.84	3.9	0.961	195.2	4.675	2.386	Flame and Moth development and Care and Maintenance at other sites
6/8/2018	<5.6		<5.6	13.94	7.995	4.234	78.94	3.2	1.149	195.8	5.037	151.1	Flame and Moth development and Care and Maintenance at other sites
6/11/2018	<5.6		<5.6	15.4	9.1	3.168	59.9	0.7	1.198	155.8	9.05	45.53	Flame and Moth development and Care and Maintenance at other sites
6/13/2018	<5.6		<5.6	15.33	9.16	3.967	63.04	0	1.763	151.5	6.517	15.94	Flame and Moth development and Care and Maintenance at other sites
6/14/2018			<5.6	15.35	10.38	4.373	52.95	0	1.65	165.4	6.36	55.49	Flame and Moth development and Care and Maintenance at other sites
6/19/2018	<5.6		<5.6	25.17	17.37	11.27	45.09	0	1.523	146.4	8.56	136.6	Flame and Moth development and Care and Maintenance at other sites
6/20/2018	<5.6		<5.6	22.58	16.99	9.93	47.75	1.8	1.457	179.6	7.703	250.1	Flame and Moth development and Care and Maintenance at other sites
6/21/2018			<5.6	25.47	16.89	6.766	55.76	0.6	1.467	262.1	8.9	327	Flame and Moth development and Care and Maintenance at other sites
6/22/2018		<5.6		28.51	19.08	12.81	44.39	0.4	2.305	80.64	8.82	14.97	Flame and Moth development and Care and Maintenance at other sites
6/26/2018	<5.6	<5.6		18.37	11.25	3.459	71.78	3.1	1.605	217.9	5.968	150.3	Flame and Moth development and Care and Maintenance at other sites
7/3/2018			<5.6	19.5	12.45	5.41	64.46	1.9	1.364	180.4	7.477	173.1	Flame and Moth development and Care and Maintenance at other sites
7/4/2018			<5.6	20.96	13.44	5.519	63.67	0.1	2.269	155.4	10.06	60.14	Flame and Moth development and Care and Maintenance at other sites
7/6/2018			<5.6	19.5	14.66	8.5	46.85	0	1.762	146.8	6.625	76.48	Flame and Moth development and Care and Maintenance at other sites

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24-HOUR AVERAGE TOTAL PARTICULATES RESULTS, METEOROLOGICAL CONDITIONS, AND SITE ACTIVITIES, AUG. 2012 – DEC. 2021

Sample Date	TSP-1 (µg/m ³)	TSP-2 (µg/m ³)	TSP-3 (µg/m ³)	Maximum Air Temperature (°C)	Mean Air Temperature (°C)	Minimum Air Temperature (°C)	Average Relative Humidity (%)	Total Rain* (mm)	Average Wind Speed (m/s)	Average Wind Direction (°)	Maximum Wind Speed (m/s)	Direction of Maximum Wind Speed (°)	Activities at site
7/10/2018			<5.6	20.06	15.79	12.04	47.65	0	2.028	300.3	8.61	328.7	Flame and Moth development and Care and Maintenance at other sites
7/11/2018			<5.6	17.4	12.56	8.6	61.01	6.3	1.929	162.1	8.92	15.82	Flame and Moth development and Care and Maintenance at other sites
7/12/2018			<5.6	17.39	10.93	7.336	75.51	2.5	1.636	205.7	7.997	107.2	Flame and Moth development and Care and Maintenance at other sites
7/13/2018	<5.6		<5.6	17.16	10.44	3.58	68.2	0	1.653	173.3	6.938	144.1	Flame and Moth development and Care and Maintenance at other sites
7/17/2018	<5.6		<5.6	13.2	8.93	6.197	86	11.3	1.041	221.1	6.556	102.4	Flame and Moth development and Care and Maintenance at other sites
7/18/2018	<5.6		5.8	17.06	9.33	5.835	84.6	4.3	1.282	168.3	5.88	168.3	Flame and Moth development and Care and Maintenance at other sites
7/24/2018	<5.6		6.9	26.58	17.31	11.24	52.87	0.1	1.532	214.9	6.674	43.67	Flame and Moth development and Care and Maintenance at other sites
7/26/2018	<5.6	34.9		29.01	19.41	11.04	41.71	0	2.021	141.2	7.664	25.33	Flame and Moth development and Care and Maintenance at other sites
7/27/2018	<5.6	9.9		27.41	18.97	11.24	42.93	0	1.947	140.2	7.203	68.43	Flame and Moth development and Care and Maintenance at other sites
7/31/2018		17.1		27.16	17.97	9.47	47.31	0	1.668	222.3	11.04	128	Flame and Moth development and Care and Maintenance at other sites
8/1/2018	<5.6			26.12	17	11.31	57.43	2	1.161	156.8	6.566	82.9	Flame and Moth development and Care and Maintenance at other sites
8/2/2018			<5.6	26.82	18.03	9.95	54.92	0	1.711	159.3	17.1	89.8	Flame and Moth development and Care and Maintenance at other sites
8/3/2018				23.89	16.56	12.37	65.1	0.9	0.934	201.1	4.557	200.2	Flame and Moth development and Care and Maintenance at other sites
8/4/2018	<5.6		<5.6	19.35	14.2	9.46	74.52	2.1	1.026	165.1	4.606	8.25	Flame and Moth development and Care and Maintenance at other sites
8/5/2018		<5.6		14.73	12.4	10.8	89.5	8.6	1.561	180.6	6.047	22.61	Flame and Moth development and Care and Maintenance at other sites

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24-HOUR AVERAGE TOTAL PARTICULATES RESULTS, METEOROLOGICAL CONDITIONS, AND SITE ACTIVITIES, AUG. 2012 – DEC. 2021

Sample Date	TSP-1 (µg/m ³)	TSP-2 (µg/m ³)	TSP-3 (µg/m ³)	Maximum Air Temperature (°C)	Mean Air Temperature (°C)	Minimum Air Temperature (°C)	Average Relative Humidity (%)	Total Rain* (mm)	Average Wind Speed (m/s)	Average Wind Direction (°)	Maximum Wind Speed (m/s)	Direction of Maximum Wind Speed (°)	Activities at site
8/6/2018			<5.6	17.5	12.72	10.31	89.7	3.6	1.521	167.2	6.86	24.34	Flame and Moth development and Care and Maintenance at other sites
8/7/2018	<5.6	<5.6	<5.6	16.36	12.19	10.07	88	2.9	0.974	198.1	6.762	22.55	Flame and Moth development and Care and Maintenance at other sites
8/8/2018		<5.6	<5.6	15.83	11.44	8.69	87.2	20.2	1.118	217.3	6.399	4.31	Flame and Moth development and Care and Maintenance at other sites
8/17/2018	<5.6	<5.6	<5.6	14.46	8.84	4.09	80.6	0.1	1.836	187.8	9.34	60.18	Flame and Moth development and Care and Maintenance at other sites
8/18/2018		<5.6	<5.6	10.23	6.836	3.253	85.6	1.9	1.983	108.8	9.17	52.15	Flame and Moth development and Care and Maintenance at other sites
8/20/2018		<5.6	<5.6	18.46	10.9	3.702	62.5	0	1.529	170.8	7.036	8.11	Flame and Moth development and Care and Maintenance at other sites
8/21/2018	<5.6	10	<5.6	20.81	14.06	8.6	64.58	0	1.63	274.9	8.21	334.3	Flame and Moth development and Care and Maintenance at other sites
8/22/2018	<5.6	<5.6		21.91	15.15	10.29	67.48	0.2	1.627	191.5	8.53	337.5	Flame and Moth development and Care and Maintenance at other sites
8/23/2018	7.9	<5.6		14.27	9.01	6.972	88	16.8	1.576	102.1	5.919	27.36	Flame and Moth development and Care and Maintenance at other sites
8/25/2018	<5.6			10.22	6.52	2.828	92.2	4.1	1.577	226.6	6.644	129.5	Flame and Moth development and Care and Maintenance at other sites
8/26/2018	6.7			12.89	8.16	2.731	83	2.4	1.707	163.1	6.468	32.1	Flame and Moth development and Care and Maintenance at other sites
9/2/2018	<5.6	<5.6	<5.6	10.7	3.297	-3.314	76.05	0.3	2.042	230.2	10.51	146	Flame and Moth development and Care and Maintenance at other sites
9/3/2018	<5.6	<5.6	<5.6	7.869	4.126	-0.97	70	1	1.602	189.8	7.928	12.66	Flame and Moth development and Care and Maintenance at other sites
9/5/2018	<5.6	<5.6	<5.6	11.22	7.083	4.282	73	5.3	0.562	220.8	4.969	185	Flame and Moth development and Care and Maintenance at other sites
9/6/2018	<5.6	<5.6	5.6	9.76	5.046	1.52	89.4	0.4	1.081	233.6	4.43	71.58	Flame and Moth development and Care and Maintenance at other sites

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Sample Date	TSP-1 (µg/m ³)	TSP-2 (µg/m ³)	TSP-3 (µg/m ³)	Maximum Air Temperature (°C)	Mean Air Temperature (°C)	Minimum Air Temperature (°C)	Average Relative Humidity (%)	Total Rain* (mm)	Average Wind Speed (m/s)	Average Wind Direction (°)	Maximum Wind Speed (m/s)	Direction of Maximum Wind Speed (°)	Activities at site
9/7/2018	<5.6	<5.6	<5.6	9.76	4.749	0.924	85.5	0	1.63	233.9	6.39	266.1	Flame and Moth development and Care and Maintenance at other sites
9/9/2018	<5.6	<5.6	<5.6	12.45	4.741	-1.783	65.15	0	1.511	198.5	5.537	124.1	Flame and Moth development and Care and Maintenance at other sites
9/10/2018	<5.6	<5.6	<5.6	13.8	5.578	-1.006	57.21	0	2.177	195	6.997	158.1	Flame and Moth development and Care and Maintenance at other sites
9/11/2018	<5.6	<5.6	<5.6	12.66	6.037	0.766	52.38	0	1.781	198.9	6.419	226.1	Flame and Moth development and Care and Maintenance at other sites
9/12/2018	<5.6	<5.6	<5.6	8.56	2.232	-2.305	45.9	0	1.346	201	4.341	33.92	Flame and Moth development and Care and Maintenance at other sites
10/03/2018				6.692	-1.208	-5.38	51.29	0	1.448	12.21	3.577	289	Flame and Moth development and Care and Maintenance at other sites
10/05/2018				4.534	-2.66	-8.08	56.46	0	1.152	27.27	4.243	300.3	Flame and Moth development and Care and Maintenance at other sites
10/07/2018				0.935	-3.467	-7.314	53.84	0	2.261	71.17	6.703	274.3	Flame and Moth development and Care and Maintenance at other sites
10/08/2018				-2.852	-7.155	-12.41	65.21	0	1.29	319.71	5.106	195.2	Flame and Moth development and Care and Maintenance at other sites
10/24/2018				7.845	3.324	-1.82	79.21	0	1.886	294.78	10.43	316.1	Flame and Moth development and Care and Maintenance at other sites
10/25/2018		2.8	2.8	8.01	4.607	0.596	57.76	0	2.915	350.76	10.45	333.2	Flame and Moth development and Care and Maintenance at other sites
10/26/2018	2.8	2.8	2.8	7.011	3.262	0.086	63.37	0	1.397	301.93	7.762	322.1	Flame and Moth development and Care and Maintenance at other sites
10/30/2018	2.8	5.6	2.8	-2.415	-6.82	-9.65	79.84	0	0.634	63.48	2.45	307.9	Flame and Moth development and Care and Maintenance at other sites
10/31/2018	2.8			-4.917	-6.713	-9.25	93.6	0	0.599	286.71	4.479	346.8	Flame and Moth development and Care and Maintenance at other sites
11/07/2018	2.8	2.8	2.8	-17.86	-20.26	-22.45	84.3	0	0.352	322.68	2.176	318.3	No mining operations, Care and Maintenance

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Sample Date	TSP-1 (µg/m ³)	TSP-2 (µg/m ³)	TSP-3 (µg/m ³)	Maximum Air Temperature (°C)	Mean Air Temperature (°C)	Minimum Air Temperature (°C)	Average Relative Humidity (%)	Total Rain* (mm)	Average Wind Speed (m/s)	Average Wind Direction (°)	Maximum Wind Speed (m/s)	Direction of Maximum Wind Speed (°)	Activities at site
11/08/2018	2.8	2.8		-16.4	-19.66	-22.55	84.8	0	0.285	57.2	1.931	339.9	No mining operations, Care and Maintenance
11/09/2018			2.8	-9.49	-13.43	-19.61	89.9	0	0.315	292.83	2.744	192.3	No mining operations, Care and Maintenance
11/15/2018	2.8	2.8	14.7	-11.8	-15.51	-20.44	85	0	3.028	51.25	9.79	202	No mining operations, Care and Maintenance
11/18/2018	2.8			-12.66	-16.45	-20.72	87.6	0	0.403	59.23	2.411	170.1	No mining operations, Care and Maintenance
11/19/2018				-8.42	-11.62	-14.8	91.6	0	0.355	57.13	2.421	212.9	No mining operations, Care and Maintenance
11/21/2018				1.579	0.073	-1.312	96.3	0	0.439	n/a	3.41	122.6	No mining operations, Care and Maintenance
11/22/2018				-0.254	-2.923	-4.954	97.3	0	0	n/a	0	0	No mining operations, Care and Maintenance
11/23/2018				-4.941	-7.187	-9.83	95.7	0	0	n/a	0	0	No mining operations, Care and Maintenance
11/28/2018				2.828	0.677	-3.581	82	0	1.781	319.7	9.01	320.6	No mining operations, Care and Maintenance
11/30/2018				-3.325	-4.106	-5.694	96.9	0	0.292	279.51	2.558	356.1	No mining operations, Care and Maintenance
12/04/2018				-11.74	-16.04	-19.83	88.4	0	0.409	325.94	3.998	344.2	No mining operations, Care and Maintenance
12/07/2018				-9.47	-15.19	-19.61	89	0	0.351	39.55	2.577	258	No mining operations, Care and Maintenance
12/10/2018				2.125	0.859	-0.496	67.85	0	3.919	296.62	13.45	327.1	No mining operations, Care and Maintenance
12/11/2018				-0.763	-3.102	-9.05	81.9	0	1.903	309.37	7.664	324.2	No mining operations, Care and Maintenance
12/12/2018				-0.763	-3.102	-9.05	81.9	0	1.903	359.61	7.664	319.6	No mining operations, Care and Maintenance
12/13/2018				-8.48	-11.5	-14.15	90.5	0	0.897	7.13	3.322	275.6	No mining operations, Care and Maintenance
12/14/2018				-10.96	-14.18	-17.34	88.5	0	0.796	338.86	3.695	241.4	No mining operations, Care and Maintenance
12/18/2018		5.7	2.8	-1.576	-3.757	-5.72	71.46	0	1.025	1.31	4.753	14.58	No mining operations, Care and Maintenance
12/26/2018		6.8	6.7	-24.57	-26.82	-27.92	77.75	0	0.321	49.67	2.372	209.7	No mining operations, Care and Maintenance
12/27/2018	7.9	6.9		-21.66	-23.42	-25.06	81.1	0	0.378	54.69	2.656	290.7	No mining operations, Care and Maintenance
12/28/2018	2.8		7.8	-14.64	-18.92	-22.93	85.5	0	0.265	359.5	2.597	237.8	No mining operations, Care and Maintenance
12/30/2018	2.8			-11.95	-16.35	-20.83	87.5	0	0.539	350.96	2.421	282.1	No mining operations, Care and Maintenance

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Sample Date	TSP-1 (µg/m ³)	TSP-2 (µg/m ³)	TSP-3 (µg/m ³)	Maximum Air Temperature (°C)	Mean Air Temperature (°C)	Minimum Air Temperature (°C)	Average Relative Humidity (%)	Total Rain* (mm)	Average Wind Speed (m/s)	Average Wind Direction (°)	Maximum Wind Speed (m/s)	Direction of Maximum Wind Speed (°)	Activities at site
01/10/2019	8.3	6.7	7.4	-24.49	-26.87083333	-30.48	77.95458333	0	0.195291667	247.125	2.156	355.8	No mining operations, Care and Maintenance
01/15/2019		7.8	7.6	-11.24	-12.59	-13.97	90.98333333	0	0.000291667	9.125	0.372	219	No mining operations, Care and Maintenance
01/17/2019	7.6	7.1	6.5	-7.955	-8.797291667	-9.78	93.83333333	0	0	0	0	0	No mining operations, Care and Maintenance
01/22/2019	7.8	8.3		-19.68	-23.18833333	-27.11	81.6	0	0	0	0	0	No mining operations, Care and Maintenance
01/24/2019				-14.15	-17.78333333	-19.34	86.29166667	0	0	0	0	0	No mining operations, Care and Maintenance
01/25/2019				-7.034	-10.31008333	-14.29	92.57083333	0	0	0	0	0	No mining operations, Care and Maintenance
01/29/2019				-9.4	-13.64541667	-16.68	90.08333333	0	0.277583333	201.1041667	2.342	330.2	No mining operations, Care and Maintenance
01/30/2019				-8.95	-13.7325	-19.7	86.86333333	0	1.542625	163.5	6.399	237.3	No mining operations, Care and Maintenance
01/31/2019				-20.23	-23.74833333	-26.83	72.5925	0	1.899833333	225.0583333	5.723	264.8	No mining operations, Care and Maintenance
02/07/2019				-18.34	-20.36	-22.9	84.31666667	0	0.364083333	248.4666667	2.029	330.2	No mining operations, Care and Maintenance
02/08/2019				-15.76	-18.39	-20.57	85.94166667	0	0.4845	239.8916667	3.116	332.5	No mining operations, Care and Maintenance
02/21/2019				-14.18	-16.91875	-18.97	82.025	0	1.657916667	213.6916667	5.909	286.5	No mining operations, Care and Maintenance
02/22/2019				-14.46	-19.28458333	-22.41	73.145	0	1.330666667	221.3541667	4.978	284	No mining operations, Care and Maintenance
02/23/2019				-18.04	-21.61083333	-25.14	77.70916667	0	0.998	231.9680833	3.263	350	No mining operations, Care and Maintenance
02/25/2019				-12.6	-17.09666667	-19.21	78.64541667	0	0.698041667	242.2583333	2.773	295.4	No mining operations, Care and Maintenance
02/26/2019	2.8	2.8	12.9	-9.67	-14.59	-17.76	78.19625	0	0.5995	227.9170833	2.499	336.4	No mining operations, Care and Maintenance
02/27/2019	2.8	2.8	2.8	-7.037	-12.0065	-15.11	78.8	0	0.54175	233.2166667	2.303	333.4	No mining operations, Care and Maintenance
02/28/2019	2.8	2.8	16.2	-6.324	-11.31808333	-14.63	82.06583333	0	0.598916667	221.4125	3.518	323.4	No mining operations, Care and Maintenance
03/05/2019		2.8	6.2	-10.06	-16.27041667	-20.19	65.37416667	0	0.947208333	224.2158333	3.636	281.4	No mining operations, Care and Maintenance
03/06/2019		2.8	2.8	-8.03	-14.92041667	-19.1	57.40583333	0	0.8925	226.7791667	3.489	294.4	No mining operations, Care and Maintenance
03/07/2019		2.8	2.8	-8.78	-14.665	-18.59	61.57208333	0	1.197875	239.2833333	3.322	297.3	No mining operations, Care and Maintenance
03/09/2019	2.8			-5.692	-11.172625	-16.56	64.7425	0	1.044166667	223.0958333	4.577	275.8	No mining operations, Care and Maintenance

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24-HOUR AVERAGE TOTAL PARTICULATES RESULTS, METEOROLOGICAL CONDITIONS, AND SITE ACTIVITIES, AUG. 2012 – DEC. 2021

Sample Date	TSP-1 (µg/m ³)	TSP-2 (µg/m ³)	TSP-3 (µg/m ³)	Maximum Air Temperature (°C)	Mean Air Temperature (°C)	Minimum Air Temperature (°C)	Average Relative Humidity (%)	Total Rain* (mm)	Average Wind Speed (m/s)	Average Wind Direction (°)	Maximum Wind Speed (m/s)	Direction of Maximum Wind Speed (°)	Activities at site
03/12/2019	2.8			2.254	-3.563875	-6.527	69.5725	0	1.170125	212.8429167	4.302	333.9	No mining operations, Care and Maintenance
03/13/2019	2.8			1.848	-4.1465	-9.98	61.66208333	0	1.993833333	297.5166667	8.93	339.6	No mining operations, Care and Maintenance
03/14/2019				3.302	-1.059333333	-4.462	59.0575	0	2.267	270.82375	8.36	359.7	No mining operations, Care and Maintenance
03/19/2019				10.84	6.23775	3.674	53.14833333	0	3.237833333	308.1475	11.77	359.4	No mining operations, Care and Maintenance
03/27/2019				5.028	-0.106041667	-4.954	70.09583333	0	1.245083333	216.0175	5.498	310.9	No mining operations, Care and Maintenance
04/02/2019				1.565	-2.173958333	-8.45	58.46125	0	2.589791667	258.5333333	9.16	281.8	No mining operations, Care and Maintenance
04/04/2019				-4.519	-12.57070833	-19.91	39.09375	0	1.457666667	231.2066667	6.909	357.8	No mining operations, Care and Maintenance
04/09/2019				7.235	3.2065	-2.077	47.27125	0	1.575416667	270.4233333	7.997	354.7	No mining operations, Care and Maintenance
04/11/2019				9.18	3.636458333	-1.373	42.92708333	0	2.046458333	314.2958333	8.23	350.4	No mining operations, Care and Maintenance
04/17/2019				8.96	1.47825	-4.434	60.35208333	0	1.448125	246.592	8.05	334	No mining operations, Care and Maintenance
04/18/2019				5.594	2.828666667	0.351	70.36	0	1.751458333	248.9078333	7.801	356.7	No mining operations, Care and Maintenance
04/19/2019	2.8	2.8		7.499	2.229375	-1.674	60.08666667	0.438	2.265541667	256.18425	6.831	357	No mining operations, Care and Maintenance
04/20/2019	2.8	8.7	2.8	6.688	0.352958333	-5.158	56.12833333	0.292	1.840541667	238.098125	6.948	358.5	No mining operations, Care and Maintenance
04/24/2019			2.8	0.96	-2.374583333	-4.882	75.50083333	1.314	1.810625	141.1084583	8.35	353.3	No mining operations, Care and Maintenance
04/25/2019		2.8		0.827	-3.362958333	-6.81	63.35125	0.73	1.634333333	185.6375	5.41	260.9	No mining operations, Care and Maintenance
04/30/2019			2.8	9.15	3.99175	-2.512	33.26916667	0	2.079625	212.7708333	8.35	293.8	No mining operations, Care and Maintenance
05/01/2019	6.1	2.8	2.8	8.81	5.197666667	1.7	33.94291667	0	2.950375	197.1625	11.64	282.3	No mining operations, Care and Maintenance
05/07/2019	2.8	2.8	2.8	15.15	8.326	0.134	53.54416667	0.73	1.816791667	186.5975	9.89	358.8	No mining operations, Care and Maintenance
05/08/2019			2.8	17.65	11.29129167	7.342	48.36208333	0.292	2.948125	290.4827917	10.3	359.3	No mining operations, Care and Maintenance
05/09/2019		2.8		12.17	8.360666667	3.331	50.14333333	0.438	2.352166667	146.6094583	8.81	359.7	No mining operations, Care and Maintenance
05/14/2019	2.8			16.28	10.91679167	5.083	28.12958333	1.022	1.602	244.7083333	6.801	316.1	No mining operations, Care and Maintenance
05/18/2019				10.95	7.726375	3.783	73.01916667	0.876	0.989458333	193.7770833	4.92	355.6	No mining operations, Care and Maintenance

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24-HOUR AVERAGE TOTAL PARTICULATES RESULTS, METEOROLOGICAL CONDITIONS, AND SITE ACTIVITIES, AUG. 2012 – DEC. 2021

Sample Date	TSP-1 ($\mu\text{g}/\text{m}^3$)	TSP-2 ($\mu\text{g}/\text{m}^3$)	TSP-3 ($\mu\text{g}/\text{m}^3$)	Maximum Air Temperature (°C)	Mean Air Temperature (°C)	Minimum Air Temperature (°C)	Average Relative Humidity (%)	Total Rain* (mm)	Average Wind Speed (m/s)	Average Wind Direction (°)	Maximum Wind Speed (m/s)	Direction of Maximum Wind Speed (°)	Activities at site
05/21/2019				21.25	16.72666667	11.5	31.79333333	0	1.3025	249.7708333	6.556	321.8	No mining operations, Care and Maintenance
05/23/2019				21.29	13.98308333	7.437	44.23041667	0	1.566041667	232.9220833	7.654	333.1	No mining operations, Care and Maintenance
06/04/2019				13.42	9.104041667	3.934	47.03833333	0	2.007166667	186.85	6.517	272.9	No mining operations, Care and Maintenance
06/06/2019				15.9	10.5805	6.499	60.96291667	0.146	1.830416667	186.6345833	8.67	358	No mining operations, Care and Maintenance
06/18/2019				19.38	14.56208333	10.12	60.11375	0	1.923958333	187.6033333	7.046	323.3	No mining operations, Care and Maintenance
06/20/2019				22.07	15.65045833	6.039	38.10625	0	1.724791667	211.0083333	6.38	301.7	No mining operations, Care and Maintenance
06/25/2019				19.23	15.17625	11.19	49.425	0	1.957708333	187.475	10.52	358.6	No mining operations, Care and Maintenance
06/28/2019				20.08	16.84125	14.1	41.73041667	0	1.123416667	159.4652083	5.116	353.6	No mining operations, Care and Maintenance
06/29/2019	23.5	26	23.2	25.09	18.68833333	12.53	52.95666667	0.584	2.162	182.8758333	11.17	303.1	No mining operations, Care and Maintenance
07/03/2019				22.18	16.4325	9.6	39.99375	0	2.028791667	171.4741667	7.272	295.4	No mining operations, Care and Maintenance
07/04/2019				19.89	15.68541667	11.1	67.605	1.168	1.418333333	206.125	8.1	287.9	No mining operations, Care and Maintenance
07/09/2019				21.46	15.44666667	8.28	42.47625	0	1.864041667	202.6333333	6.703	282.3	No mining operations, Care and Maintenance
07/11/2019				19.66	13.62083333	10.8	77.20125	7.878	1.231375	200.5145833	10.68	350.3	No mining operations, Care and Maintenance
07/16/2019				20	14.81875	9.61	64.73666667	0	1.535875	207.8833333	6.556	343.7	No mining operations, Care and Maintenance
07/19/2019				22.76	16.9775	9.6	54.39541667	0	1.653708333	198.1547917	7.438	291.4	No mining operations, Care and Maintenance
07/21/2019		49.4	15.1	22.43	17.07958333	11.22	56.63125	0	1.466916667	218.4291667	5.537	293	No mining operations, Care and Maintenance
07/26/2019	2.8	9.3		17.67	12.58854167	7.242	64.05583333	0	1.530958333	203.3425	5.606	305.3	No mining operations, Care and Maintenance
07/30/2019	2.8	2.8	2.8	18.77	12.2425	8.25	71.22875	0	1.050375	179.0002083	8.38	346.9	No mining operations, Care and Maintenance
07/31/2019	9.6		6.4	18.56	12.50595833	7.046	69.40458333	0	1.209	185.4454167	6.801	356.4	No mining operations, Care and Maintenance
08/01/2019				18.99	11.8195	7.009	74.10791667	2.918	1.389708333	170.7909583	9.81	360	No mining operations, Care and Maintenance
08/06/2019				18.23	11.94854167	7.721	74.81083333	4.085	1.988916667	188.1879167	10.98	351.5	No mining operations, Care and Maintenance
08/08/2019				14.8	8.995166667	3.894	51.97791667	0	2.298125	177.2541667	6.733	278.4	No mining operations, Care and Maintenance

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24-HOUR AVERAGE TOTAL PARTICULATES RESULTS, METEOROLOGICAL CONDITIONS, AND SITE ACTIVITIES, AUG. 2012 – DEC. 2021

Sample Date	TSP-1 (µg/m ³)	TSP-2 (µg/m ³)	TSP-3 (µg/m ³)	Maximum Air Temperature (°C)	Mean Air Temperature (°C)	Minimum Air Temperature (°C)	Average Relative Humidity (%)	Total Rain* (mm)	Average Wind Speed (m/s)	Average Wind Direction (°)	Maximum Wind Speed (m/s)	Direction of Maximum Wind Speed (°)	Activities at site
08/15/2019				15.56	11.80875	9.01	57.17791667	0	3.489625	105.6720833	9.86	191.5	No mining operations, Care and Maintenance
08/16/2019				8.92	7.203958333	4.712	83.785	4.085	1.228791667	154.379125	6.194	358.1	No mining operations, Care and Maintenance
08/21/2019				11.3	6.336916667	2.046	58.40375	1.022	1.366708333	168.9470417	11.95	355.1	No mining operations, Care and Maintenance
08/22/2019	2.8	2.8	2.8	12.61	4.829041667	-2.778	66.03541667	0.146	1.198458333	175.1840417	5.762	356.7	No mining operations, Care and Maintenance
08/27/2019	2.8	7.9	6.1	16.63	8.097666667	0.956	61.71875	0	1.889458333	145.95	6.88	294.9	No mining operations, Care and Maintenance
08/28/2019	2.8	7.2		15.27	8.420416667	1.319	61.02541667	0	1.564166667	171.4449583	6.145	358.6	No mining operations, Care and Maintenance
08/30/2019			9.7	16.84	9.61075	2.711	61.90166667	0	1.469166667	188.222875	5.811	331.6	No mining operations, Care and Maintenance
09/03/2019				15.1	9.793041667	4.93	74.10166667	0.73	1.239833333	212.310375	7.781	358.8	No mining operations, Care and Maintenance
09/04/2019				13.89	8.2975	2.692	69.73166667	7.733	1.769708333	194.2491667	6.478	345.7	No mining operations, Care and Maintenance
09/05/2019				16.13	9.246416667	4.274	63.15291667	0	1.431291667	220.3025	5.165	349.3	No mining operations, Care and Maintenance
09/10/2019				17.37	12.04745833	5.63	37.35333333	0.292	1.5765	288.1713333	8.77	347.7	No mining operations, Care and Maintenance
09/12/2019				17.19	10.65720833	5.053	49.51708333	0	1.249875	261.565375	6.233	359.6	No mining operations, Care and Maintenance
09/17/2019				9.26	7.0395	4.661	89.8175	0.584	0.950833333	237.0634583	5.9	359.3	No mining operations, Care and Maintenance
09/24/2019	2.8	2.8	2.8	9.91	2.337416667	-2.25	71.89416667	0.2	1.297125	215.505	3.969	353.2	No mining operations, Care and Maintenance
09/25/2019	2.8	2.8	5.8	6.485	2.208125	-0.156	81.61	0	0.854875	230.8291667	4.028	338.1	No mining operations, Care and Maintenance
09/27/2019	11.8	2.8	2.8	4.932	-1.192125	-5.692	64.195	0.1	1.418541667	208.228375	6.399	345.5	No mining operations, Care and Maintenance
10/02/2019				9.26	6.436375	0.814	69.36208333	0	1.595125	247.3634167	7.762	352.9	No mining operations, Care and Maintenance
10/03/2019				5.661	0.994625	-1.64	86.135	0.1	1.120666667	225.2746667	4.528	350.3	No mining operations, Care and Maintenance
10/11/2019				2.553	0.765916667	-0.261	88.97375	0	0.744875	195.3220833	6.429	352	No mining operations, Care and Maintenance
10/15/2019				-6.956	-11.73279167	-15.44	87.225	0	0.9325	214.3479167	5.606	313.7	No mining operations, Care and Maintenance
10/17/2019				-0.439	-3.159375	-4.712	88.31625	0	0.768375	190.2233333	4.753	236.4	No mining operations, Care and Maintenance
10/22/2019				-0.99	-3.084791667	-4.71	90.36666667	0	0.928708333	263.80125	4.351	359.4	No mining operations, Care and Maintenance

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24-HOUR AVERAGE TOTAL PARTICULATES RESULTS, METEOROLOGICAL CONDITIONS, AND SITE ACTIVITIES, AUG. 2012 – DEC. 2021

Sample Date	TSP-1 (µg/m ³)	TSP-2 (µg/m ³)	TSP-3 (µg/m ³)	Maximum Air Temperature (°C)	Mean Air Temperature (°C)	Minimum Air Temperature (°C)	Average Relative Humidity (%)	Total Rain* (mm)	Average Wind Speed (m/s)	Average Wind Direction (°)	Maximum Wind Speed (m/s)	Direction of Maximum Wind Speed (°)	Activities at site
10/23/2019	2.8	2.8		-2.434	-5.478208333	-9.16	91.50208333	0	1.024791667	185.8808333	4.645	355.7	No mining operations, Care and Maintenance
10/24/2019		2.8	2.8	-1.507	-3.947875	-6.706	94.9625	0	0.778916667	255.3833333	4.057	356.8	No mining operations, Care and Maintenance
10/25/2019	2.8	2.8	2.8	-0.251	-5.003166667	-7.436	91.15125	0	0.9845	307.9083333	3.018	357.1	No mining operations, Care and Maintenance
10/29/2019	2.8		2.8	0.805	-1.501666667	-3.723	98.325	0	0.353583333	281.8958333	2.675	359.4	No mining operations, Care and Maintenance
10/31/2019	2.8			-2.423	-4.637875	-6.819	95.85416667	0	0.926541667	324.0666667	3.303	356.2	No mining operations, Care and Maintenance
11/06/2019				-15.09	-19.33958333	-23.77	83.85416667	0	0.405291667	208.6	3.028	284.5	No mining operations, Care and Maintenance
11/07/2019				-9.33	-12.31875	-15.22	89.16666667	0	1.090833333	195.7875	7.801	230	No mining operations, Care and Maintenance
11/12/2019				-14.1	-16.15541667	-18.05	84.41666667	0	0.460666667	218.5	5.547	359.6	No mining operations, Care and Maintenance
11/14/2019				-15.61	-17.3225	-19.02	84.43291667	0	0.901416667	189.0916667	5.743	219.3	No mining operations, Care and Maintenance
11/19/2019				-10.96	-12.91791667	-15.25	90.40416667	0	0.594416667	240.1170417	3.45	355	No mining operations, Care and Maintenance
11/20/2019				-2.919	-6.004083333	-10.41	95.54583333	0	0.795708333	149.5583333	3.577	238.7	No mining operations, Care and Maintenance
11/21/2019	2.8			-1.681	-3.039916667	-6.409	97.67916667	0	0	0	0	0	No mining operations, Care and Maintenance
11/26/2019	2.8	2.8		-12.69	-13.5875	-14.6	89.97083333	0	0.311208333	228.9333333	2.46	355	No mining operations, Care and Maintenance
11/27/2019	2.8	2.8	2.8	-14.66	-16.97125	-18.73	87.15416667	0	0.6095	266.9041667	3.048	302.2	No mining operations, Care and Maintenance
11/28/2019		2.8		-12.54	-14.64916667	-17.01	89.06666667	0	0.510083333	224.9541667	3.293	326.8	No mining operations, Care and Maintenance
11/29/2019			2.8	-8.82	-10.65416667	-13.46	92.2375	0	0.255583333	144.3166667	3.361	333	No mining operations, Care and Maintenance
12/03/2019				-10.87	-14.07708333	-18.56	89.05833333	0	2.245333333	207.9625	8.25	237.7	No mining operations, Care and Maintenance
12/10/2019				-7.679	-10.99041667	-15.5	92.10416667	0	0.303291667	239.4791667	2.666	308	No mining operations, Care and Maintenance
12/12/2019				-6.312	-9.365708333	-12.85	88.45916667	0	0.847416667	277.5125	6.35	344	No mining operations, Care and Maintenance
12/13/2019				-10.78	-11.06416667	-11.5	89.56666667	0	0.354916667	233.6541667	2.558	343.6	No mining operations, Care and Maintenance
12/18/2019				-20.14	-25.29958333	-28.69	79.55125	0	0.308625	199.9677917	2.871	258.1	No mining operations, Care and Maintenance
12/19/2019				-19.08	-21.23375	-25.53	83.28041667	0	0.627208333	206.0833333	3.185	230.6	No mining operations, Care and Maintenance

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24-HOUR AVERAGE TOTAL PARTICULATES RESULTS, METEOROLOGICAL CONDITIONS, AND SITE ACTIVITIES, AUG. 2012 – DEC. 2021

Sample Date	TSP-1 (µg/m ³)	TSP-2 (µg/m ³)	TSP-3 (µg/m ³)	Maximum Air Temperature (°C)	Mean Air Temperature (°C)	Minimum Air Temperature (°C)	Average Relative Humidity (%)	Total Rain* (mm)	Average Wind Speed (m/s)	Average Wind Direction (°)	Maximum Wind Speed (m/s)	Direction of Maximum Wind Speed (°)	Activities at site
12/24/2019	2.8	2.8	10.4	-10.93	-13.29958333	-15.11	90.175	0	0.229375	258.1041667	1.999	341.1	No mining operations, Care and Maintenance
12/25/2019	5.6	2.8	2.8	-4.349	-7.254791667	-13.49	93.74583333	0	1.201583333	198.7418333	8.42	351.3	No mining operations, Care and Maintenance
12/27/2019		5.7	2.8	-19.77	-24.40541667	-27.26	80.615	0	1.431583333	208.9208333	5.233	262	No mining operations, Care and Maintenance
12/27/2019	-	5.7	2.8	-19.77	-24.405417	-27.26	80.615	0	1.4315833	208.92083	5.233	262	No mining operations, Care and Maintenance
01/08/2020	-	-	-	-24.75	-28.65333333	-32.7	75.42625	0	1.073	200.1708333	4.567	207.9	No mining operations, Care and Maintenance
01/09/2020	-	-	-	-32.55	-33.83916667	-35.21	70.02916667	0	0.3745	203.1716667	2.597	196.1	No mining operations, Care and Maintenance
01/14/2020	-	-	-	-33.56	-34.57625	-36.14	69.29958333	0	0.160125	269.303	1.725	200.6	No mining operations, Care and Maintenance
01/16/2020	-	-	-	-30.28	-31.85416667	-34.05	72.18875	0	0.361875	245.7505417	2.029	214.1	No mining operations, Care and Maintenance
01/23/2020	-	-	-	-11	-13.65458333	-16.44	89.8375	0	0.356	207.6008333	3.459	168	No mining operations, Care and Maintenance
01/24/2020	-	-	-	-12.84	-15.66958333	-18.71	87.87916667	0	0.60025	119.6466667	3.714	8.1	No mining operations, Care and Maintenance
01/26/2020	-	-	-	-19.52	-22.07208333	-25.36	82.29333333	0	0.927291667	191.1763333	4.831	200.1	No mining operations, Care and Maintenance
01/27/2020	-	-	-	-21	-22.85666667	-25.56	81.33416667	0.1	0.592458333	203.15	2.617	222.1	No mining operations, Care and Maintenance
01/28/2020	-	-	-	-7.618	-16.98991667	-25.55	86.28166667	0	1.289166667	248.06975	9.23	333.2	No mining operations, Care and Maintenance
01/30/2020	2.8	2.8	-	-7.641	-10.71583333	-15.43	91.95416667	0	1.056208333	287.1625	4.577	353.6	No mining operations, Care and Maintenance
01/31/2020	2.8	2.8	-	-11.95	-14.5725	-17.52	88.7875	0	0.659875	250.6625	3.459	168	No mining operations, Care and Maintenance
02/04/2020	-	-	-	-16.15	-21.4475	-26.76	82.92125	0	0.44875	229.1041667	2.93	200.7	No mining operations, Care and Maintenance
02/05/2020	-	-	-	-11.03	-13.79791667	-16.4	89.17916667	0	0.368875	213.8125	2.391	307.5	No mining operations, Care and Maintenance
02/06/2020	-	-	-	-7.323	-10.2525	-13.43	91.73333333	0	0.379666667	269.15125	2.058	218.5	No mining operations, Care and Maintenance
02/07/2020	-	-	-	-8.67	-10.62	-13.1	91.4125	0	0.218541667	156.4853333	2.45	208.7	No mining operations, Care and Maintenance
02/14/2020	-	-	-	-27.48	-31.72125	-34.24	71.61916667	0	1.068166667	201.5083333	3.989	205.8	No mining operations, Care and Maintenance
02/18/2020	-	-	-	-16.05	-21.94041667	-25.15	81.71708333	0	0.649958333	208.8875	4.763	205.3	No mining operations, Care and Maintenance
02/19/2020	-	-	-	-0.387	-3.29075	-15.28	69.50416667	0	4.209083333	316.05	17.01	321.2	No mining operations, Care and Maintenance

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ATTACHMENT A1

24-HOUR AVERAGE TOTAL PARTICULATES RESULTS, METEOROLOGICAL CONDITIONS, AND SITE ACTIVITIES, AUG. 2012 – DEC. 2021

Sample Date	TSP-1 (µg/m ³)	TSP-2 (µg/m ³)	TSP-3 (µg/m ³)	Maximum Air Temperature (°C)	Mean Air Temperature (°C)	Minimum Air Temperature (°C)	Average Relative Humidity (%)	Total Rain* (mm)	Average Wind Speed (m/s)	Average Wind Direction (°)	Maximum Wind Speed (m/s)	Direction of Maximum Wind Speed (°)	Activities at site
02/20/2020	-	-	-	-2.891	-5.195583333	-7.755	64.91666667	0	2.870833333	319.6133333	12.42	316.3	No mining operations, Care and Maintenance
02/21/2020	-	2.8	2.8	-2.066	-4.977041667	-8.2	73.76208333	0	1.379541667	217.785	9.66	324.5	No mining operations, Care and Maintenance
02/25/2020	2.8	2.8	2.8	-18.07	-21.80166667	-26.24	79.90833333	0	1.070541667	240.675	5.067	209.8	No mining operations, Care and Maintenance
02/26/2020	2.8	2.8	2.8	-14.71	-18.91916667	-22.63	84.3375	0.7	0.515291667	207.9791667	3.185	201	No mining operations, Care and Maintenance
02/27/2020	2.8	-	-	-13.77	-15.85125	-18.19	84.29833333	1.3	1.567041667	214.55	5.38	202	No mining operations, Care and Maintenance
03/03/2020	-	-	-	-14.16	-18.31375	-23.39	82.22166667	1	1.034041667	212.4583333	3.675	214.3	No mining operations, Care and Maintenance
03/10/2020	-	-	-	-8.22	-11.43208333	-16.65	83.60708333	0.1	1.652125	207.2458333	6.194	192.1	No mining operations, Care and Maintenance
03/12/2020	-	-	-	-15.32	-24.20708333	-29.28	65.74083333	0	1.359833333	209.8805417	3.695	350	No mining operations, Care and Maintenance
03/19/2020	-	-	-	0.597	-3.675791667	-7.041	74.09916667	0	0.9235	206.0408333	4.773	213.7	No mining operations, Care and Maintenance
03/24/2020	-	-	-	-1.314	-6.080375	-12.25	79.17083333	1.3	1.950083333	155.8077083	9.89	52.89	No mining operations, Care and Maintenance
03/25/2020	-	-	-	0.798	-2.537916667	-5.041	85.86166667	1.7	2.228291667	32.57966667	8.15	109.3	No mining operations, Care and Maintenance
03/26/2020	11.4	2.8	2.8	-4.863	-9.027541667	-14.48	68.26291667	0.1	2.898708333	157.7095833	9.4	331.5	No mining operations, Care and Maintenance
03/31/2020	-	-	10.6	-5.757	-15.91129167	-22.62	41.5125	0.3	1.399166667	224.11	3.979	163.4	No mining operations, Care and Maintenance
04/02/2020	-	-	-	-0.974	-9.887416667	-16.15	45.9575	0.5	1.562125	214.0245833	4.988	265.8	No mining operations, Care and Maintenance
04/03/2020	-	-	-	-2.224	-8.65375	-14.01	47.92375	0	1.590083333	220.1	4.665	198.7	No mining operations, Care and Maintenance
04/07/2020	-	-	-	-4.811	-10.58170833	-17.43	55.52958333	0.4	2.020333333	163.1907083	7.154	29.71	No mining operations, Care and Maintenance
04/10/2020	-	-	-	-0.38	-8.080916667	-15.31	46.02416667	0.7	1.903375	189.2947917	6.115	59.65	No mining operations, Care and Maintenance
04/16/2020	-	-	-	8.49	5.269166667	2.279	63.21833333	0.2	2.054833333	205.2249167	12.38	166.5	No mining operations, Care and Maintenance
04/21/2020	-	-	-	7	2.943833333	0.801	81.57708333	1.3	1.247083333	208.828625	5.615	302.1	No mining operations, Care and Maintenance
04/22/2020	-	-	-	4.123	1.223708333	-2.551	73.40458333	0.5	1.634125	169.7766667	8.18	77.49	No mining operations, Care and Maintenance
04/24/2020	-	2.8	2.8	-2.297	-5.00725	-8.07	58.16166667	0.2	2.864333333	174.075	9.15	148.6	No mining operations, Care and Maintenance
04/28/2020	-	2.8	-	5.954	1.568	-4.194	61.76833333	0.1	1.854291667	184.14375	6.635	64.19	No mining operations, Care and Maintenance

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24-HOUR AVERAGE TOTAL PARTICULATES RESULTS, METEOROLOGICAL CONDITIONS, AND SITE ACTIVITIES, AUG. 2012 – DEC. 2021

Sample Date	TSP-1 ($\mu\text{g}/\text{m}^3$)	TSP-2 ($\mu\text{g}/\text{m}^3$)	TSP-3 ($\mu\text{g}/\text{m}^3$)	Maximum Air Temperature (°C)	Mean Air Temperature (°C)	Minimum Air Temperature (°C)	Average Relative Humidity (%)	Total Rain* (mm)	Average Wind Speed (m/s)	Average Wind Direction (°)	Maximum Wind Speed (m/s)	Direction of Maximum Wind Speed (°)	Activities at site
04/29/2020	2.8	7.2	9.2	1.934	-0.397458333	-3.49	56.89375	0.4	2.189791667	236.1366667	7.918	258.3	No mining operations, Care and Maintenance
04/30/2020	2.8	-	-	-1.625	-5.063875	-8.14	80.01208333	0.5	2.35475	195.8791667	6.948	163	No mining operations, Care and Maintenance
05/05/2020	-	-	-	11.67	4.849708333	-0.784	66.341666667	0.8	1.633375	238.2458333	6.782	214.7	No mining operations, Care and Maintenance
05/06/2020	-	-	-	12.95	5.823791667	-0.895	54.36333333	0.5	1.417041667	232.4291667	5.106	233.7	No mining operations, Care and Maintenance
05/07/2020	-	-	-	12.96	7.012625	1.961	47.95791667	0	1.200541667	209.69875	5.067	209.8	No mining operations, Care and Maintenance
05/19/2020	-	-	-	10.63	4.087916667	-2.92	36.195	0	2.5845	248.1583333	7.526	261	No mining operations, Care and Maintenance
05/21/2020	-	-	-	15.4	8.486083333	0.058	46.08291667	0	1.559666667	205.4920417	5.762	7.979	No mining operations, Care and Maintenance
05/26/2020	-	-	-	13.2	9.020583333	6.395	64.889166667	2.3	1.421375	171.5091667	7.183	259.7	No mining operations, Care and Maintenance
05/27/2020	2.8	2.8	2.8	13.6	9.132208333	5.523	79.08875	1.6	0.999291667	168.2158333	7.468	140.6	No mining operations, Care and Maintenance
05/29/2020	2.8	2.8	2.8	19.12	14.3225	9.71	27.51	0	1.610791667	254.4833333	6.958	76.08	No mining operations, Care and Maintenance
06/11/2020	-	-	-	16.13	11.52991667	6.738	65.42708333	10.5	1.744291667	188.8279167	7.056	153.6	No mining operations, Care and Maintenance
06/17/2020	-	-	-	17.26	12.891666667	10.16	70.97375	0.7	1.6235	254.8325	7.487	331.7	No mining operations, Care and Maintenance
06/18/2020	-	-	-	20.3	14.219166667	8.66	63.904166667	0.7	1.095291667	256.6654167	7.703	257.6	No mining operations, Care and Maintenance
06/22/2020	-	-	-	11.68	8.739208333	6.459	83.67	0	2.185375	112.8005833	9.88	19.07	No mining operations, Care and Maintenance
06/23/2020	-	-	-	10.63	7.681083333	5.57	84.97291667	1	1.794583333	111.55225	7.458	348.9	No mining operations, Care and Maintenance
06/24/2020	-	-	-	11.8	7.445333333	5.332	89.58583333	6.3	1.481708333	60.48054167	6.713	8.96	No mining operations, Care and Maintenance
06/25/2020	2.8	2.8	-	13.94	8.420333333	3.679	76.12833333	2	1.378708333	132.3204167	9.99	121.7	No mining operations, Care and Maintenance
06/30/2020	2.8	2.8	-	15.5	10.97825	6.649	77.47958333	0.4	1.933625	188.1480833	8.39	139.6	No mining operations, Care and Maintenance
07/02/2020	-	-	-	15.89	9.632125	1.384	57.03833333	0.9	1.962875	190.35	6.723	34.36	No mining operations, Care and Maintenance
07/09/2020	-	-	-	16.53	11.511666667	8.09	76.0075	0	1.236166667	196.2525	6.546	36.73	No mining operations, Care and Maintenance
07/10/2020	-	-	-	16.58	11.191666667	7.925	84.16458333	0	0.943916667	207.4458333	5.449	20.9	No mining operations, Care and Maintenance
07/16/2020	-	-	-	20.82	13.49575	6.776	70.90333333	3.3	1.421791667	219.695	5.576	14.13	No mining operations, Care and Maintenance

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24-HOUR AVERAGE TOTAL PARTICULATES RESULTS, METEOROLOGICAL CONDITIONS, AND SITE ACTIVITIES, AUG. 2012 – DEC. 2021

Sample Date	TSP-1 (µg/m ³)	TSP-2 (µg/m ³)	TSP-3 (µg/m ³)	Maximum Air Temperature (°C)	Mean Air Temperature (°C)	Minimum Air Temperature (°C)	Average Relative Humidity (%)	Total Rain* (mm)	Average Wind Speed (m/s)	Average Wind Direction (°)	Maximum Wind Speed (m/s)	Direction of Maximum Wind Speed (°)	Activities at site
07/22/2020	-	-	-	12.03	9.899291667	7.552	85.7675	5.3	1.607541667	240.2458333	5.625	87.4	No mining operations, Care and Maintenance
07/23/2020	-	-	-	16.22	9.930833333	5.661	73.44125	0.2	1.442	194.4804167	5.165	212.1	No mining operations, Care and Maintenance
07/28/2020	-	-	-	11.32	9.550333333	7.694	93.40833333	0.6	0.516416667	223.2900833	3.646	359.1	No mining operations, Care and Maintenance
07/29/2020	-	-	-	15.9	11.615	8.85	85.33708333	0	0.860458333	171.277125	5.312	153.2	No mining operations, Care and Maintenance
07/30/2020	-	22.9	16.2	22.92	14.57866667	6.921	71.01916667	0	1.611791667	269.35	6.39	157.7	No mining operations, Care and Maintenance
08/04/2020	-	-	-	18.74	11.866625	6.787	76.00083333	4.2	1.280125	233.6866667	4.949	199.2	Mining operations active
08/06/2020	-	-	-	15.95	10.98695833	6.458	75.3875	0.5	1.199541667	231.9166667	4.978	286.9	Mining operations active
08/10/2020	-	-	-	12.98	9.12128	4.893	85.4488	0.5	0.80776	201.2	5.096	204.6	Mining operations active
08/23/2020	-	-	-	18.48	13.18416667	10.53	76.37125	1.8	1.26375	202.1154167	5.9	235.1	Mining operations active
08/24/2020	-	-	-	14.06	11.49333333	9.1	85.56083333	6.6	0.875208333	234.9566667	4.204	13.69	Mining operations active
08/25/2020	-	-	-	12.62	10.68958333	9.34	93.18333333	17.3	0.427208333	261.3083333	2.734	267.5	Mining operations active
08/26/2020	-	2.8	5.6	12.89	9.890166667	7.491	89.02208333	13.4	0.740708333	241.2291667	3.93	287.1	Mining operations active
08/27/2020	-	6.8	6.5	14.05	9.001541667	4.255	78.86	0	1.08075	191.195	3.793	215.3	Mining operations active
08/28/2020	2.8	2.8	8.7	14.49	9.097708333	4.627	75.98291667	0	1.378625	228.9166667	4.91	219.5	Mining operations active
08/29/2020	9.3	-	-	15.4	9.761791667	5.197	73.61583333	0	1.311291667	178.0129167	6.056	225.1	Mining operations active
08/30/2020	2.8	-	-	10.86	8.845708333	7.022	74.19	0.1	1.404875	320.8397917	6.527	141.6	Mining operations active
09/02/2020	2.8	2.8	6.1	14.4	7.991875	4.123	81.83541667	0	1.169666667	256.417625	5.762	7.979	Mining operations active
09/04/2020	5.6	9.4	2.8	8.38	5.559375	3.885	94.66666667	6.5	0.61625	196.5055833	4.684	273.1	Mining operations active
09/06/2020	2.8	2.8	2.8	10.88	6.010583333	3.58	85.13458333	0.2	0.684291667	203.571625	5.439	10.13	Mining operations active
09/09/2020	-	-	-	11	6.139208333	1.932	77.56625	1.6	1.409333333	198.3554167	7.144	324.5	Mining operations active
09/10/2020	-	-	-	7.981	4.92925	2.3	86.01458333	2.6	1.157	203.9933333	8.06	178.2	Mining operations active
09/11/2020	-	-	-	4.295	2.180791667	0.149	78.56916667	0	1.609333333	207.2551667	7.193	41.58	Mining operations active
09/12/2020	-	-	-	6.649	2.350875	-0.358	79.64583333	1.4	0.911958333	249.4270833	5.762	7.979	Mining operations active
09/14/2020	-	-	-	8.55	3.162416667	-1.496	69.09625	0	1.394375	252.8107917	4.351	197.7	Mining operations active
09/24/2020	-	-	-	8.06	6.161333333	4.084	82.84125	0.2	1.189583333	216.25	5.694	295.3	Mining operations active
10/06/2020	11.2	2.8	2.8	3.111	2.19375	1.089	97.20833333	4.8	0.570666667	196.1082917	2.744	327.3	Mining operations active
10/07/2020	2.8	2.8	6.0	2.4	0.715958333	0.047	98.0125	0.4	0.345	172.4083333	3.067	189.8	Mining operations active
10/08/2020	2.8	2.8	2.8	1.602	0.032625	-1.014	97.24583333	3.4	0.240458333	93.94166667	3.783	206.2	Mining operations active
10/13/2020	-	-	-	-6.458	-8.996416667	-11.48	82.91	0	1.310833333	211.9958333	3.949	220.7	Mining operations active
10/15/2020	-	-	-	-5.877	-7.304625	-9.13	92.14583333	0	0.73875	204.175	3.273	210	Mining operations active
10/16/2020	-	-	-	-6.125	-10.82483333	-16.96	76.59916667	0	1.72975	191.8985833	6.576	118.9	Mining operations active
10/19/2020	-	-	-	-10.26	-14.96375	-17.78	83.315	0	1.089333333	235.8685417	2.852	223.8	Mining operations active
10/20/2020	-	-	-	-11.48	-15.20208333	-18.07	85.24291667	2.626	0.997916667	229.3541667	3.842	208.9	Mining operations active
10/23/2020	-	-	-	-12.8	-16.28041667	-18.46	85.51666667	0	0.886083333	249.9833333	3.273	210	Mining operations active
10/24/2020	-	-	-	-10.84	-14.82958333	-18.5	85.44958333	0	0.571958333	228.9208333	2.548	193.4	Mining operations active
10/25/2020	-	-	-	-8.89	-11.9	-13.44	87.2025	0	0.716875	247.3942917	3.077	340.7	Mining operations active
11/01/2020	-	-	-	-22.39	-23.96333333	-25.59	80.92291667	0	0.715833333	211.39	5.851	15.52	Mining operations active
11/22/2020	-	-	-	-10.01	-11.56708333	-14.95	91.5625	0.584	0.351875	261.70175	2.813	215.2	Mining operations active

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Sample Date	TSP-1 (µg/m ³)	TSP-2 (µg/m ³)	TSP-3 (µg/m ³)	Maximum Air Temperature (°C)	Mean Air Temperature (°C)	Minimum Air Temperature (°C)	Average Relative Humidity (%)	Total Rain* (mm)	Average Wind Speed (m/s)	Average Wind Direction (°)	Maximum Wind Speed (m/s)	Direction of Maximum Wind Speed (°)	Activities at site
11/23/2020	-	-	-	-9.03	-11.13458333	-13.79	91.49166667	0	0.759	217.83575	4.116	279.9	Mining operations active
11/24/2020	-	-	-	-9.04	-10.49083333	-13.27	92.04166667	1.168	0.287458333	283.4985	2.734	267.5	Mining operations active
11/25/2020	-	-	-	-14.19	-16.06833333	-17.59	87.89583333	0	0.616333333	249.6845833	2.813	215.2	Mining operations active
11/30/2020	-	2.8	-	-6.436	-9.222416667	-11.14	87.78166667	0	0.978333333	265.8970833	6.684	120.4	Mining operations active
12/07/2020	2.8	2.8	-	-1.728	-4.406875	-8.37	94.275	0	0.734708333	168.2958333	4.165	176	Mining operations active
12/08/2020	2.8	-	-	-0.613	-1.713611111	-5.824	79.33277778	0	0.732611111	229.3290556	5.664	212.4	Mining operations active
01/01/2021	-	2.8	2.8	-12.43	-16.36625	-21.99	86.35	0	0.910208333	270.2958333	2.979	217.7	Mining operations active
01/02/2021	-	2.8	2.8	-18.83	-20.40291667	-23.35	84.09166667	0	0.363666667	234.2916667	2.068	124.2	Mining operations active
01/03/2021	-	2.8	-	-19.05	-21.69208333	-23.48	82.99583333	0	0.322166667	200.4625	2.195	229.1	Mining operations active
01/04/2021	-	-	-	-17.37	-20.52958333	-23.05	84.19583333	0	0.342875	191.5566667	3.303	210.3	Mining operations active
01/07/2021	-	-	2.8	-5.327	-8.148958333	-9.93	85.21416667	0	0.823791667	233.62975	4.038	188.6	Mining operations active
01/08/2021	-	-	-	-1.061	-3.997041667	-6.979	72.82958333	0	1.804208333	216.841375	9.77	334.3	Mining operations active
01/11/2021	-	-	-	0.482	-1.243958333	-3.992	66.08625	0	2.690041667	271.094625	11.6	327.9	Mining operations active
01/14/2021	-	-	-	-8.42	-13.64833333	-16.5	87.91333333	0	0.933416667	229.5083333	4.371	183.3	Mining operations active
01/16/2021	-	-	-	-6.59	-9.610583333	-11.49	92.7	0	0.793666667	255.0416667	3.822	195.7	Mining operations active
01/17/2021	-	-	-	-6.731	-8.3555	-11.77	91.80833333	0	0.692	259.5458333	4.057	209.1	Mining operations active
02/04/2021	-	2.8	2.8	-24.52	-26.12291667	-27.2	78.20666667	0	0.432958333	214.5182917	3.724	349.3	Mining operations active
02/05/2021	-	2.8	6.9	-26.72	-28.69291667	-30.84	75.42333333	0	0.558125	224.5966667	3.616	298	Mining operations active
02/06/2021	-	2.8	6.2	-29.15	-31.81916667	-33.46	72.09375	0	0.446666667	248.5816667	2.489	353.3	Mining operations active
02/12/2021	-	-	-	-14.34	-19.44333333	-22.38	81.20541667	0	0.417458333	213.1729583	2.499	189.1	Mining operations active
02/15/2021	-	-	-	-17.67	-21.82833333	-24.03	74.8075	0	0.635583333	251.6720833	3.312	323.4	Mining operations active
02/16/2021	-	-	-	-20.14	-22.67875	-25.23	79.16791667	0	0.60975	190.992875	3.283	1.998	Mining operations active
02/17/2021	-	-	-	-16.9	-19.84083333	-22.26	82.97	0	0.647166667	216.0125	5.517	349.3	Mining operations active
03/03/2021	-	-	-	-9.43	-11.93916667	-13.93	86.1375	0	1.259375	201.8875	3.93	287.1	Mining operations active
03/05/2021	-	-	-	-4.394	-9.061708333	-12.62	87.46208333	0	0.651333333	235.2166667	3.479	205.9	Mining operations active
03/06/2021	-	-	-	-5.187	-7.8115	-11.14	77.0925	0	1.352541667	234.2329167	6.517	288	Mining operations active
03/07/2021	-	-	-	-7.079	-13.07091667	-18.14	75.09666667	0	1.476041667	218.5577917	5.145	337.5	Mining operations active
03/09/2021	-	-	-	-7.436	-13.82158333	-18.41	74.09416667	0	1.060916667	236.7158333	3.371	199.3	Mining operations active
03/10/2021	-	-	-	-8.62	-13.02125	-16	75.98125	0	0.917583333	235.2708333	4.381	211.6	Mining operations active
03/15/2021	-	2.8	5.7	-12.66	-21.1025	-26.48	67.41666667	0	1.353541667	226.2125	4.204	13.69	Mining operations active
03/18/2021	-	2.8	2.8	-7.427	-10.29358333	-17.56	82.41125	0	1.348708333	171.2874583	5.998	132.8	Mining operations active
03/19/2021	-	2.8	2.8	-10.76	-15.15625	-19.09	69.49625	0	2.764125	194.1125	6.38	304.5	Mining operations active
04/01/2021	-	2.8	5.8	-4.07	-8.799958333	-13.61	61.50041667	0	3.202708333	234.7875	9.56	269.3	Mining operations active
04/02/2021	-	2.8	2.8	-6.366	-13.44316667	-20.16	54.64958333	0	1.759208333	182.8083333	7.213	51.31	Mining operations active
04/03/2021	-	5.8	2.8	-2.949	-7.686916667	-11.95	71.05	0	1.71925	188.7717083	7.585	333.1	Mining operations active
04/05/2021	-	-	-	-3.172	-7.024458333	-15.12	66.96291667	0	2.80825	128.7345833	10.01	331.2	Mining operations active
04/15/2021	-	-	-	7.863	3.07275	-2.574	48.36125	0	1.777333333	216.4666667	7.046	127	Mining operations active
04/16/2021	-	-	-	9.38	2.783625	-2.562	48.29916667	0	1.593458333	198.875	5.998	132.8	Mining operations active
04/17/2021	-	-	-	8.54	2.294666667	-4.559	43.62583333	0	2.024333333	206.8416667	5.39	206.2	Mining operations active
04/18/2021	-	-	-	13	3.448166667	-3.432	38.82666667	0	1.593333333	227.4999583	4.596	200.2	Mining operations active
04/20/2021	-	-	-	9.54	3.1645	-4.876	53.98166667	0	2.984041667	167.2214583	12.39	127.8	Mining operations active
05/03/2021	-	-	-	9.21	5.270833333	0.954	43.52666667	0	1.767125	269.827	6.713	8.96	Mining operations active
05/04/2021	-	-	-	8.61	5.35575	1.449	56.19625	0	1.47175	216.8411667	6.409	32	Mining operations active

* Starting October 15, 2013, total precipitation is reported rather than total rain

Note: - indicates no data recorded; n/a = not applicable/not available

ATTACHMENT A1

24-HOUR AVERAGE TOTAL PARTICULATES RESULTS, METEOROLOGICAL CONDITIONS, AND SITE ACTIVITIES, AUG. 2012 – DEC. 2021

Sample Date	TSP-1 (µg/m ³)	TSP-2 (µg/m ³)	TSP-3 (µg/m ³)	Maximum Air Temperature (°C)	Mean Air Temperature (°C)	Minimum Air Temperature (°C)	Average Relative Humidity (%)	Total Rain* (mm)	Average Wind Speed (m/s)	Average Wind Direction (°)	Maximum Wind Speed (m/s)	Direction of Maximum Wind Speed (°)	Activities at site
05/06/2021	-	-	-	11.06	7.244416667	2.91	45.26041667	0	2.106666667	262.30875	8.15	109.3	Mining operations active
05/10/2021	-	-	-	13.28	6.86575	1.255	52.19541667	0	1.435166667	204.708375	8.32	326.2	Mining operations active
05/13/2021	-	-	-	9.17	5.130541667	0.313	71.19291667	0	1.426458333	184.1409583	7.409	51.11	Mining operations active
05/14/2021	-	-	-	6.919	3.953875	0.87	82.59291667	0	1.635541667	191.3404167	6.899	88.2	Mining operations active
05/15/2021	-	-	-	8.02	3.590083333	-0.615	76.75208333	0	1.313333333	207.4295833	6.468	257.7	Mining operations active
05/17/2021	-	-	-	11.07	5.636541667	-0.592	58.87625	0	2.135541667	206.6083333	7.007	267.8	Mining operations active
05/19/2021	-	-	-	12.63	6.409958333	0.21	54.2	0	1.410708333	186.8675833	5.988	259.7	Mining operations active
06/01/2021	-	2.8	2.8	14.69	10.45616667	7.703	77.78333333	0	1.692625	182.9022917	9.62	167.8	Mining operations active
06/02/2021	-	2.8	2.8	15.93	10.53208333	5.388	68.58541667	0	2.141958333	265.3041667	9.73	349.8	Mining operations active
06/07/2021	-	11.5	2.8	14.43	9.912125	4.701	50.91833333	0	2.312208333	158.6666667	8.17	322.8	Mining operations active
06/09/2021	-	-	-	21.26	15.20091667	7.652	36.31583333	0	2.271708333	263.8208333	11.05	333.3	Mining operations active
06/10/2021	-	-	-	21.5	14.73273913	6.18	32.65565217	0	1.670608696	190.1269565	14.31	273.9	Mining operations active
06/14/2021	-	-	-	20.57	14.45833333	7.63	39.41375	0	1.821125	198.52	7.242	200.7	Mining operations active
06/18/2021	-	-	-	22.59	15.85666667	10.6	48.31583333	0	1.810666667	215.5454167	9.06	153.2	Mining operations active
06/22/2021	-	-	-	21.03	14.54083333	8.74	55.42708333	0.2	1.754916667	176.8520833	5.841	64.4	Mining operations active
06/28/2021	-	-	-	24.37	18.31208333	11.34	49.5725	0	1.630708333	217.3239583	9.67	111.9	Mining operations active
10/14/2021	-	2.8	2.8	-1.459	-2.0475	-2.526	97.17	0	0.6191	273.46	2.871	278	Mining operations active
10/15/2021	-	2.8	2.8	-0.911	-2.963583333	-6.007	97.05416667	0	0.171333333	84.59166667	2.891	213.8	Mining operations active
10/16/2021	-	2.8	2.8	-3.035	-4.296791667	-5.335	95.02916667	0	0.563958333	219.7375	2.509	178.2	Mining operations active
10/17/2021	-	2.8	2.8	-3.604	-6.854625	-10.89	96.18333333	0	1.018166667	268.6208333	3.528	284.8	Mining operations active
12/01/2021	-	2.8	8.7	-15.88	-18.30041667	-20.18	85.9125	0	0.357791667	221.125	2.274	234.4	Mining operations active
12/07/2021	-	2.8	6.1	-14.32	-17.95083333	-22.42	86.00833333	0	0.340541667	191.2258333	2.901	219.5	Mining operations active
12/08/2021	-	2.8	-	-14.14	-17.10375	-20.21	86.83333333	0	0.382375	278.4592083	2.577	340.9	Mining operations active
12/09/2021	-	2.8	6.7	-18.29	-20.43166667	-23.75	83.9125	0	0.183666667	256.1495833	2.499	205.7	Mining operations active
12/10/2021	-	2.8	2.8	-14.02	-16.70916667	-21.17	87.17916667	0	0.056416667	139.4325	2.313	214.3	Mining operations active
12/12/2021	-	2.8	9.9	-19.6	-22.12916667	-24.48	81.65208333	0	0.9025	97.45	5.351	205.6	Mining operations active
12/27/2021	-	2.8	7.1	-19.31	-23.23458333	-26.39	81.14875	0	0.356916667	211.7087917	4.136	224.5	Mining operations active
12/28/2021	-	2.8	6.2	-19.6	-21.02083333	-21.8	83.07083333	0	0.355083333	250.1338333	2.822	303	Mining operations active
12/30/2021	-	2.8	2.8	-14.08	-17.7425	-22.61	86.00833333	3	0	0	0	0	Mining operations active
12/31/2021	-	8.7	2.8	-22.22	-24.08083333	-25.87	80.37083333	0	0	0	0	0	Mining operations active

* Starting October 15, 2013, total precipitation is reported rather than total rain

Note: - indicates no data recorded; n/a = not applicable/not available

ATTACHMENT A2

AVERAGE PM₁₀ AND PM_{2.5} RESULTS (24-HOUR), AUG. 2015 – DEC. 2021

ATTACHMENT A2
 AVERAGE PM10 AND PM2.5 RESULTS (24-HOUR), AUG. 2015 – DEC. 2021

Sample Date	TSP-1		TSP-2		TSP-3	
	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
17-Aug-2015	-	2.8	-	2.8	-	2.8
18-Aug-2015	-	6.5	-	6.5	-	2.8
20-Aug-2015	-	6.5	-	6.5	-	2.8
22-Aug-2015	2.8	-	2.8	-	2.8	-
23-Aug-2015	7.8	-	7.8	-	2.8	-
24-Aug-2015	14.6	-	14.6	-	5.8	-
05-Sep-2015	2.8	-	2.8	-	2.8	-
06-Sep-2015	2.8	-	2.8	-	2.8	-
09-Sep-2015	2.8	-	2.8	-	2.8	-
11-Sep-2015	-	2.8	-	2.8	-	2.8
12-Sep-2015	-	-	-	-	-	2.8
14-Sep-2015	-	-	-	-	-	2.8
20-Nov-2015	-	2.8	-	2.8	-	-
21-Nov-2015	-	2.8	-	2.8	-	-
24-Nov-2015	-	2.8	-	2.8	-	-
25-Nov-2015	2.8	-	2.8	-	2.8	-
09-Jan-2016	-	2.8	-	2.8	-	2.8
10-Jan-2016	-	2.8	-	2.8	-	6.2
16-Jan-2016	-	2.8	-	2.8	-	2.8
17-Jan-2016	2.8	-	2.8	-	2.8	-
18-Jan-2016	2.8	-	2.8	-	2.8	-
19-Jan-2016	2.8	-	2.8	-	2.8	-
13-Feb-2016	2.8	-	2.8	-	6.4	-
14-Feb-2016	2.8	-	2.8	-	2.8	-
15-Feb-2016	2.8	-	2.8	-	2.8	-
22-Feb-2016	-	2.8	-	2.8	-	2.8
23-Feb-2016	-	2.8	-	2.8	-	2.8
25-Feb-2016	-	2.8	-	2.8	-	2.8
17-Mar-2016	2.8	-	2.8	-	2.8	-
18-Mar-2016	2.8	-	2.8	-	2.8	-
19-Mar-2016	2.8	-	2.8	-	2.8	-
21-Mar-2016	-	2.8	-	2.8	-	2.8
23-Mar-2016	-	2.8	-	2.8	-	2.8
28-Mar-2016	-	2.8	-	2.8	-	2.8
15-Apr-2016	-	2.8	-	2.8	-	2.8
16-Apr-2016	-	2.8	-	2.8	-	2.8
18-Apr-2016	-	2.8	-	2.8	-	2.8
25-Apr-2016	2.8	-	2.8	-	2.8	-
26-Apr-2016	2.8	-	2.8	-	2.8	-
29-Apr-2016	2.8	-	2.8	-	8.2	-
15-May-2016	2.8	-	2.8	-	2.8	-
16-May-2016	2.8	-	2.8	-	2.8	-

Note: - indicates not applicable

ATTACHMENT A2
 AVERAGE PM10 AND PM2.5 RESULTS (24-HOUR), AUG. 2015 – DEC. 2021

Sample Date	TSP-1		TSP-2		TSP-3	
	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
18-May-2016	2.8	-	2.8	-	2.8	-
19-May-2016	-	2.8	-	2.8	-	2.8
21-May-2016	-	2.8	-	2.8	-	2.8
22-May-2016	-	2.8	-	2.8	-	2.8
20-Jun-2016	2.8	-	2.8	-	2.8	-
22-Jun-2016	2.8	-	2.8	-	2.8	-
26-Jun-2016	2.8	-	2.8	-	2.8	-
27-Jun-2016	-	5.6	-	5.6	-	2.8
29-Jun-2016	-	13.8	-	13.8	-	13.6
15-Jul-2016	-	17.4	-	17.4	-	12.1
17-Jul-2016	-	10.1	-	10.1	-	12.2
18-Jul-2016	-	2.8	-	2.8	-	2.8
25-Jul-2016	2.8	-	2.8	-	2.8	-
26-Jul-2016	2.8	-	2.8	-	2.8	-
27-Jul-2016	2.8	-	2.8	-	2.8	-
13-Aug-2016	2.8	-	2.8	-	2.8	-
14-Aug-2016	2.8	-	2.8	-	2.8	-
15-Aug-2016	2.8	-	2.8	-	2.8	-
30-Aug-2016	-	2.8	-	2.8	-	9.0
31-Aug-2016	-	2.8	-	2.8	-	2.8
12-Sep-2016	-	2.8	-	2.8	-	2.8
14-Sep-2016	-	2.8	-	2.8	-	2.8
21-Sep-2016	-	2.8	-	2.8	-	2.8
23-Sep-2016	2.8	-	2.8	-	2.8	-
24-Sep-2016	2.8	-	2.8	-	2.8	-
25-Sep-2016	2.8	-	2.8	-	2.8	-
03-Oct-2016	-	-	-	-	2.8	-
23-Oct-2016	-	2.8	-	2.8	-	2.8
27-Oct-2016	-	2.8	-	2.8	-	2.8
28-Oct-2016	-	2.8	-	2.8	-	2.8
29-Oct-2016	2.8	-	2.8	-	2.8	-
30-Oct-2016	2.8	-	2.8	-	-	-
31-Oct-2016	2.8	-	2.8	-	2.8	-
04-Nov-2016	2.8	-	2.8	-	2.8	-
05-Nov-2016	2.8	-	2.8	-	2.8	-
25-Nov-2016	2.8	-	2.8	-	2.8	-
30-Nov-2016	-	6.0	-	6.0	-	2.8
01-Dec-2016	-	2.8	-	2.8	-	2.8
02-Dec-2016	-	2.8	-	2.8	-	2.8
18-Dec-2016	-	2.8	-	2.8	-	10.0
20-Dec-2016	-	8.3	-	8.3	-	6.2
21-Dec-2016	-	2.8	-	2.8	-	2.8

Note: - indicates not applicable

ATTACHMENT A2
 AVERAGE PM10 AND PM2.5 RESULTS (24-HOUR), AUG. 2015 – DEC. 2021

Sample Date	TSP-1		TSP-2		TSP-3	
	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
31-Dec-2016	2.8	-	2.8	-	2.8	-
01-Jan-2017	2.8	-	2.8	-	2.8	-
02-Jan-2017	2.8	-	2.8	-	2.8	-
15-Jan-2017	11.0	-	11.0	-	11.4	-
19-Jan-2017	6.1	-	6.1	-	11.0	-
23-Jan-2017	5.8	-	5.8	-	11.8	-
25-Jan-2017	-	6.4	-	6.4	-	5.7
26-Jan-2017	-	2.8	-	2.8	-	6.2
27-Jan-2017	-	8.2	-	8.2	-	7.2
20-Feb-2017	2.8	-	2.8	-	-	-
22-Feb-2017	2.8	-	2.8	-	2.8	-
23-Feb-2017	2.8	-	2.8	-	2.8	-
24-Feb-2017	-	2.8	-	2.8	2.8	-
25-Feb-2017	-	2.8	-	2.8	-	2.8
26-Feb-2017	-	2.8	-	2.8	-	2.8
17-Mar-2017	-	6.2	-	6.2	-	-
18-Mar-2017	-	2.8	-	2.8	-	-
19-Mar-2017	-	2.8	-	2.8	-	-
21-Mar-2017	2.8	-	2.8	-	-	-
22-Mar-2017	2.8	-	2.8	-	-	-
23-Mar-2017	2.8	-	2.8	-	-	-
21-Apr-2017	2.8	-	2.8	-	-	-
23-Apr-2017	2.8	-	2.8	-	-	-
24-Apr-2017	2.8	-	2.8	-	-	-
25-Apr-2017	-	2.8	-	2.8	-	-
28-Apr-2017	-	6.0	-	6.0	-	-
29-Apr-2017	-	2.8	-	2.8	-	-
12-May-2017	-	2.8	-	2.8	-	-
17-May-2017	-	2.8	-	2.8	-	-
18-May-2017	-	2.8	-	2.8	-	-
19-May-2017	2.8	-	2.8	-	-	-
23-May-2017	2.8	-	2.8	-	-	-
24-May-2017	2.8	-	2.8	-	-	-
02-Jun-2017	-	2.8	-	2.8	-	-
06-Jun-2017	-	2.8	-	2.8	-	-
07-Jun-2017	-	2.8	-	2.8	-	-
08-Jun-2017	-	-	-	-	-	-
09-Jun-2017	-	-	-	-	-	2.8
13-Jun-2017	-	-	-	-	-	2.8
14-Jun-2017	2.8	-	2.8	-	-	2.8
15-Jun-2017	6.2	-	6.2	-	-	-
16-Jun-2017	14.2	-	14.2	-	-	-

Note: - indicates not applicable

ATTACHMENT A2
AVERAGE PM10 AND PM2.5 RESULTS (24-HOUR), AUG. 2015 – DEC. 2021

Sample Date	TSP-1		TSP-2		TSP-3	
	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
20-Jun-2017	-	-	-	-	-	-
23-Jun-2017	-	-	-	-	7.9	-
27-Jun-2017	-	-	-	-	6.2	-
28-Jun-2017	-	-	-	-	2.8	-
04-Jul-2017	2.8	-	2.8	-	6.0	-
05-Jul-2017	6.1	-	6.1	-	5.6	-
07-Jul-2017	2.8	-	2.8	-	2.8	-
11-Jul-2017	-	2.8	-	2.8	-	2.8
12-Jul-2017	-	2.8	-	2.8	-	7.9
14-Jul-2017	-	7.9	-	7.9	-	-
09-Aug-2017	13.9	-	13.9	-	11.1	-
11-Aug-2017	15.1	-	15.1	-	9.6	-
15-Aug-2017	6.7	-	6.7	-	2.8	-
16-Aug-2017	-	2.8	-	2.8	-	2.8
22-Aug-2017	-	2.8	-	2.8	-	2.8
23-Aug-2017	-	2.8	-	2.8	-	2.8
01-Sep-2017	-	2.8	-	2.8	-	8.5
05-Sep-2017	-	5.7	-	5.7	-	8.3
06-Sep-2017	-	2.8	-	2.8	-	8.7
08-Sep-2017	9.2	-	9.2	-	6.9	-
15-Sep-2017	-	-	-	-	2.8	-
16-Sep-2017	7.8	-	7.8	-	-	-
19-Sep-2017	9.2	-	9.2	-	5.8	-
10-Oct-2017	2.8	-	2.8	-	2.8	-
12-Oct-2017	2.8	-	2.8	-	2.8	-
13-Oct-2017	2.8	-	2.8	-	2.8	-
18-Oct-2017	-	-	-	-	-	2.8
19-Oct-2017	-	2.8	-	2.8	-	-
24-Oct-2017	-	2.8	-	2.8	-	2.8
26-Oct-2017	-	-	-	-	-	2.8
02-Nov-2017	-	-	-	-	7.2	-
14-Nov-2017	-	-	-	-	2.8	-
16-Nov-2017	-	-	-	-	2.8	-
17-Nov-2017	-	-	-	-	-	2.8
23-Nov-2017	-	2.8	-	2.8	-	-
24-Nov-2017	-	-	-	-	-	8.3
28-Nov-2017	-	5.6	-	5.6	-	7.1
30-Nov-2017	-	7.5	-	7.5	-	-
05-Dec-2017	-	2.8	-	2.8	-	-
07-Dec-2017	-	2.8	-	2.8	-	-
12-Dec-2017	-	6.5	-	6.5	-	-
13-Dec-2017	-	-	-	-	-	2.8

Note: - indicates not applicable

ATTACHMENT A2
AVERAGE PM10 AND PM2.5 RESULTS (24-HOUR), AUG. 2015 – DEC. 2021

Sample Date	TSP-1		TSP-2		TSP-3	
	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
15-Dec-2017	-	-	-	-	-	7.1
19-Dec-2017	-	-	-	-	-	6.5
20-Dec-2017	2.8	-	2.8	-	2.8	-
24-Dec-2017	-	-	-	-	8.9	-
28-Dec-2017	-	-	-	-	6.5	-
29-Dec-2017	2.8	-	2.8	-	-	-
02-Jan-2018	2.8	-	2.8	-	11.2	-
03-Jan-2018	2.8	-	2.8	-	2.8	-
04-Jan-2018	2.8	-	2.8	-	2.8	-
11-Jan-2018	-	2.8	-	2.8	-	5.6
18-Jan-2018	-	2.8	-	2.8	-	2.8
23-Jan-2018	-	2.8	-	2.8	-	2.8
31-Jan-2018	-	-	-	-	-	-
14-Feb-2018	-	-	-	-	-	-
15-Feb-2018	2.8	-	2.8	-	2.8	-
20-Feb-2018	2.8	-	2.8	-	2.8	-
21-Feb-2018	2.8	-	2.8	-	2.8	-
22-Feb-2018	-	2.8	-	2.8	-	10.1
23-Feb-2018	-	2.8	-	2.8	-	2.8
27-Feb-2018	-	2.8	-	2.8	-	12.4
01-Mar-2018	-	2.8	-	2.8	-	2.8
02-Mar-2018	-	2.8	-	2.8	-	2.8
06-Mar-2018	-	2.8	-	2.8	-	2.8
08-Mar-2018	2.8	-	2.8	-	6.0	-
13-Mar-2018	2.8	-	2.8	-	2.8	-
15-Mar-2018	2.8	-	2.8	-	2.8	-
10-Apr-2018	-	-	-	-	2.8	-
11-Apr-2018	-	-	-	-	2.8	-
12-Apr-2018	2.8	-	2.8	-	2.8	-
17-Apr-2018	2.8	-	2.8	-	-	2.8
19-Apr-2018	2.8	-	2.8	-	-	2.8
20-Apr-2018	-	6.2	-	6.2	-	-
24-Apr-2018	-	2.8	-	2.8	-	-
26-Apr-2018	-	2.8	-	2.8	-	2.8
01-May-2018	-	5.7	-	5.7	-	2.8
03-May-2018	-	2.8	-	2.8	-	2.8
08-May-2018	-	2.8	-	2.8	-	2.8
09-May-2018	6.4	-	6.4	-	-	-
10-May-2018	-	-	-	-	7.1	-
15-May-2018	2.8	-	2.8	-	6.8	-
22-May-2018	5.7	-	5.7	-	2.8	-
11-Jun-2018	2.8	-	2.8	-	2.8	-

Note: - indicates not applicable

ATTACHMENT A2
AVERAGE PM10 AND PM2.5 RESULTS (24-HOUR), AUG. 2015 – DEC. 2021

Sample Date	TSP-1		TSP-2		TSP-3	
	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
13-Jun-2018	2.8	-	2.8	-	2.8	-
14-Jun-2018	-	-	-	-	2.8	-
19-Jun-2018	7.9	-	7.9	-	-	6.1
20-Jun-2018	-	2.8	-	2.8	-	10.1
21-Jun-2018	-	-	-	-	-	2.8
26-Jun-2018	-	7.2	-	7.2	-	-
03-Jul-2018	-	2.8	-	2.8	-	2.8
04-Jul-2018	-	2.8	-	2.8	-	2.8
06-Jul-2018	-	2.8	-	2.8	-	2.8
10-Jul-2018	2.8	-	2.8	-	2.8	-
11-Jul-2018	2.8	-	2.8	-	2.8	-
12-Jul-2018	2.8	-	2.8	-	2.8	-
13-Jul-2018	-	-	-	-	2.8	-
17-Jul-2018	-	-	-	-	-	-
18-Jul-2018	-	-	-	-	-	-
24-Jul-2018	-	2.8	-	2.8	-	-
26-Jul-2018	-	2.8	-	2.8	-	-
27-Jul-2018	-	2.8	-	2.8	-	-
01-Aug-2018	-	2.8	-	2.8	-	-
02-Aug-2018	-	-	-	-	-	2.8
04-Aug-2018	2.8	-	2.8	-	2.8	-
06-Aug-2018	-	-	-	-	2.8	-
07-Aug-2018	2.8	-	2.8	-	2.8	-
08-Aug-2018	-	-	-	-	-	2.8
17-Aug-2018	2.8	-	2.8	-	-	2.8
21-Aug-2018	-	2.8	-	2.8	-	-
22-Aug-2018	-	2.8	-	2.8	-	-
06-Sep-2018	2.8	-	2.8	-	2.8	-
07-Sep-2018	2.8	-	2.8	-	2.8	-
09-Sep-2018	2.8	-	2.8	-	2.8	-
10-Sep-2018	-	2.8	-	2.8	-	8.5
11-Sep-2018	-	2.8	-	2.8	-	2.8
12-Sep-2018	-	2.8	-	2.8	-	6.8
02-Oct-2018	-	-	-	-	-	7.1
03-Oct-2018	-	15.1	-	15.1	-	6.7
05-Oct-2018	-	15.4	-	15.4	-	10.1
07-Oct-2018	-	14.2	-	14.2	2.8	-
08-Oct-2018	16.4	-	16.4	-	10.1	-
24-Oct-2018	2.8	-	2.8	-	2.8	-
25-Oct-2018	2.8	-	2.8	-	-	-
16-Nov-2018	-	-	-	-	8.9	-
18-Nov-2018	-	-	-	-	2.8	-

Note: - indicates not applicable

ATTACHMENT A2
AVERAGE PM10 AND PM2.5 RESULTS (24-HOUR), AUG. 2015 – DEC. 2021

Sample Date	TSP-1		TSP-2		TSP-3	
	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
19-Nov-2018	2.8	-	2.8	-	2.8	-
21-Nov-2018	2.8	-	2.8	-	-	2.8
22-Nov-2018	2.8	-	2.8	-	-	2.8
23-Nov-2018	-	2.8	-	2.8	-	5.8
28-Nov-2018	-	2.8	-	2.8	-	-
30-Nov-2018	-	2.8	-	2.8	-	-
04-Dec-2018	-	2.8	-	2.8	-	2.8
06-Dec-2018	-	-	-	-	-	2.8
07-Dec-2018	-	2.8	-	2.8	-	-
10-Dec-2018	-	2.8	-	2.8	-	2.8
12-Dec-2018	-	2.8	-	2.8	-	-
12-Dec-2018	6.7	-	6.7	-	-	-
13-Dec-2018	2.8	-	2.8	-	9.0	-
14-Dec-2018	2.8	-	2.8	-	8.2	-
26-Dec-2018	7.2	-	7.2	-	6.1	-
22-Jan-2019	2.8	-	2.8	-	6.0	-
24-Jan-2019	5.8	-	5.8	-	2.8	-
25-Jan-2019	2.8	-	2.8	-	6.1	-
29-Jan-2019	-	2.8	-	2.8	-	2.8
30-Jan-2019	-	2.8	-	2.8	-	8.2
31-Jan-2019	-	2.8	-	2.8	-	2.8
07-Feb-2019	-	2.8	-	2.8	-	2.8
08-Feb-2019	-	2.8	-	2.8	-	2.8
21-Feb-2019	-	5.7	-	5.7	-	2.8
22-Feb-2019	2.8	-	2.8	-	6.5	-
23-Feb-2019	2.8	-	2.8	-	2.8	-
25-Feb-2019	7.6	-	7.6	-	6.8	-
26-Feb-2019	-	-	-	-	-	-
27-Feb-2019	-	-	-	-	-	-
28-Feb-2019	-	-	-	-	-	-
09-Mar-2019	-	-	-	-	8.3	-
12-Mar-2019	-	-	-	-	2.8	-
13-Mar-2019	-	-	-	-	2.8	-
14-Mar-2019	2.8	-	2.8	-	-	2.8
19-Mar-2019	2.8	-	2.8	-	-	7.4
27-Mar-2019	2.8	-	2.8	-	-	6.2
02-Apr-2019	-	2.8	-	2.8	-	2.8
04-Apr-2019	-	2.8	-	2.8	-	2.8
09-Apr-2019	-	7.1	-	7.1	-	-
10-Apr-2019	-	-	-	-	-	2.8
11-Apr-2019	2.8	-	2.8	-	11.2	-
16-Apr-2019	-	-	-	-	2.8	-

Note: - indicates not applicable

ATTACHMENT A2
AVERAGE PM10 AND PM2.5 RESULTS (24-HOUR), AUG. 2015 – DEC. 2021

Sample Date	TSP-1		TSP-2		TSP-3	
	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
17-Apr-2019	2.8	-	2.8	-	-	-
18-Apr-2019	2.8	-	2.8	-	-	-
19-Apr-2019	-	-	-	-	2.8	-
20-Apr-2019	-	-	-	-	-	-
10-May-2019	-	-	-	-	2.8	-
14-May-2019	-	-	-	-	2.8	-
18-May-2019	2.8	-	2.8	-	2.8	-
21-May-2019	12.5	-	12.5	-	-	21.2
23-May-2019	19.7	-	19.7	-	-	2.8
28-May-2019	-	-	-	-	-	2.8
04-Jun-2019	-	2.8	-	2.8	-	2.8
06-Jun-2019	-	2.8	-	2.8	-	2.8
18-Jun-2019	-	2.8	-	2.8	-	2.8
20-Jun-2019	2.8	-	2.8	-	2.8	-
25-Jun-2019	5.6	-	5.6	-	22.5	-
28-Jun-2019	2.8	-	2.8	-	10.6	-
29-Jun-2019	-	-	-	-	-	-
03-Jul-2019	-	7.4	-	7.4	-	10.0
04-Jul-2019	-	2.8	-	2.8	-	-
05-Jul-2019	-	-	-	-	-	2.8
09-Jul-2019	-	28.2 Y	-	28.2 Y	-	14.0
11-Jul-2019	36.2	-	36.2	-	-	11.9
16-Jul-2019	9.3	-	9.3	-	-	-
17-Jul-2019	-	-	-	-	-	6.1
18-Jul-2019	-	-	-	-	-	8.1
19-Jul-2019	36.5	-	36.5	-	-	-
21-Jul-2019	13.1	-	13.1	-	-	-
01-Aug-2019	-	2.8	-	2.8	-	2.8
06-Aug-2019	-	2.8	-	2.8	-	2.8
08-Aug-2019	-	2.8	-	2.8	-	-
13-Aug-2019	-	-	-	-	-	2.8
15-Aug-2019	2.8	-	2.8	-	2.8	-
16-Aug-2019	2.8	-	2.8	-	2.8	-
21-Aug-2019	2.8	-	2.8	-	2.8	-
22-Aug-2019	-	-	-	-	-	-
27-Aug-2019	-	-	-	-	-	-
03-Sep-2019	-	6.4	-	6.4	-	5.8
04-Sep-2019	-	2.8	-	2.8	-	2.8
05-Sep-2019	-	5.8	-	5.8	-	-
06-Sep-2019	-	-	-	-	-	2.8
10-Sep-2019	46.0	-	46.0	-	18.6	-
12-Sep-2019	2.8	-	2.8	-	16.9	-

Note: - indicates not applicable

ATTACHMENT A2
 AVERAGE PM10 AND PM2.5 RESULTS (24-HOUR), AUG. 2015 – DEC. 2021

Sample Date	TSP-1		TSP-2		TSP-3	
	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
17-Sep-2019	6.1	-	6.1	-	2.8	-
02-Oct-2019	-	2.8	-	2.8	-	-
03-Oct-2019	-	6.8	-	6.8	-	6.0
11-Oct-2019	-	2.8	-	2.8	-	2.8
15-Oct-2019	2.8	-	2.8	-	-	2.8
17-Oct-2019	2.8	-	2.8	-	2.8	-
22-Oct-2019	11.7	-	11.7	-	11.9	-
23-Oct-2019	-	-	-	-	2.8	-
06-Nov-2019	-	2.8	-	2.8	-	2.8
07-Nov-2019	-	2.8	-	2.8	-	2.8
12-Nov-2019	-	2.8	-	2.8	-	2.8
14-Nov-2019	2.8	-	2.8	-	2.8	-
19-Nov-2019	10.7	-	10.7	-	2.8	-
20-Nov-2019	11.2	-	11.2	-	-	-
21-Nov-2019	-	-	-	-	2.8	-
26-Nov-2019	-	-	-	-	2.8	-
03-Dec-2019	-	2.8	-	2.8	-	2.8
10-Dec-2019	-	2.8	-	2.8	-	2.8
12-Dec-2019	-	2.8	-	2.8	-	2.8
13-Dec-2019	2.8	-	2.8	-	6.9	-
18-Dec-2019	2.8	-	2.8	-	7.6	-
19-Dec-2019	2.8	-	2.8	-	2.8	-
24-Dec-2019	-	-	-	-	-	-
25-Dec-2019	-	-	-	-	-	-
27-Dec-2019	-	-	-	-	-	-
08-Jan-2020	-	2.8	-	2.8	-	-
09-Jan-2020	-	2.8	-	2.8	-	-
14-Jan-2020	-	2.8	-	2.8	-	-
16-Jan-2020	2.8	-	2.8	-	-	-
23-Jan-2020	2.8	-	7.8	-	-	-
24-Jan-2020	-	-	-	-	-	2.8
26-Jan-2020	-	-	-	-	-	2.8
27-Jan-2020	-	-	2.8	-	-	-
28-Jan-2020	2.8	-	-	-	-	-
30-Jan-2020	-	-	-	-	-	-
31-Jan-2020	-	-	-	-	2.8	2.8
04-Feb-2020	-	2.8	-	2.8	-	2.8
05-Feb-2020	-	-	-	2.8	-	-
06-Feb-2020	-	2.8	-	-	-	2.8
07-Feb-2020	-	2.8	-	2.8	-	2.8
14-Feb-2020	-	-	2.8	-	2.8	-
18-Feb-2020	-	-	2.8	-	2.8	-

Note: - indicates not applicable

ATTACHMENT A2
 AVERAGE PM10 AND PM2.5 RESULTS (24-HOUR), AUG. 2015 – DEC. 2021

Sample Date	TSP-1		TSP-2		TSP-3	
	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
19-Feb-2020	2.8	-	-	-	-	-
20-Feb-2020	2.8	-	2.8	-	2.8	-
21-Feb-2020	2.8	-	-	-	-	-
25-Feb-2020	-	-	-	-	-	-
26-Feb-2020	-	-	-	-	-	-
27-Feb-2020	-	-	-	-	-	-
03-Mar-2020	-	2.8	-	2.8	-	10.0
10-Mar-2020	-	5.8	-	8.5	-	2.8
12-Mar-2020	-	2.8	-	2.8	-	6.1
19-Mar-2020	2.8	-	2.8	-	2.8	-
24-Mar-2020	2.8	-	2.8	-	6.0	-
25-Mar-2020	2.8	-	2.8	-	2.8	-
26-Mar-2020	-	-	-	-	-	-
03-Apr-2020	-	2.8	-	-	-	-
31-Mar-2020	-	-	-	-	-	-
02-Apr-2020	-	-	-	2.8	-	2.8
07-Apr-2020	-	2.8	-	6.7	-	7.5
10-Apr-2020	-	2.8	-	2.8	-	2.8
16-Apr-2020	2.8	-	2.8	-	2.8	-
21-Apr-2020	2.8	-	2.8	-	2.8	-
22-Apr-2020	2.8	-	2.8	-	2.8	-
24-Apr-2020	-	-	-	-	-	-
28-Apr-2020	-	-	-	-	-	-
29-Apr-2020	-	-	-	-	-	-
30-Apr-2020	-	-	-	-	-	-
05-May-2020	-	2.8	-	2.8	-	2.8
06-May-2020	-	2.8	-	2.8	-	2.8
07-May-2020	-	2.8	-	2.8	-	2.8
19-May-2020	2.8	-	8.7	-	2.8	-
21-May-2020	2.8	-	10.8	-	2.8	-
26-May-2020	2.8	-	6.0	-	5.6	-
27-May-2020	-	-	-	-	-	-
29-May-2020	-	-	-	-	-	-
11-Jun-2020	-	2.8	-	2.8	-	-
17-Jun-2020	-	2.8	-	2.8	-	2.8
18-Jun-2020	-	2.8	-	2.8	-	2.8
22-Jun-2020	2.8	-	2.8	-	-	2.8
23-Jun-2020	2.8	-	2.8	-	2.8	-
24-Jun-2020	2.8	-	2.8	-	-	-
25-Jun-2020	-	-	-	-	2.8	-
30-Jun-2020	-	-	-	-	2.8	-
02-Jul-2020	-	2.8	-	2.8	-	2.8

Note: - indicates not applicable

ATTACHMENT A2
AVERAGE PM10 AND PM2.5 RESULTS (24-HOUR), AUG. 2015 – DEC. 2021

Sample Date	TSP-1		TSP-2		TSP-3	
	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
09-Jul-2020	-	2.8	-	2.8	-	-
10-Jul-2020	-	-	-	-	-	2.8
16-Jul-2020	-	2.8	-	2.8	-	2.8
22-Jul-2020	2.8	-	2.8	-	2.8	-
23-Jul-2020	2.8	-	2.8	-	65.7 Y	-
28-Jul-2020	-	-	2.8	-	2.8	-
29-Jul-2020	7.2	-	-	-	-	-
30-Jul-2020	16.0	-	-	-	-	-
04-Aug-2020	-	2.8	-	2.8	-	2.8
06-Aug-2020	-	6.1	-	6.1	-	2.8
10-Aug-2020	-	2.8	-	2.8	-	2.8
23-Aug-2020	7.5	-	2.8	-	2.8	-
24-Aug-2020	6.9	-	2.8	-	2.8	-
25-Aug-2020	2.8	-	2.8	-	2.8	-
26-Aug-2020	-	-	-	-	-	-
27-Aug-2020	-	-	-	-	-	-
28-Aug-2020	-	-	-	-	-	-
29-Aug-2020	-	-	-	-	-	-
30-Aug-2020	-	-	-	-	-	-
02-Sep-2020	-	-	-	-	-	-
04-Sep-2020	-	-	-	-	-	-
06-Sep-2020	-	-	-	-	-	-
09-Sep-2020	2.8	-	2.8	-	2.8	-
10-Sep-2020	2.8	-	2.8	-	2.8	-
11-Sep-2020	2.8	-	2.8	-	2.8	-
12-Sep-2020	-	2.8	-	2.8	-	2.8
14-Sep-2020	-	2.8	-	2.8	-	2.8
24-Sep-2020	-	2.8	-	2.8	-	2.8
06-Oct-2020	-	-	-	-	-	-
07-Oct-2020	-	-	-	-	-	-
08-Oct-2020	-	-	-	-	-	-
11-Oct-2020	-	-	2.8	-	2.8	-
13-Oct-2020	2.8	-	-	-	-	-
15-Oct-2020	2.8	-	-	-	2.8	-
16-Oct-2020	-	-	2.8	-	-	-
19-Oct-2020	-	-	2.8	-	2.8	-
20-Oct-2020	2.8	-	-	-	-	-
23-Oct-2020	-	6.0	-	2.8	-	-
24-Oct-2020	-	2.8	-	2.8	-	-
25-Oct-2020	-	2.8	-	2.8	-	2.8
01-Nov-2020	-	-	-	-	-	6.0
22-Nov-2020	-	2.8	-	2.8	-	-

Note: - indicates not applicable

ATTACHMENT A2
 AVERAGE PM10 AND PM2.5 RESULTS (24-HOUR), AUG. 2015 – DEC. 2021

Sample Date	TSP-1		TSP-2		TSP-3	
	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
23-Nov-2020	-	2.8	-	2.8	-	-
24-Nov-2020	-	2.8	-	2.8	-	-
25-Nov-2020	2.8	-	2.8	-	-	-
30-Nov-2020	2.8	-	2.8	-	-	-
07-Dec-2020	-	-	-	-	-	-
08-Dec-2020	-	-	-	-	-	-
10-Dec-2020	-	-	-	-	-	-
11-Dec-2020	-	-	-	-	-	-
12-Dec-2020	2.8	-	2.8	-	-	-
13-Dec-2020	2.8	-	2.8	-	-	-
14-Dec-2020	2.8	-	2.8	-	-	-
17-Dec-2020	-	2.8	-	2.8	-	-
18-Dec-2020	-	2.8	-	2.8	-	-
19-Dec-2020	-	2.8	-	2.8	-	-
03-Jan-2021	-	-	2.8	-	-	-
04-Jan-2021	-	-	2.8	-	2.8	-
08-Jan-2021	-	-	2.8	-	-	-
10-Jan-2021	-	-	-	7.4	-	-
11-Jan-2021	-	-	-	2.8	-	-
13-Jan-2021	-	-	-	2.8	-	-
14-Jan-2021	-	-	-	2.8	-	2.8
16-Jan-2021	-	-	7.2	-	2.8	-
17-Jan-2021	-	-	-	2.8	-	-
07-Feb-2021	-	-	7.9	-	-	-
10-Feb-2021	-	-	10.7	-	-	-
12-Feb-2021	-	-	8.5	-	2.8	-
13-Feb-2021	-	-	-	2.8	-	-
15-Feb-2021	-	-	11.9	-	-	2.8
16-Feb-2021	-	-	2.8	-	-	2.8
17-Feb-2021	-	-	-	2.8	-	-
03-Mar-2021	-	-	-	2.8	-	-
04-Mar-2021	-	-	-	2.8	-	-
05-Mar-2021	-	-	-	2.8	-	2.8
06-Mar-2021	-	-	-	2.8	-	2.8
07-Mar-2021	-	-	2.8	-	2.8	-
09-Mar-2021	-	-	2.8	-	2.8	-
10-Mar-2021	-	-	2.8	-	2.8	-
05-Apr-2021	-	-	2.8	-	2.8	-
15-Apr-2021	-	-	2.8	-	2.8	-
16-Apr-2021	-	-	6	-	2.8	-
17-Apr-2021	-	-	-	5.6	-	2.8
18-Apr-2021	-	-	-	7.1	-	2.8

Note: - indicates not applicable

ATTACHMENT A2
 AVERAGE PM10 AND PM2.5 RESULTS (24-HOUR), AUG. 2015 – DEC. 2021

Sample Date	TSP-1		TSP-2		TSP-3	
	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
20-Apr-2021	-	-	-	6.7	-	2.8
03-May-2021	-	-	-	5.6	-	2.8
04-May-2021	-	-	-	2.8	-	2.8
05-May-2021	-	-	-	2.8	-	-
06-May-2021	-	-	-	8.1	-	-
10-May-2021	-	-	11.8	-	2.8	-
13-May-2021	-	-	2.8	-	2.8	-
14-May-2021	-	-	2.8	-	2.8	-
09-Jun-2021	-	-	28.1	-	2.8	-
10-Jun-2021	-	-	28.5	-	2.8	-
14-Jun-2021	-	-	7.1	-	2.8	-
18-Jun-2021	-	-	-	10	-	7.4
22-Jun-2021	-	-	-	31.4 Y	-	2.8
28-Jun-2021	-	-	-	15.1	-	2.8
14-Oct-2021	-	-	-	2.8	2.8	-
15-Oct-2021	-	-	-	2.8	2.8	-
16-Oct-2021	-	-	-	2.8	2.8	-
17-Oct-2021	-	-	-	2.8	-	2.8
01-Dec-2021	-	-	2.8	-	-	-
07-Dec-2021	-	-	2.8	-	-	8.7
08-Dec-2021	-	-	2.8	-	-	6.1
09-Dec-2021	-	-	-	2.8	6.7	-
10-Dec-2021	-	-	-	2.8	2.8	-
12-Dec-2021	-	-	-	2.8	9.9	-
27-Dec-2021	-	-	-	-	-	-
28-Dec-2021	-	-	-	-	-	-
30-Dec-2021	-	-	-	-	-	-
31-Dec-2021	-	-	8.7	-	2.8	-

Note: - indicates not applicable

ATTACHMENT A3

METAL CONCENTRATIONS (24-HOUR), TSP-1, AUG. 2012 – DEC. 2020

ATTACHMENT A3
METAL CONCENTRATIONS (24-HOUR), TSP-1, AUG. 2012 – DEC. 2020

Sample Date	Aluminum (Al), (Sb), µg/m ³	Antimony (Sb), µg/m ³	Arsenic (As), µg/m ³	Barium (Ba), µg/m ³	Beryllium (Be), µg/m ³	Boron (B), µg/m ³	Cadmium (Cd), µg/m ³	Calcium (Ca), µg/m ³	Chromium (Cr), µg/m ³	Cobalt (Co), µg/m ³	Copper (Cu), µg/m ³	Iron (Fe), µg/m ³	Lead (Pb), µg/m ³	Magnesium (Mg), µg/m ³	Manganese (Mn), µg/m ³	Molybdenum (Mo), µg/m ³	Nickel (Ni), µg/m ³	Phosphorus (P), µg/m ³	Potassium (K), µg/m ³	Selenium (Se), µg/m ³	Silicon (Si), µg/m ³	Silver (Ag), µg/m ³	Sodium (Na), µg/m ³	Strontium (Sr), µg/m ³	Sulphur (S), µg/m ³	Tin (Sn), µg/m ³	Titanium (Ti), µg/m ³	Vanadium (V), µg/m ³	Zinc (Zn), µg/m ³	Zirconium (Zr), µg/m ³
23-Aug-12	0.139	0.1889	0.0556	0.0021	0.0556	0.021	0.01389	0.486	0.0208	0.03472	0.035	0.554	0.17361	0.061	0.045	0.03472	0.042	0.208	0.694	0.03472	-	0.02083	0.208	0.02028	0.1	0.0556	0.014	0.021	0.0389	0.035
27-Sep-12	0.667	0.1889	0.0556	0.0021	0.0556	0.021	0.01389	1.722	0.0208	0.03472	0.035	0.021	0.0556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	-	0.02083	0.208	0.02028	0.1	0.0556	0.014	0.021	0.0389	0.035
23-Oct-12	0.139	0.1889	0.0556	0.0021	0.0556	0.021	0.01389	1.433	0.0208	0.03472	0.035	0.232	0.48610	0.038	0.031	0.03472	0.03472	0.208	0.694	0.03472	-	0.02083	0.208	0.02028	0.1	0.0556	0.014	0.021	0.0389	0.035
15-Dec-12	0.139	0.1889	0.0556	0.0021	0.0556	0.021	0.01389	0.139	0.0208	0.03472	0.035	0.128	0.13889	0.021	0.052	0.03472	0.03472	0.208	0.694	0.03472	-	0.02083	0.208	0.02028	0.1	0.0556	0.014	0.021	0.0389	0.035
14-Jan-13	0.403	0.1889	0.0556	0.0097	0.0556	0.021	0.01389	2.069	0.0208	0.03472	0.035	0.816	0.0556	0.217	0.026	0.03472	0.03472	0.208	0.694	0.03472	-	0.02083	0.875	0.00736	0.6	0.17361	0.014	0.021	0.1958	0.035
16-Jan-13	0.139	0.1889	0.0556	0.0021	0.0556	0.021	0.01389	0.444	0.0208	0.03472	0.035	0.126	0.0556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	-	0.02083	0.208	0.02028	0.1	0.0556	0.014	0.021	0.0389	0.035
23-Mar-13	0.292	0.1889	0.0556	0.0021	0.0556	0.021	0.01389	1.347	0.0208	0.03472	0.035	0.318	0.0556	0.072	0.034	0.03472	0.03472	0.208	0.694	0.03472	-	0.02083	0.208	0.02028	0.1	0.0556	0.014	0.021	0.0389	0.035
24-Mar-13	0.139	0.1889	0.0556	0.0021	0.0556	0.021	0.01389	0.597	0.0208	0.03472	0.035	0.193	0.0556	0.021	0.066	0.03472	0.03472	0.208	0.694	0.03472	-	0.02083	0.208	0.02028	0.1	0.0556	0.014	0.021	0.0389	0.035
25-Mar-13	0.139	0.1889	0.0556	0.0021	0.0556	0.021	0.01389	0.139	0.0208	0.03472	0.035	0.138	0.0556	0.058	0.021	0.03472	0.03472	0.208	0.694	0.03472	-	0.02083	0.208	0.02028	0.1	0.0556	0.014	0.021	0.0389	0.035
26-Mar-13	0.139	0.1889	0.0556	0.0021	0.0556	0.021	0.01389	0.139	0.0208	0.03472	0.035	0.168	0.0556	0.057	0.019	0.03472	0.03472	0.208	0.694	0.03472	-	0.02083	0.208	0.02028	0.1	0.0556	0.014	0.021	0.0389	0.035
10-Apr-13	0.139	0.1889	0.0556	0.0021	0.0556	0.021	0.01389	0.139	0.0431	0.03472	0.035	0.272	0.0556	0.082	0.017	0.03472	0.03472	0.208	0.694	0.03472	-	0.02083	0.208	0.02028	0.3	0.0556	0.014	0.021	0.0389	0.035
13-Apr-13	0.139	0.1889	0.0556	0.0021	0.0556	0.021	0.01389	0.306	0.0528	0.03472	0.035	0.465	0.0556	0.106	0.022	0.03472	0.03472	0.208	0.694	0.03472	-	0.02083	0.208	0.02028	0.4	0.0556	0.014	0.021	0.0389	0.035
16-Apr-13	0.139	0.1889	0.0556	0.0021	0.0556	0.021	0.01389	0.139	0.0208	0.03472	0.035	0.107	0.0556	0.046	0.006	0.03472	0.03472	0.208	0.694	0.03472	-	0.02083	0.208	0.02028	0.1	0.0556	0.014	0.021	0.0389	0.035
18-May-13	5.292	0.1889	0.0556	0.0094	0.0556	0.264	0.01389	8.722	0.0486	0.03472	0.035	0.312	0.0556	0.222	0.013	0.03472	0.03472	0.208	0.694	0.03472	-	0.02083	0.583	0.01708	0.3	0.0556	0.014	0.021	0.0389	0.035
16-Jun-13	5.236	0.1889	0.0556	0.0118	0.0556	0.264	0.01389	8.597	0.0764	0.03472	0.035	0.879	0.23261	0.211	0.083	0.03472	0.03472	0.208	0.694	0.03472	-	0.02083	0.722	0.01639	0.3	0.0556	0.014	0.021	0.0389	0.035
18-Jun-13	0.861	0.1889	0.0556	0.0188	0.0556	0.021	0.01389	1.417	0.075	0.03472	0.035	2.153	0.79444	0.318	0.218	0.03472	0.03472	0.208	0.694	0.03472	-	0.02083	0.569	0.00458	0.7	0.0556	0.014	0.021	0.0389	0.035
24-Jun-13	0.139	0.1889	0.0556	0.0185	0.0556	0.021	0.01389	0.139	0.1028	0.03472	0.035	0.47	0.0556	0.021	0.018	0.03472	0.03472	0.208	0.694	0.03472	-	0.02083	0.444	0.00208	0.1	0.0556	0.014	0.021	0.0389	0.035
19-Jul-13	0.139	0.1889	0.0556	0.0021	0.0556	0.021	0.01389	0.139	0.1278	0.03472	0.035	0.419	0.0556	0.021	0.017	0.03472	0.03472	0.208	0.694	0.03472	-	0.02083	0.208	0.02028	0.1	0.0556	0.014	0.021	0.0389	0.035
20-Jul-13	0.139	0.1889	0.0556	0.0046	0.0556	0.021	0.01389	0.444	0.1	0.03472	0.035	1.367	0.0556	0.096	0.017	0.03472	0.03472	0.208	0.694	0.03472	-	0.02083	0.208	0.02028	0.1	0.0556	0.014	0.021	0.0389	0.035
21-Jul-13	0.139	0.1889	0.0556	0.0021	0.0556	0.021	0.01389	0.139	0.1056	0.03472	0.035	0.322	0.0556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	-	0.02083	0.208	0.02028	0.1	0.0556	0.014	0.021	0.0389	0.035
23-Jul-13	0.139	0.1889	0.0556	0.0021	0.0556	0.021	0.01389	0.139	0.1164	0.03472	0.035	0.493	0.0556	0.021	0.027	0.03472	0.03472	0.208	0.694	0.03472	-	0.02083	0.208	0.02028	0.1	0.0556	0.014	0.021	0.0389	0.035
22-Aug-13	0.139	0.1889	0.0556	0.0021	0.0556	0.021	0.01389	0.139	0.0778	0.03472	0.035	0.383	0.0556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	-	0.02083	0.208	0.02028	0.1	0.0556	0.014	0.021	0.0389	0.035
23-Aug-13	0.139	0.1889	0.0556	0.0021	0.0556	0.021	0.01389	0.139	0.0528	0.03472	0.035	0.194	0.0556	0.054	0.006	0.03472	0.03472	0.208	0.694	0.03472	-	0.02083	0.208	0.02028	0.1	0.0556	0.014	0.021	0.0389	0.035
24-Aug-13	0.139	0.1889	0.0556	0.0021	0.0556	0.021	0.01389	0.139	0.0875	0.03472	0.035	0.388	0.0556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	-	0.02083	0.208	0.02028	0.1	0.0556	0.014	0.021	0.0389	0.035
25-Aug-13	0.139	0.1889	0.0556	0.0021	0.0556	0.021	0.01389	0.139	0.0458	0.03472	0.035	0.208	0.0556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	-	0.02083	0.208	0.02028	0.1	0.0556	0.014	0.021	0.0389	0.035
13-Sep-13	0.139	0.1889	0.0556	0.0021	0.0556	0.021	0.01389	0.139	0.0868	0.03472	0.035	0.439	0.0556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	-	0.02083	0.208	0.02028	0.1	0.0556	0.014	0.021	0.0389	0.035
27-Sep-13	0.139	0.1889	0.0556	0.0021	0.0556	0.021	0.01389	0.139	0.0861	0.03472	0.035	0.235	0.0556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	-	0.02083	0.208	0.02028	0.1	0.0556	0.014	0.021	0.0389	0.035
28-Sep-13	0.139	0.1889	0.0556	0.0021	0.0556	0.021	0.01389	0.139	0.0833	0.03472	0.035	0.351	0.0556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	-	0.02083	0.208	0.02028	0.1	0.0556	0.014	0.021	0.0389	0.035
29-Sep-13	0.139	0.1889	0.0556	0.0021	0.0556	0.021	0.01389	0.139	0.0875	0.03472	0.035	0.672	0.0556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	-	0.02083	0.208	0.02028	0.1	0.0556	0.014	0.021	0.0389	0.035
25-Oct-13	0.139	0.1889	0.0556	0.0021	0.0556	0.021	0.01389	0.139	0.0958	0.03472	0.035	0.336	0.0556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	-	0.02083	0.208	0.02028	0.1	0.0556	0.014	0.021	0.0389	0.035
23-Oct-13	0.139	0.1889	0.0556	0.0021	0.0556	0.021	0.01389	0.139	0.0833	0.03472	0.035	0.361	0.0556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	-	0.02083	0.208	0.02028	0.1	0.0556	0.014	0.021	0.0389	0.035
27-Oct-13	0.139	0.1889	0.0556	0.0021	0.0556	0.021	0.01389	0.139	0.1028	0.03472	0.035	0.331	0.0556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	-	0.02083	0.208							

ATTACHMENT A3
METAL CONCENTRATIONS (24-HOUR), TSP-1, AUG. 2012 – DEC. 2020

Sample Date	Aluminum (Al), µg/m ³	Antimony (Sb), µg/m ³	Arsenic (As), µg/m ³	Barium (Ba), µg/m ³	Beryllium (Be), µg/m ³	Boron (B), µg/m ³	Cadmium (Cd), µg/m ³	Calcium (Ca), µg/m ³	Chromium (Cr), µg/m ³	Cobalt (Co), µg/m ³	Copper (Cu), µg/m ³	Iron (Fe), µg/m ³	Lead (Pb), µg/m ³	Magnesium (Mg), µg/m ³	Manganese (Mn), µg/m ³	Molybdenum (Mo), µg/m ³	Nickel (Ni), µg/m ³	Phosphorus (P), µg/m ³	Potassium (K), µg/m ³	Selenium (Se), µg/m ³	Silicon (Si), µg/m ³	Silver (Ag), µg/m ³	Sodium (Na), µg/m ³	Strontium (Sr), µg/m ³	Sulphur (S), µg/m ³	Tin (Sn), µg/m ³	Titanium (Ti), µg/m ³	Vanadium (V), µg/m ³	Zinc (Zn), µg/m ³	Zirconium (Zr), µg/m ³	
02-Apr-15	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.0736	0.03472	0.035	0.344	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.2	0.021	0.0139	0.035
03-Apr-15	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.1014	0.03472	0.035	0.464	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.2	0.021	0.0139	0.035
04-Apr-15	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.075	0.03472	0.035	0.31	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.2	0.021	0.0139	0.035
05-Apr-15	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.069	0.03472	0.035	0.05	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.2	0.021	0.0139	0.035
25-May-15	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.292	0.05	0.03472	0.035	0.326	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.00208	0.4	0.05556	0.014	0.2	0.021	0.0139	0.035
26-May-15	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.292	0.067	0.03472	0.035	0.314	0.05556	0.021	0.023	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.00208	0.4	0.05556	0.014	0.2	0.021	0.0139	0.035
27-May-15	0.444	0.13889	0.05556	0.0049	0.00556	0.021	0.01389	1.139	0.0208	0.03472	0.035	0.24	0.05556	0.122	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.00264	0.3	0.05556	0.014	0.2	0.021	0.0139	0.035
28-May-15	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.431	0.0597	0.03472	0.035	0.431	0.05556	0.089	0.023	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.00528	0.3	0.05556	0.014	0.2	0.021	0.0139	0.035
16-Jun-15	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.0569	0.03472	0.035	0.2	0.05556	0.064	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.2	0.021	0.0139	0.035
17-Jun-15	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.0528	0.03472	0.035	0.221	0.05556	0.064	0.006	0.03472	0.03472	0.208	0.694	0.03472	1.681	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.2	0.021	0.0139	0.035
18-Jun-15	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.0528	0.03472	0.035	0.212	0.05556	0.057	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.931	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.2	0.021	0.0139	0.035
01-Jul-15	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.0431	0.03472	0.035	0.108	0.05556	0.05	0.006	0.03472	0.03472	0.208	0.694	0.03472	-	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.2	0.021	0.0139	0.035
08-Jul-15	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.0472	0.03472	0.035	0.021	0.05556	0.051	0.006	0.03472	0.03472	0.208	0.694	0.03472	-	0.02083	2.444	0.00208	0.1	0.05556	0.014	0.2	0.021	0.0139	0.035
11-Jul-15	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.0486	0.03472	0.035	0.05	0.05556	0.064	0.006	0.03472	0.03472	0.208	0.694	0.03472	-	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.2	0.021	0.0139	0.035
20-Jul-15	0.139	0.13889	0.05556	0.0042	0.00556	0.021	0.01389	0.139	0.0208	0.03472	0.035	0.112	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	-	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.2	0.021	0.0139	0.035
13-Aug-15	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.0458	0.03472	0.035	0.021	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	-	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.2	0.021	0.0139	0.035
14-Aug-15	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.0611	0.03472	0.035	0.021	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	-	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.2	0.021	0.0139	0.035
15-Aug-15	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.05	0.03472	0.035	0.21	0.05556	0.049	0.006	0.03472	0.03472	0.208	0.694	0.03472	-	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.2	0.021	0.0139	0.035
16-Aug-15	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.0528	0.03472	0.035	0.239	0.05556	0.06	0.006	0.03472	0.03472	0.208	0.694	0.03472	-	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.2	0.021	0.0139	0.035
17-Sep-15	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.0208	0.03472	0.035	0.021	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	-	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.2	0.021	0.0139	0.035
20-Oct-15	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.0917	0.03472	0.035	0.021	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	-	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.2	0.021	0.0139	0.035
21-Oct-15	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.0722	0.03472	0.035	0.021	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	-	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.2	0.021	0.0141	0.035
13-Nov-15	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.0778	0.03472	0.035	0.021	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	-	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.2	0.021	0.0139	0.035
15-Nov-15	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.0681	0.03472	0.035	0.021	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	-	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.2	0.021	0.0139	0.035
16-Nov-15	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.0542	0.03472	0.035	0.021	0.05556	0.021	0.011	0.03472	0.03472	0.208	0.694	0.03472	-	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.2	0.021	0.0139	0.035
17-Nov-15	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.0639	0.03472	0.035	0.021	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	-	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.2	0.021	0.0139	0.035
18-Nov-15	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.0667	0.03472	0.035	0.021	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	-	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.2	0.021	0.0139	0.035
16-Dec-15	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.0778	0.03472	0.035	0.047	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.2	0.021	0.0139	0.035
17-Dec-15	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.0681	0.03472	0.035	0.056	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	-	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.2	0.021	0.0139	0.035
18-Dec-15	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.0736	0.03472	0.035	0.044	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.2	0.021	0.0139	0.035
19-Dec-15	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.0528	0.03472	0.035	0.021	0.0																		

ATTACHMENT A3
METAL CONCENTRATIONS (24-HOUR), TSP-1, AUG. 2012 – DEC. 2020

Sample Date	Aluminum (Al), µg/m ³	Antimony (Sb), µg/m ³	Arsenic (As), µg/m ³	Barium (Ba), µg/m ³	Beryllium (Be), µg/m ³	Boron (B), µg/m ³	Cadmium (Cd), µg/m ³	Calcium (Ca), µg/m ³	Chromium (Cr), µg/m ³	Cobalt (Co), µg/m ³	Copper (Cu), µg/m ³	Iron (Fe), µg/m ³	Lead (Pb), µg/m ³	Magnesium (Mg), µg/m ³	Manganese (Mn), µg/m ³	Molybdenum (Mo), µg/m ³	Nickel (Ni), µg/m ³	Phosphorus (P), µg/m ³	Potassium (K), µg/m ³	Selenium (Se), µg/m ³	Silicon (Si), µg/m ³	Silver (Ag), µg/m ³	Sodium (Na), µg/m ³	Strontium (Sr), µg/m ³	Sulphur (S), µg/m ³	Tin (Sn), µg/m ³	Titanium (Ti), µg/m ³	Vanadium (V), µg/m ³	Zinc (Zn), µg/m ³	Zirconium (Zr), µg/m ³						
02-Nov-17	0.139	25	0.3	10	0.01	120	0.025	0.5	0.5	0.1	50	4	0.5	0.5	0.4	120	2	0.2	0.2	10	1	120	120	0.1	10	120	2	120	0.0208	0.1	0.0556	0.014	0.021	0.0139	0.035	
16-Nov-17	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.0819	0.03472	0.035	0.049	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.02028	0.1	0.0556	0.014	0.021	0.0139	0.035						
17-Nov-17	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.0819	0.03472	0.035	0.021	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.02028	0.1	0.0556	0.014	0.021	0.0139	0.035						
13-Dec-17	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.0819	0.03472	0.035	0.049	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.02028	0.1	0.0556	0.014	0.021	0.0139	0.035						
15-Dec-17	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.444	0.6339	0.03472	0.035	0.054	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.764	0.02028	0.1	0.0556	0.014	0.021	0.0139	0.035						
19-Dec-17	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.528	0.1097	0.03472	0.035	0.081	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.903	0.02028	0.1	0.0556	0.014	0.021	0.0139	0.035						
31-Jan-18	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.361	0.0708	0.03472	0.035	0.044	0.05556	0.049	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.02028	0.4	0.0556	0.014	0.021	0.0139	0.035						
07-Feb-18	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.514	0.0722	0.03472	0.035	0.069	0.05556	0.043	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.02028	0.1	0.0556	0.014	0.021	0.0139	0.035						
09-Feb-18	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.472	0.0514	0.03472	0.035	0.053	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.02028	0.1	0.0556	0.014	0.021	0.0139	0.035						
14-Feb-18	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.542	0.0806	0.03472	0.035	0.058	0.05556	0.042	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.02028	0.1	0.0556	0.014	0.021	0.0139	0.035						
16-Mar-18	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.347	0.0667	0.03472	0.035	0.021	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.02028	0.1	0.0556	0.014	0.021	0.0139	0.035						
20-Mar-18	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.375	0.0625	0.03472	0.035	0.057	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.02028	0.1	0.0556	0.014	0.021	0.0139	0.035						
21-Mar-18	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.444	0.0764	0.03472	0.035	0.055	0.05556	0.044	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.02028	0.1	0.0556	0.014	0.021	0.0139	0.035						
03-Apr-18	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.347	0.0514	0.03472	0.035	0.021	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.02028	0.1	0.0556	0.014	0.021	0.0139	0.035						
04-Apr-18	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.333	0.0875	0.03472	0.035	0.021	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.02028	0.1	0.0556	0.014	0.021	0.0139	0.035						
05-Apr-18	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.389	0.1097	0.03472	0.035	0.042	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.02028	0.1	0.0556	0.014	0.021	0.0139	0.035						
24-May-18	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.431	0.0833	0.03472	0.035	0.021	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.02028	0.1	0.0556	0.014	0.021	0.0139	0.035						
26-May-18	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.431	0.0819	0.03472	0.035	0.021	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.02028	0.1	0.0556	0.014	0.021	0.0139	0.035						
05-Jun-18	0.029	0.00035	0.00035	0.0012	0.00035	0.012	0.00007	0.431	0.0343	0.00035	0.005	0.056	0.0006	0.051	0.001	0.00021	0.00133	0.056	0.035	0.00035	0.139	0.00014	0.194	0.00014	0.194	0.00014	0.194	0.00014	0.194	0.00014	0.194	0.00014	0.194	0.00014	0.194	0.00014
06-Jun-18	0.029	0.00035	0.00035	0.0012	0.00035	0.012	0.00007	0.417	0.0672	0.00035	0.001	0.069	0.00181	0.049	0.002	0.00021	0.00035	0.056	0.035	0.00035	0.139	0.00014	0.194	0.00014	0.194	0.00014	0.194	0.00014	0.194	0.00014	0.194	0.00014	0.194	0.00014	0.194	0.00014
08-Jun-18	0.057	0.00035	0.00035	0.0008	0.00035	0.021	0.00021	0.361	0.0762	0.00035	0.002	0.085	0.0009	0.047	0.002	0.00021	0.00035	0.056	0.035	0.00035	0.139	0.00014	0.194	0.00014	0.194	0.00014	0.194	0.00014	0.194	0.00014	0.194	0.00014	0.194	0.00014	0.194	0.00014
13-Jul-18	0.042	0.00035	0.00035	0.0014	0.00035	0.021	0.00021	0.208	0.0385	0.00035	0.001	0.119	0.01403	0.021	0.006	0.00021	0.00035	0.056	0.035	0.00035	0.139	0.00014	0.194	0.00014	0.194	0.00014	0.194	0.00014	0.194	0.00014	0.194	0.00014	0.194	0.00014	0.194	0.00014
17-Jul-18	0.046	0.00035	0.00035	0.002	0.00035	0.021	0.00007	0.319	0.0562	0.00035	0.01	0.064	0.0025	0.021	0.002	0.00021	0.00136	0.056	0.035	0.00035	0.139	0.00014	0.167	0.00016	0.167	0.00016	0.167	0.00016	0.167	0.00016	0.167	0.00016	0.167	0.00016	0.167	0.00016
18-Jul-18	0.044	0.00035	0.00035	0.0017	0.00035	0.021	0.00007	0.358	0.0562	0.00035	0.01	0.056	0.0025	0.021	0.002	0.00021	0.00136	0.056	0.035	0.00035	0.139	0.00014	0.167	0.00016	0.167	0.00016	0.167	0.00016	0.167	0.00016	0.167	0.00016	0.167	0.00016	0.167	0.00016
23-Aug-18	0.047	0.00035	0.00035	0.0044	0.00035	0.021	0.00019	0.139	0.096	0.00035	0.003	0.08	0.00276	0.021	0.004	0.00021	0.00174	0.056	0.074	0.00035	0.139	0.00014	0.222	0.00035	0.64	0.00035	0.014	0.014	0.0081	0.003						
25-Aug-18	0.038	0.00035	0.00035	0.0016	0.00035	0.021	0.00015	0.167	0.0739	0.00035	0.003	0.162	0.00147	0.021	0.002	0.00021	0.00168	0.056	0.078	0.00035	0.139	0.00014	0.222	0.00035	0.64	0.00035	0.014	0.014	0.001	0.003						
26-Aug-18	0.038	0.00035	0.00035	0.0011	0.00035	0.021	0.00007	0.194	0.0871	0.00035	0.002	0.303	0.00775	0.021	0.003	0.00256	0.00021	0.056	0.035	0.00035	0.139	0.00014	0.208	0.00069	0.64	0.00035	0.014	0.014	0.0087	0.003						
02-Sep-18	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.417	0.0514	0.03472	0.035	0.021	0.05556	0.053	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.02028	0.1	0.0556	0.014	0.021	0.0139	0.035						
03-Sep-18	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.486	0.0567	0.03472	0.035	0.021	0.05556	0.044	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.02028	0.1	0.0556	0.014	0.021	0.0139	0.035						
05-Sep-18	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	1.139	0.0444	0.03472	0.035	0.021	0.05556	0.064	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.667	0.02028	0.3	0.055										

ATTACHMENT A4

METAL CONCENTRATIONS (24-HOUR), TSP-2, AUG. 2012 – DEC. 2021

ATTACHMENT A4
METAL CONCENTRATIONS (24-HOUR), TSP-2, AUG. 2012 – DEC. 2021

Sample Date	Aluminum (Al), µg/m³	Antimony (Sb), µg/m³	Arsenic (As), µg/m³	Barium (Ba), µg/m³	Beryllium (Be), µg/m³	Boron (B), µg/m³	Cadmium (Cd), µg/m³	Calcium (Ca), µg/m³	Chromium (Cr), µg/m³	Cobalt (Co), µg/m³	Copper (Cu), µg/m³	Iron (Fe), µg/m³	Lead (Pb), µg/m³	Magnesium (Mg), µg/m³	Manganese (Mn), µg/m³	Molybdenum (Mo), µg/m³	Nickel (Ni), µg/m³	Phosphorus (P), µg/m³	Potassium (K), µg/m³	Selenium (Se), µg/m³	Silicon (Si), µg/m³	Silver (Ag), µg/m³	Sodium (Na), µg/m³	Strontium (Sr), µg/m³	Sulphur (S), µg/m³	Tin (Sn), µg/m³	Titanium (Ti), µg/m³	Vanadium (V), µg/m³	Zinc (Zn), µg/m³	Zirconium (Zr), µg/m³
Ontario AAC (24 hr avg)	25	0.3	10	0.01	120	0.025	0.5	0.1	50	4	0.5	0.4	0.5	0.4	120	2	1	120	2	120	1	120	120	0.7	10	120	2	120	0.025	0.035
23-Aug-2012	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.0208	0.03472	0.035	0.047	0.73611	0.047	0.033	0.03472	0.03472	0.208	0.694	0.03472	0.439	0.02083	0.208	0.00208	0.7	0.05556	0.014	0.021	0.1083	0.035
27-Sep-2012	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.0208	0.03472	0.035	0.021	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.439	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.021	0.0389	0.035
15-Dec-2012	0.139	0.13889	0.05556	0.0042	0.00556	0.021	0.01389	0.139	0.0208	0.03472	0.035	0.533	0.18056	0.076	0.066	0.03472	0.03472	0.208	0.694	0.03472	0.439	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.021	0.1222	0.035
16-Jan-2013	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.0208	0.03472	0.035	0.143	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.439	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.021	0.0319	0.035
23-Mar-2013	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.0208	0.03472	0.035	1.431	0.32083	0.089	0.407	0.03472	0.03472	0.208	0.694	0.03472	0.439	0.02083	0.208	0.00208	0.4	0.05556	0.014	0.021	0.2444	0.035
24-Mar-2013	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.0208	0.03472	0.035	1.174	0.36111	0.124	0.651	0.03472	0.03472	0.208	0.694	0.03472	0.439	0.02083	0.208	0.00208	0.4	0.05556	0.014	0.021	0.2778	0.035
25-Mar-2013	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.0208	0.03472	0.035	1.162	0.36667	0.108	0.39	0.03472	0.03472	0.208	0.694	0.03472	0.439	0.02083	0.208	0.00208	0.4	0.05556	0.014	0.021	0.2639	0.035
26-Mar-2013	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.0208	0.03472	0.035	0.921	0.15278	0.117	0.29	0.03472	0.03472	0.208	0.694	0.03472	0.439	0.02083	0.208	0.00208	0.3	0.05556	0.014	0.021	0.1417	0.035
07-Apr-2013	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.0208	0.03472	0.035	1.161	0.41667	0.119	0.471	0.03472	0.03472	0.208	0.694	0.03472	0.439	0.02083	0.208	0.00208	0.3	0.05556	0.014	0.021	0.2944	0.035
10-Apr-2013	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.0431	0.03472	0.035	0.439	0.05556	0.081	0.049	0.03472	0.03472	0.208	0.694	0.03472	0.439	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.021	0.0664	0.035
13-Apr-2013	0.306	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.0444	0.03472	0.035	0.199	0.05556	0.081	0.017	0.03472	0.03472	0.208	0.694	0.03472	0.439	0.02083	0.208	0.00208	0.4	0.05556	0.014	0.021	0.0139	0.035
15-Apr-2013	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.0472	0.03472	0.035	0.268	0.05556	0.079	0.025	0.03472	0.03472	0.208	0.694	0.03472	0.439	0.02083	0.208	0.00208	0.3	0.05556	0.014	0.021	0.0139	0.035
16-Apr-2013	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.0431	0.03472	0.035	0.165	0.05556	0.065	0.012	0.03472	0.03472	0.208	0.694	0.03472	0.439	0.02083	0.208	0.00208	0.3	0.05556	0.014	0.021	0.0139	0.035
17-Jun-2013	0.361	0.13889	0.05556	0.0087	0.00556	0.021	0.01389	0.708	0.0208	0.03472	0.035	0.232	0.05556	0.063	0.016	0.03472	0.03472	0.208	0.694	0.03472	0.439	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.021	0.0139	0.035
18-Jun-2013	1.583	0.13889	0.05556	0.0053	0.00556	0.071	0.01389	2.569	0.1222	0.03472	0.035	0.825	0.13333	0.094	0.078	0.03472	0.03472	0.208	0.694	0.03472	0.439	0.02083	0.208	0.00486	0.1	0.05556	0.014	0.021	0.0958	0.035
21-Jun-2013	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.0889	0.03472	0.035	0.432	0.05556	0.021	0.014	0.03472	0.03472	0.208	0.694	0.03472	0.439	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.021	0.0139	0.035
23-Jun-2013	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.361	0.0542	0.03472	0.035	0.282	0.05556	0.072	0.017	0.03472	0.03472	0.208	0.694	0.03472	0.439	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.021	0.0306	0.035
28-Jun-2013	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.5	0.0542	0.03472	0.035	0.414	0.05556	0.082	0.046	0.03472	0.03472	0.208	0.694	0.03472	0.439	0.02083	0.208	0.00208	0.3	0.05556	0.014	0.021	0.0708	0.035
19-Jul-2013	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.1167	0.03472	0.035	0.526	0.05556	0.021	0.027	0.03472	0.03472	0.208	0.694	0.03472	0.439	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.021	0.0389	0.035
20-Jul-2013	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.0653	0.03472	0.035	0.381	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.439	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.021	0.0139	0.035
21-Jul-2013	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.0958	0.03472	0.035	0.5	0.05556	0.021	0.052	0.03472	0.03472	0.208	0.694	0.03472	0.439	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.021	0.0292	0.035
22-Jul-2013	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.292	0.0944	0.03472	0.035	1.122	0.05556	0.071	0.134	0.03472	0.03472	0.208	0.694	0.03472	0.439	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.021	0.0917	0.035
22-Aug-2013	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.0944	0.03472	0.035	0.314	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.439	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.021	0.0278	0.035
25-Aug-2013	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.05	0.03472	0.035	0.185	0.05556	0.047	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.439	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.021	0.0139	0.035
26-Aug-2013	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.0736	0.03472	0.035	0.496	0.05556	0.021	0.012	0.03472	0.03472	0.208	0.694	0.03472	0.439	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.021	0.0458	0.035
28-Aug-2013	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.0708	0.03472	0.035	0.496	0.05556	0.021	0.046	0.03472	0.03472	0.208	0.694	0.03472	0.439	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.021	0.1222	0.035
31-Aug-2013	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.0569	0.03472	0.035	0.2	0.05556	0.047	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.439	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.021	0.0139	0.035
21-Sep-2013	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.0972	0.03472	0.035	0.347	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.439	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.021	0.0139	0.035
24-Sep-2013	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.1139	0.03472	0.035	0.424	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.439	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.021	0.0139	0.035
27-Sep-2013	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.1264	0.03472	0.035	0.479	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.439	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.021	0.0139	0.035
28-Sep-2013	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.0861	0.03472	0.035	0.338	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694											

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METAL CONCENTRATIONS (24-HOUR), TSP-2, AUG. 2012 – DEC. 2021

Sample Date	Aluminum (Al), µg/m ³	Antimony (Sb), µg/m ³	Arsenic (As), µg/m ³	Barium (Ba), µg/m ³	Beryllium (Be), µg/m ³	Boron (B), µg/m ³	Cadmium (Cd), µg/m ³	Calcium (Ca), µg/m ³	Chromium (Cr), µg/m ³	Cobalt (Co), µg/m ³	Copper (Cu), µg/m ³	Iron (Fe), µg/m ³	Lead (Pb), µg/m ³	Magnesium (Mg), µg/m ³	Manganese (Mn), µg/m ³	Molybdenum (Mo), µg/m ³	Nickel (Ni), µg/m ³	Phosphorus (P), µg/m ³	Potassium (K), µg/m ³	Selenium (Se), µg/m ³	Silicon (Si), µg/m ³	Silver (Ag), µg/m ³	Sodium (Na), µg/m ³	Strontium (Sr), µg/m ³	Sulphur (S), µg/m ³	Tin (Sn), µg/m ³	Titanium (Ti), µg/m ³	Vanadium (V), µg/m ³	Zinc (Zn), µg/m ³	Zirconium (Zr), µg/m ³
Ontario AQC (24 hr avg)	25	0.3	10	0.01	120	0.025	0.5	0.1	50	0.5	0.5	0.5	0.5	0.4	120	2	10	1	120	10	120	2	120	2	120	2	120	2	120	2
27-Sep-2014	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.1	0.03472	0.035	0.354	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.458	0.00208	0.1	0.05556	0.014	0.021	0.0139	0.035
15-Oct-2014	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.0694	0.03472	0.035	0.242	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	2.167	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.021	0.0139	0.035
16-Oct-2014	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.0875	0.03472	0.035	0.239	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.021	0.0139	0.035
23-Oct-2014	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.0903	0.03472	0.035	0.386	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.021	0.0139	0.035
24-Oct-2014	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.0542	0.03472	0.035	0.161	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.021	0.0139	0.035
22-Nov-2014	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.1319	0.03472	0.035	0.353	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.611	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.021	0.0139	0.035
23-Nov-2014	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.1153	0.03472	0.035	0.339	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.833	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.021	0.0139	0.035
25-Nov-2014	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.1042	0.03472	0.035	0.258	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	1.458	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.021	0.0139	0.035
12-Dec-2014	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.0944	0.03472	0.035	0.362	0.05556	0.021	0.017	0.03472	0.03472	0.208	0.694	0.03472	1.167	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.021	0.0139	0.035
13-Dec-2014	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.1139	0.03472	0.035	0.414	0.05556	0.021	0.043	0.03472	0.03472	0.208	0.694	0.03472	1.361	0.02083	0.917	0.00208	0.1	0.05556	0.014	0.021	0.0139	0.035
14-Dec-2014	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.0958	0.03472	0.035	0.378	0.05556	0.021	0.021	0.03472	0.03472	0.208	0.694	0.03472	0.833	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.021	0.0139	0.035
15-Dec-2014	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.1264	0.03472	0.035	0.381	0.05556	0.021	0.02	0.03472	0.03472	0.208	0.694	0.03472	0.931	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.021	0.0139	0.035
10-Jan-2015	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.1097	0.03472	0.035	0.342	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.444	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.021	0.0139	0.035
11-Jan-2015	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.0819	0.03472	0.035	0.281	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.021	0.0139	0.035
13-Jan-2015	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.0611	0.03472	0.035	0.262	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.021	0.0139	0.035
15-Jan-2015	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.0611	0.03472	0.035	0.333	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.021	0.0139	0.035
12-Feb-2015	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.0653	0.03472	0.035	0.021	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.75	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.021	0.0139	0.035
13-Feb-2015	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.0569	0.03472	0.035	0.021	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.021	0.0139	0.035
15-Feb-2015	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.0583	0.03472	0.035	0.021	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.021	0.0139	0.035
16-Feb-2015	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.075	0.03472	0.035	0.304	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.021	0.0139	0.035
06-Mar-2015	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.0625	0.03472	0.035	0.047	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	1.014	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.021	0.0139	0.035
07-Mar-2015	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.0694	0.03472	0.035	0.137	0.05556	0.046	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.021	0.0139	0.035
16-Mar-2015	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.0542	0.03472	0.035	0.075	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.021	0.0139	0.035
17-Mar-2015	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.0597	0.03472	0.035	0.05	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.021	0.0139	0.035
02-Apr-2015	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.0598	0.03472	0.035	0.357	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.021	0.0139	0.035
03-Apr-2015	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.1042	0.03472	0.035	0.281	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.021	0.0139	0.035
04-Apr-2015	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.0833	0.03472	0.035	0.306	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.021	0.0139	0.035
05-Apr-2015	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.0486	0.03472	0.035	0.021	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.021	0.0139	0.035
25-May-2015	0.139	0.13889	0.05556	0.0476	0.00556	0.021	0.01389	0.611	0.0556	0.03472	0.035	1.015	0.05556	0.167	0.117	0.03472	0.03472	0.208	0.694	0.03472	0.444	0.02083	0.208	0.00208	0.6	0.05556	0.014	0.021	0.0094	0.035
26-May-2015	0.139	0.13889	0.05556	0.0062	0.00556	0.021	0.01389	0.625	0.05	0.03472	0.035	0.056	0.05556	0.186	0.101	0.03472	0.03472	0.208	0.694	0.03472	0.556	0.02083	0.208	0.00208	0.4	0.05556	0.014	0.021	0.0039	0.035
27-May-2015	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.0431	0.03472	0.035	0.353	0.05556	0.005	0.018	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.00208	0.4	0.05556	0.014	0.021	0.0139	0.035
28-May-2015	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.0431	0.03472	0.035	0.347	0.05556	0.075	0.023	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.021	0.0139	0.035
16-Jun-2015	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.0708	0.03472	0.035	0.238	0.05556	0.061	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.021	0.0139	0.035
17-Jun-2015	0.139	0.13889	0.05556	0.0083																										

ATTACHMENT A4
METAL CONCENTRATIONS (24-HOUR), TSP-2, AUG. 2012 – DEC. 2021

Sample Date	Aluminum (Al), µg/m ³	Antimony (Sb), µg/m ³	Arsenic (As), µg/m ³	Barium (Ba), µg/m ³	Beryllium (Be), µg/m ³	Boron (B), µg/m ³	Cadmium (Cd), µg/m ³	Calcium (Ca), µg/m ³	Chromium (Cr), µg/m ³	Cobalt (Co), µg/m ³	Copper (Cu), µg/m ³	Iron (Fe), µg/m ³	Lead (Pb), µg/m ³	Magnesium (Mg), µg/m ³	Manganese (Mn), µg/m ³	Molybdenum (Mo), µg/m ³	Nickel (Ni), µg/m ³	Phosphorus (P), µg/m ³	Potassium (K), µg/m ³	Selenium (Se), µg/m ³	Silicon (Si), µg/m ³	Silver (Ag), µg/m ³	Sodium (Na), µg/m ³	Strontium (Sr), µg/m ³	Sulphur (S), µg/m ³	Tin (Sn), µg/m ³	Titanium (Ti), µg/m ³	Vanadium (V), µg/m ³	Zinc (Zn), µg/m ³	Zirconium (Zr), µg/m ³
Ontario AAC (24 hr avg)	25	0.3	10	0.01	120	0.025	0.5	0.1	50	0.4	0.5	0.4	120	2	10	1	120	10	120	2	120	10	120	2	120	10	120	2	120	10
28-Nov-2016	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.0722	0.03472	0.035	0.05	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.021	0.0139	0.035
27-Dec-2016	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.0931	0.03472	0.035	0.047	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.021	0.0139	0.035
29-Dec-2016	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.1083	0.03472	0.035	0.062	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.021	0.0139	0.035
30-Dec-2016	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.0958	0.03472	0.035	0.082	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.021	0.0139	0.035
28-Jan-2017	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.0861	0.03472	0.035	0.044	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.021	0.0139	0.035
29-Jan-2017	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.0694	0.03472	0.035	0.021	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.021	0.0139	0.035
30-Jan-2017	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.1194	0.03472	0.035	0.185	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.00667	0.1	0.05556	0.014	0.021	0.0139	0.035
02-Feb-2017	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.0917	0.03472	0.035	0.06	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	1.125	0.00208	0.1	0.05556	0.014	0.021	0.0139	0.035
14-Feb-2017	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.0903	0.03472	0.035	0.124	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.021	0.0139	0.035
18-Feb-2017	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.0819	0.03472	0.035	0.072	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.00625	0.1	0.05556	0.014	0.021	0.0139	0.035
19-Feb-2017	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.0792	0.03472	0.035	0.068	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.021	0.0139	0.035
23-Mar-2017	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.1028	0.03472	0.035	0.185	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.00458	0.1	0.05556	0.014	0.021	0.0139	0.035
27-Mar-2017	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.0694	0.03472	0.035	0.021	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.021	0.0139	0.035
28-Mar-2017	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.292	0.0917	0.03472	0.035	0.26	0.05556	0.021	0.025	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.02361	0.1	0.05556	0.014	0.021	0.0139	0.035
14-Apr-2017	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.611	0.1014	0.03472	0.035	0.089	0.05556	0.046	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.00764	0.1	0.05556	0.014	0.021	0.0139	0.035
18-Apr-2017	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.375	0.125	0.03472	0.035	0.458	0.05556	0.086	0.03	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.00875	0.3	0.05556	0.014	0.021	0.0139	0.035
20-Apr-2017	0.139	0.13889	0.05556	0.0042	0.00556	0.021	0.01389	0.347	0.1111	0.03472	0.035	0.349	0.05556	0.081	0.029	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.417	0.00972	0.1	0.05556	0.014	0.021	0.0139	0.035
25-May-2017	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.458	0.0736	0.03472	0.035	0.107	0.05556	0.064	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.431	0.00667	0.1	0.05556	0.014	0.021	0.0139	0.035
26-May-2017	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.1208	0.03472	0.035	0.071	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.021	0.0139	0.035
30-May-2017	0.139	0.13889	0.05556	0.0042	0.00556	0.021	0.01389	0.403	0.0861	0.03472	0.035	0.643	0.05556	0.129	0.078	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.00556	0.1	0.05556	0.014	0.021	0.0597	0.035
01-Jun-2017	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.0972	0.03472	0.035	0.134	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.00486	0.1	0.05556	0.014	0.021	0.0139	0.035
08-Jun-2017	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.0886	0.03472	0.035	0.123	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.021	0.0261	0.035
09-Jun-2017	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.319	0.1111	0.03472	0.035	0.162	0.05556	0.047	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.021	0.0139	0.035
13-Jun-2017	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.306	0.1306	0.03472	0.035	0.547	0.05556	0.065	0.04	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.021	0.0139	0.035
04-Jul-2017	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.1125	0.03472	0.035	1.058	0.05556	0.021	0.022	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.021	0.0139	0.035
05-Jul-2017	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.0819	0.03472	0.035	0.236	0.05556	0.054	0.026	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.021	0.0139	0.035
07-Jul-2017	0.139	0.13889	0.05556	0.0042	0.00556	0.021	0.01389	0.431	0.0819	0.03472	0.035	0.608	0.05556	0.144	0.088	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.021	0.0542	0.035
09-Aug-2017	0.653	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	1.278	0.0764	0.03472	0.035	2.778	0.36944	0.468	0.404	0.03472	0.03472	0.208	0.694	0.03472	1.097	0.02083	0.208	0.00486	0.6	0.05556	0.032	0.021	0.2764	0.035
11-Aug-2017	0.139	0.13889	0.05556	0.0087	0.00556	0.021	0.01389	0.548	0.0597	0.03472	0.035	1.046	0.1625	0.157	0.164	0.03472	0.03472	0.208	0.694	0.03472	0.556	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.021	0.1153	0.035
15-Aug-2017	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.1	0.03472	0.035	0.15	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.021	0.0139	0.035
20-Sep-2017	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.472	0.1014	0.03472	0.035	0.05	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.021	0.0139	0.035
26-Sep-2017	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.444	0.1056	0.03472	0.035	0.054	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.021	0.0139	0.035
29-Sep-2017	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.444	0.1458	0.03472	0.035	0.086	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.021	0.0139	0.035
03-Oct-2017	0.139	0.13889	0.05556	0.0021																										

ATTACHMENT A4
METAL CONCENTRATIONS (24-HOUR), TSP-2, AUG. 2012 – DEC. 2021

Sample Date	Aluminum (Al), µg/m ³	Antimony (Sb), µg/m ³	Arsenic (As), µg/m ³	Barium (Ba), µg/m ³	Beryllium (Be), µg/m ³	Boron (B), µg/m ³	Cadmium (Cd), µg/m ³	Calcium (Ca), µg/m ³	Chromium (Cr), µg/m ³	Cobalt (Co), µg/m ³	Copper (Cu), µg/m ³	Iron (Fe), µg/m ³	Lead (Pb), µg/m ³	Magnesium (Mg), µg/m ³	Manganese (Mn), µg/m ³	Molybdenum (Mo), µg/m ³	Nickel (Ni), µg/m ³	Phosphorus (P), µg/m ³	Potassium (K), µg/m ³	Selenium (Se), µg/m ³	Silicon (Si), µg/m ³	Silver (Ag), µg/m ³	Sodium (Na), µg/m ³	Strontium (Sr), µg/m ³	Sulphur (S), µg/m ³	Tin (Sn), µg/m ³	Titanium (Ti), µg/m ³	Vanadium (V), µg/m ³	Zinc (Zn), µg/m ³	Zirconium (Zr), µg/m ³	
Ontario AAC (24 hr avg)	25	0.3	10	0.01	120	0.025	0.5	0.1	50	4	0.5	0.4	120	2	10	1	120	2	120	1	120	2	120	10	120	2	120	2	120	10	120
26-Feb-2019	0.139	0.1389	0.05556	0.0021	0.05556	0.021	0.01389	0.361	0.0681	0.03472	0.035	0.054	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.021	0.0694	0.035	
27-Feb-2019	0.139	0.1389	0.05556	0.0021	0.05556	0.021	0.01389	0.375	0.0625	0.03472	0.035	0.043	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.021	0.0694	0.035	
28-Feb-2019	0.139	0.1389	0.05556	0.0021	0.05556	0.021	0.01389	0.361	0.0792	0.03472	0.035	0.051	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.021	0.0792	0.035	
05-Mar-2019	0.014	0.00035	0.00035	0.0011	0.00035	0.021	0.00007	0.472	0.0793	0.00035	0.001	0.043	0.00074	0.021	0.001	0.00021	0.00112	0.056	0.035	0.00035	0.139	0.00014	0.069	0.00075	69.4	0.00035	0.014	0.014	0.2333	0.003	
06-Mar-2019	0.014	0.00035	0.00035	0.0018	0.00035	0.021	0.00019	0.5	0.0942	0.00035	0.001	0.064	0.00786	0.044	0.001	0.00069	0.00119	0.056	0.035	0.00035	0.139	0.00014	0.194	0.001	69.4	0.00035	0.014	0.014	0.2083	0.003	
07-Mar-2019	0.014	0.00035	0.00035	0.0012	0.00035	0.021	0.00018	0.5	0.0671	0.00035	0.001	0.047	0.00035	0.042	0.001	0.00058	0.00126	0.056	0.035	0.00035	0.139	0.00014	0.167	0.00097	69.4	0.00035	0.014	0.014	0.2703	0.003	
19-Apr-2019	0.038	0.00035	0.00035	0.0022	0.00035	0.021	0.00007	0.486	0.0594	0.00035	0.001	0.075	0.0044	0.044	0.003	0.00021	0.00082	0.056	0.035	0.00035	0.139	0.00014	0.069	0.0011	69.4	0.00035	0.014	0.014	0.1417	0.003	
20-Apr-2019	0.061	0.00035	0.00072	0.0018	0.00035	0.021	0.00147	0.5	0.0714	0.00035	0.004	0.193	0.02847	0.058	0.009	0.00021	0.00212	0.056	0.035	0.00035	0.139	0.00014	0.069	0.00115	69.4	0.00035	0.014	0.014	0.1778	0.003	
25-Apr-2019	0.04	0.00035	0.00035	0.0016	0.00035	0.021	0.00025	0.444	0.0674	0.00035	0.002	0.085	0.00221	0.021	0.002	0.00021	0.0015	0.056	0.035	0.00035	0.139	0.00014	0.069	0.00096	69.4	0.00035	0.014	0.014	0.2333	0.003	
01-May-2019	0.014	0.00035	0.00035	0.0003	0.00035	0.021	0.00031	0.069	0.0775	0.00035	0	0.053	0.0011	0.021	0.001	0.00021	0.00125	0.056	0.035	0.00035	0.139	0.00014	0.069	0.00035	69.4	0.00035	0.014	0.014	0.0035	0.003	
07-May-2019	0.16	0.00119	0.00622	0.0045	0.00035	0.021	0.00093	0.417	0.1149	0.00035	0.004	0.633	0.10278	0.11	0.086	0.00021	0.00188	0.056	0.035	0.00035	0.139	0.00082	0.194	0.00164	69.4	0.00035	0.014	0.014	0.0676	0.003	
09-May-2019	0.043	0.00035	0.00128	0.0016	0.00035	0.021	0.00021	0.069	0.0622	0.00035	0.001	0.075	0.00662	0.021	0.002	0.00021	0.00106	0.056	0.035	0.00035	0.139	0.00014	0.069	0.00076	69.4	0.00035	0.014	0.014	0.0035	0.003	
29-Jun-2019	0.122	0.00035	0.00222	0.0048	0.00035	0.021	0.00042	0.611	0.0825	0.00035	0.004	0.385	0.02625	0.089	0.034	0.00046	0.00225	0.056	0.035	0.00035	0.139	0.00014	0.25	0.0014	69.4	0.00035	0.014	0.014	0.0689	0.003	
21-Jul-2019	0.121	0.00035	0.00299	0.0079	0.00035	0.021	0.00072	0.736	0.0826	0.00035	0.002	0.497	0.04069	0.115	0.048	0.00021	0.00181	0.056	0.035	0.00035	0.139	0.00014	0.181	0.00171	69.4	0.00035	0.014	0.014	0.0915	0.003	
26-Jul-2019	0.028	0.00035	0.00035	0.0013	0.00035	0.021	0.00018	0.444	0.0785	0.00035	0.001	0.106	0.00624	0.021	0.006	0.00021	0.00122	0.056	0.035	0.00035	0.139	0.00014	0.153	0.0009	69.4	0.00035	0.014	0.014	0.0478	0.003	
30-Jul-2019	0.014	0.00035	0.00035	0.0009	0.00035	0.021	0.00007	0.361	0.0797	0.00035	0	0.061	0.00256	0.021	0.003	0.00021	0.00131	0.056	0.035	0.00035	0.139	0.00014	0.069	0.00075	69.4	0.00035	0.014	0.014	0.0401	0.003	
22-Aug-2019	0.043	0.00035	0.001	0.0016	0.00035	0.021	0.00086	0.069	0.0751	0.00035	0.001	0.146	0.01528	0.021	0.013	0.00021	0.00139	0.056	0.035	0.00035	0.139	0.00014	0.069	0.00089	69.4	0.00035	0.014	0.014	0.0318	0.003	
27-Aug-2019	0.097	0.00035	0.00275	0.0032	0.00035	0.021	0.0005	0.236	0.0894	0.00035	0.002	0.39	0.04917	0.081	0.037	0.00021	0.00118	0.056	0.035	0.00035	0.139	0.00036	0.139	0.00099	69.4	0.00035	0.014	0.014	0.0479	0.003	
28-Aug-2019	0.062	0.00035	0.00122	0.0019	0.00035	0.021	0.00036	0.139	0.0696	0.00035	0.006	0.193	0.01764	0.021	0.027	0.00021	0.00143	0.056	0.035	0.00035	0.139	0.00014	0.069	0.00072	69.4	0.00035	0.014	0.014	0.0608	0.003	
24-Sep-2019	0.032	0.00035	0.00035	0.0007	0.00035	0.021	0.00007	0.069	0.1889	0.00147	0.006	0.688	0.00253	0.021	0.072	0.00247	0.00417	0.056	0.035	0.00035	0.139	0.00014	0.069	0.00035	69.4	0.00035	0.014	0.014	0.2931	0.003	
25-Sep-2019	0.014	0.00035	0.00035	0.0003	0.00035	0.021	0.00021	0.069	0.0756	0.00035	0.001	0.057	0.00103	0.021	0	0.00021	0.00122	0.056	0.035	0.00035	0.139	0.00014	0.069	0.00035	69.4	0.00035	0.014	0.014	0.0226	0.003	
27-Sep-2019	0.014	0.00089	0.00035	0.001	0.00035	0.021	0.00007	0.069	0.0715	0.00035	0.001	0.067	0.0024	0.021	0.002	0.00021	0.00151	0.056	0.035	0.00035	0.139	0.00014	0.206	0.00071	69.4	0.00035	0.014	0.014	0.3583	0.003	
23-Oct-2019	0.014	0.00035	0.00328	0.0012	0.00035	0.021	0.00007	0.069	0.0778	0.00035	0.002	0.064	0.00106	0.021	0.001	0.00021	0.00132	0.056	0.035	0.00035	0.139	0.00014	0.167	0.00035	69.4	0.00035	0.014	0.014	0.021	0.003	
24-Oct-2019	0.014	0.00035	0.00347	0.0003	0.00035	0.021	0.00007	0.069	0.0717	0.00035	0.004	0.062	0.00124	0.021	0.001	0.00021	0.00147	0.056	0.035	0.00035	0.139	0.00014	0.069	0.00035	69.4	0.00035	0.014	0.014	0.0325	0.003	
25-Oct-2019	0.038	0.00035	0.01165	0.0013	0.00035	0.021	0.00076	0.194	0.0724	0.00035	0.007	0.104	0.00408	0.021	0.002	0.00021	0.00107	0.056	0.035	0.00035	0.139	0.00014	0.069	0.00081	69.4	0.00035	0.014	0.014	0.1019	0.003	
26-Nov-2019	0.014	0.00035	0.00035	0.0013	0.00035	0.021	0.00044	0.486	0.0669	0.00035	0.001	0.062	0.00099	0.021	0.001	0.00021	0.00104	0.056	0.035	0.00035	0.139	0.00014	0.264	0.00078	69.4	0.00035	0.014	0.014	0.0882	0.003	
27-Nov-2019	0.014	0.00035	0.00035	0.0003	0.00035	0.021	0.00047	0.403	0.065	0.00035	0.001	0.075	0.0022	0.021	0.005	0.00021	0.00097	0.056	0.035	0.00035	0.139	0.00014	0.153	0.00035	69.4	0.00035	0.014	0.014	0.0646	0.003	
28-Nov-2019	0.014	0.00035	0.00035	0.001	0.00035	0.021	0.00028	0.486	0.0521	0.00035	0.001	0.044	0.00076	0.021	0.001	0.00021	0.00108	0.056	0.035	0.00035	0.139	0.00014	0.069	0.00081	69.4	0.00035	0.014	0.014	0.0511	0.003	
24-Dec-2019	0.029	0.00035	0.00035	0.0015	0.00035	0.021	0.00007	0.431	0.0508	0.00035	0.001	0.049	0.00118	0.021	0.001	0.00021	0.00147	0.056	0.035	0.00035	0.139	0.00014	0.222	0.00086	69.4	0.00035	0.014	0.014	0.0746	0.003	
25-Dec-2019	0.014	0.00035	0.00035	0.0011	0.00035	0.021	0.00017	0.417	0.065	0.00035	0.001	0.054	0.00258	0.021	0.003	0.00021	0.00186	0.056	0.035	0.00035	0.139	0.00014	0.208	0.00076	69.4	0.00035	0.014	0.014	0.0807	0.003	
27-Dec-2019	0.014	0.00035	0.00035	0.0009	0.00035	0.021	0.00035																								

ATTACHMENT A4
METAL CONCENTRATIONS (24-HOUR), TSP-2, AUG. 2012 – DEC. 2021

Sample Date	Aluminum (Al), µg/m³	Antimony (Sb), µg/m³	Arsenic (As), µg/m³	Barium (Ba), µg/m³	Beryllium (Be), µg/m³	Boron (B), µg/m³	Cadmium (Cd), µg/m³	Calcium (Ca), µg/m³	Chromium (Cr), µg/m³	Cobalt (Co), µg/m³	Copper (Cu), µg/m³	Iron (Fe), µg/m³	Lead (Pb), µg/m³	Magnesium (Mg), µg/m³	Manganese (Mn), µg/m³	Molybdenum (Mo), µg/m³	Nickel (Ni), µg/m³	Phosphorus (P), µg/m³	Potassium (K), µg/m³	Selenium (Se), µg/m³	Silicon (Si), µg/m³	Silver (Ag), µg/m³	Sodium (Na), µg/m³	Strontium (Sr), µg/m³	Sulphur (S), µg/m³	Tin (Sn), µg/m³	Titanium (Ti), µg/m³	Vanadium (V), µg/m³	Zinc (Zn), µg/m³	Zirconium (Zr), µg/m³	
Ontario AAQC (24 hr avg)		25	0.3	10	0.01	120	0.025		0.5	0.1	50	4	0.5		0.4	120	2			10		1		120			10	120	2	120	
01-Jan-2021	0.014	0.00035	0.00035	0.0042	0.00035	0.021	0.00007	0.375	0.1168	0.00035	0.002	0.065	0.00035	0.021	0.002	0.00021	0.00167	0.056	0.035	0.00035	0.139	0.00014	0.069	0.00079	69.4	0.00035	0.014	0.014	0.0543	0.003	
02-Jan-2021	0.014	0.00035	0.00035	0.0035	0.00035	0.021	0.00005	0.361	0.1076	0.00035	0.002	0.062	0.006	0.021	0.004	0.00021	0.001	0.056	0.035	0.00035	0.139	0.00014	0.069	0.00035	69.4	0.00072	0.014	0.014	0.0696	0.003	
03-Jan-2021	0.014	0.00096	0.001	0.0085	0.00035	0.021	0.00144	0.403	0.0919	0.00035	0.004	0.129	0.08556	0.06	0.017	0.00062	0.00096	0.056	0.035	0.00035	0.139	0.00082	0.069	0.00115	69.4	0.00035	0.014	0.014	0.1958	0.003	
04-Feb-2021	0.014	0.0011	0.0011	0.0008	0.00035	0.021	0.00075	0.069	0.1224	0.00035	0.001	0.119	0.11264	0.021	0.015	0.00021	0.001	0.056	0.069	0.00035	0.139	0.00106	0.069	0.00035	69.4	0.00035	0.014	0.014	0.0421	0.003	
05-Feb-2021	0.014	0.00035	0.00035	0.0003	0.00035	0.021	0.00007	0.069	0.0944	0.00035	0.001	0.058	0.00342	0.021	0.001	0.00021	0.00056	0.056	0.071	0.00035	0.139	0.00014	0.069	0.00035	69.4	0.00035	0.014	0.014	0.0078	0.003	
06-Feb-2021	0.029	0.00035	0.00035	0.0008	0.00035	0.021	0.00019	0.069	0.0849	0.00035	0.001	0.075	0.00418	0.021	0.006	0.00021	0.0029	0.056	0.079	0.00035	0.139	0.00014	0.069	0.00071	69.4	0.00035	0.014	0.014	0.0112	0.003	
15-Mar-2021	0.014	0.00035	0.00035	0.0025	0.00035	0.021	0.00007	0.347	0.0594	0.00035	0.002	0.043	0.00193	0.021	0.001	0.00021	0.00099	0.056	0.035	0.00035	0.139	0.00014	0.139	0.00089	69.4	0.01667	0.014	0.014	0.0475	0.003	
18-Mar-2021	0.028	0.00035	0.00035	0.0022	0.00035	0.021	0.00007	0.375	0.0706	0.00035	0.001	0.021	0.00201	0.021	0.001	0.00021	0.00111	0.056	0.035	0.00035	0.139	0.00014	0.153	0.00076	69.4	0.00035	0.014	0.014	0.0394	0.003	
19-Mar-2021	0.029	0.00035	0.00035	0.0026	0.00035	0.021	0.0004	0.444	0.0581	0.00035	0.002	0.078	0.02028	0.044	0.016	0.00021	0.00108	0.056	0.035	0.00035	0.139	0.00014	0.194	0.00107	69.4	0.00035	0.014	0.014	0.0553	0.003	
01-Apr-2021	0.014	0.00035	0.00035	0.0009	0.00035	0.021	0.00007	0.347	0.0699	0.00035	0.001	0.049	0.00099	0.021	0.001	0.00021	0.0014	0.056	0.035	0.00035	0.139	0.00014	0.153	0.00071	69.4	0.00035	0.014	0.014	0.0124	0.003	
02-Apr-2021	0.036	0.00125	0.0011	0.0011	0.00035	0.021	0.00074	0.444	0.0658	0.00035	0.003	0.142	0.12764	0.043	0.016	0.00021	0.00186	0.056	0.035	0.00035	0.139	0.00147	0.139	0.00114	69.4	0.00035	0.014	0.014	0.0568	0.003	
03-Apr-2021	0.072	0.00146	0.00157	0.0014	0.00035	0.021	0.00078	0.431	0.0421	0.00035	0.01	0.19	0.13347	0.05	0.022	0.00021	0.00165	0.056	0.035	0.00035	0.139	0.00158	0.069	0.00128	69.4	0.00035	0.014	0.014	0.0754	0.003	
15-May-2021	0.036	0.0056	0.00106	0.0008	0.00035	0.021	0.00044	0.069	0.0828	0.00035	0.002	0.106	0.06139	0.021	0.008	0.00021	0.00129	0.056	0.035	0.00035	0.139	0.00064	0.069	0.00035	69.4	0.00035	0.014	0.014	0.0242	0.003	
17-May-2021	0.063	0.00035	0.00035	0.0014	0.00035	0.021	0.00026	0.153	0.0726	0.00035	0.002	0.151	0.04583	0.021	0.008	0.00021	0.00114	0.056	0.035	0.00035	0.139	0.0004	0.069	0.00085	69.4	0.00035	0.014	0.014	0.0183	0.003	
19-May-2021	0.014	0.00035	0.00035	0.0003	0.00035	0.021	0.00007	0.069	0.0736	0.00035	0.001	0.053	0.00221	0.021	0.001	0.00021	0.00169	0.056	0.035	0.00035	0.139	0.00014	0.069	0.00035	69.4	0.00035	0.014	0.014	0.0035	0.003	
01-Jun-2021	0.031	0.00035	0.00035	0.0012	0.00035	0.021	0.00182	0.514	0.0625	0.00035	0.002	0.137	0.02153	0.044	0.006	0.00021	0.00138	0.056	0.035	0.00035	0.472	0.00014	0.069	0.00086	69.4	0.00035	0.014	0.014	0.0208	0.003	
02-Jun-2021	0.051	0.00035	0.00133	0.0016	0.00035	0.021	0.00049	0.472	0.0943	0.00035	0.002	0.176	0.05042	0.05	0.014	0.00021	0.00232	0.056	0.035	0.00035	0.736	0.0006	0.139	0.00104	69.4	0.00035	0.014	0.014	0.0424	0.003	
07-Jun-2021	0.175	0.00181	0.00533	0.0047	0.00035	0.021	0.00182	0.917	0.1064	0.00035	0.005	0.642	0.20556	0.158	0.077	0.00021	0.00281	0.056	0.035	0.00035	0.569	0.00185	0.208	0.002	69.4	0.00035	0.014	0.014	0.1389	0.003	
27-Dec-2021	0.032	0.00035	0.00035	0.0012	0.00035	0.021	0.00021	0.458	0.0696	0.00035	0.003	0.081	0.02319	0.021	0.007	0.00021	0.00164	0.056	0.035	0.00035	0.139	0.00014	0.153	0.0009	69.4	0.00035	0.014	0.014	0.0572	0.003	
28-Dec-2021	0.063	0.00035	0.00035	0.0009	0.00035	0.021	0.00029	0.361	0.0885	0.00035	0.003	0.069	0.01597	0.021	0.006	0.00021	0.00133	0.056	0.035	0.00035	0.139	0.00051	0.194	0.00081	69.4	0.00035	0.014	0.014	0.0451	0.003	
30-Dec-2021	0.014	0.00035	0.00035	0.001	0.00035	0.021	0.00017	0.292	0.0551	0.00035	0.003	0.05	0.01285	0.021	0.002	0.00021	0.00207	0.056	0.035	0.00035	0.139	0.00036	0.208	0.00035	69.4	0.00035	0.014	0.014	0.0396	0.003	

* Criteria effective on July 1, 2016

ATTACHMENT A5

METAL CONCENTRATIONS (24-HOUR), TSP-3, DEC. 2014 – DEC. 2021

ATTACHMENT A5
METAL CONCENTRATIONS (24-HOUR), TSP-3, DEC. 2014 - DEC. 2021

Sample Date	Aluminum (Al), total µg/m ³	Antimony (Sb), total µg/m ³	Arsenic (As), total µg/m ³	Barium (Ba), total µg/m ³	Beryllium (Be), total µg/m ³	Boron (B), total µg/m ³	Cadmium (Cd), total µg/m ³	Calcium (Ca), total µg/m ³	Chromium (Cr), total µg/m ³	Cobalt (Co), total µg/m ³	Copper (Cu), total µg/m ³	Iron (Fe), total µg/m ³	Lead (Pb), total µg/m ³	Magnesium (Mg), total µg/m ³	Manganese (Mn), total µg/m ³	Molybdenum (Mo), total µg/m ³	Nickel (Ni), total µg/m ³	Phosphorus (P), total µg/m ³	Potassium (K), total µg/m ³	Selenium (Se), total µg/m ³	Silicon (Si), total µg/m ³	Silver (Ag), total µg/m ³	Sodium (Na), total µg/m ³	Strontium (Sr), total µg/m ³	Sulphur (S), total µg/m ³	Tin (Sn), total µg/m ³	Titanium (Ti), total µg/m ³	Vanadium (V), total µg/m ³	Zinc (Zn), total µg/m ³	Zirconium (Zr), total µg/m ³	
Ontario AOC (24-hr avg)	25	0.3	10	0.01	120	0.025	0.5	0.1	50	4	0.5	0.04	120	2	10	1	120	2	120	10	120	2	120	2	120	10	120	2	120	2	120
12-Dec-2014	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.306	0.0958	0.03472	0.035	0.367	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	1.472	0.02083	0.208	0.0208	0.1	0.05556	0.014	0.021	0.0139	0.035	
13-Dec-2014	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.319	0.0972	0.03472	0.035	0.315	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	1.097	0.02083	0.208	0.0208	0.1	0.05556	0.014	0.021	0.0139	0.035	
14-Dec-2014	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.319	0.1028	0.03472	0.035	0.272	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.611	0.02083	0.208	0.0208	0.1	0.05556	0.014	0.021	0.0139	0.035	
15-Dec-2014	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.319	0.0986	0.03472	0.035	0.399	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	1.569	0.02083	0.208	0.0208	0.1	0.05556	0.014	0.021	0.0139	0.035	
12-Jan-2015	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.319	0.0806	0.03472	0.035	0.351	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.0208	0.1	0.05556	0.014	0.021	0.0139	0.035	
15-Jan-2015	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.319	0.0628	0.03472	0.035	0.021	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.0208	0.1	0.05556	0.014	0.021	0.0139	0.035	
16-Jan-2015	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.319	0.0764	0.03472	0.035	0.065	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.569	0.02083	0.208	0.0208	0.1	0.05556	0.014	0.021	0.0139	0.035	
18-Jan-2015	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.319	0.0611	0.03472	0.035	0.021	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.0208	0.1	0.05556	0.014	0.021	0.0139	0.035	
12-Feb-2015	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.319	0.0597	0.03472	0.035	0.043	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.0208	0.1	0.05556	0.014	0.021	0.0139	0.035	
15-Feb-2015	0.139	0.13889	0.05556	0.0021	0.00556	0.064	0.01389	0.431	0.0903	0.03472	0.035	0.325	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.542	0.02083	0.208	0.0208	0.1	0.05556	0.014	0.021	0.0139	0.035	
16-Feb-2015	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.306	0.0681	0.03472	0.035	0.021	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.0208	0.1	0.05556	0.014	0.021	0.0139	0.035	
18-Feb-2015	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.292	0.1306	0.03472	0.035	0.046	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.972	0.02083	0.208	0.0208	0.1	0.05556	0.014	0.021	0.0139	0.035	
06-Mar-2015	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.319	0.0569	0.03472	0.035	0.054	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.0208	0.1	0.05556	0.014	0.021	0.0139	0.035	
07-Mar-2015	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.319	0.0569	0.03472	0.035	0.147	0.05556	0.050	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.0208	0.1	0.05556	0.014	0.021	0.0139	0.035	
16-Mar-2015	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.319	0.0542	0.03472	0.035	0.054	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.472	0.02083	0.208	0.0208	0.1	0.05556	0.014	0.021	0.0139	0.035	
17-Mar-2015	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.319	0.0556	0.03472	0.035	0.062	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.833	0.02083	0.208	0.0208	0.1	0.05556	0.014	0.021	0.0139	0.035	
02-Apr-2015	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.319	0.0972	0.03472	0.035	0.317	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.0208	0.1	0.05556	0.014	0.021	0.0139	0.035	
03-Apr-2015	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.319	0.1014	0.03472	0.035	0.289	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.0208	0.1	0.05556	0.014	0.021	0.0139	0.035	
04-Apr-2015	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.319	0.0944	0.03472	0.035	0.332	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.0208	0.1	0.05556	0.014	0.021	0.0139	0.035	
05-Apr-2015	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.319	0.1181	0.03472	0.035	0.433	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.0208	0.1	0.05556	0.014	0.021	0.0139	0.035	
23-May-2015	2.583	0.13889	0.05556	0.0021	0.00556	0.218	0.01389	6.417	0.0208	0.03472	0.035	0.247	0.05556	0.510	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.0208	0.3	0.05556	0.014	0.021	0.0544	0.035	
22-May-2015	2.097	0.13889	0.05556	0.0021	0.00556	0.165	0.01389	5.083	0.0208	0.03472	0.035	0.238	0.05556	0.421	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.0208	0.1	0.05556	0.014	0.021	0.0403	0.035	
23-May-2015	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.319	0.0500	0.03472	0.035	0.274	0.05556	0.071	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.0208	0.3	0.05556	0.014	0.021	0.0139	0.035	
24-May-2015	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.319	0.0500	0.03472	0.035	0.322	0.05556	0.106	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.0208	0.1	0.05556	0.014	0.021	0.0139	0.035	
16-Jun-2015	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.319	0.0472	0.03472	0.035	0.214	0.05556	0.075	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.0208	0.1	0.05556	0.014	0.021	0.0139	0.035	
17-Jun-2015	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.333	0.0486	0.03472	0.035	0.228	0.05556	0.082	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.0208	0.3	0.05556	0.014	0.021	0.0139	0.035	
18-Jun-2015	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.306	0.0569	0.03472	0.035	0.157	0.05556	0.049	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.0208	0.1	0.05556	0.014	0.021	0.0139	0.035	
01-Jul-2015	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.319	0.0597	0.03472	0.035	0.128	0.05556	0.057	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.0208	0.3	0.05556	0.014	0.021	0.0139	0.035	
08-Jul-2015	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.319	0.0528	0.03472	0.035	0.082	0.05556	0.050	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.0208	0.1	0.05556	0.014	0.021	0.0139	0.035	
11-Jul-2015	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.319	0.0208	0.03472	0.035	0.021	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.0208	0.1	0.05556	0.014	0.021	0.0139	0.035	
20-Jul-2015	0.139	0.13889	0.05556	0.0021	0.00556	0																									

ATTACHMENT A5
METAL CONCENTRATIONS (24-HOUR), TSP-3, DEC. 2014 – DEC. 2021

Sample Date	Aluminum (Al), total µg/m ³	Antimony (Sb), total µg/m ³	Arsenic (As), total µg/m ³	Barium (Ba), total µg/m ³	Beryllium (Be), total µg/m ³	Boron (B), total µg/m ³	Cadmium (Cd), total µg/m ³	Calcium (Ca), total µg/m ³	Chromium (Cr), total µg/m ³	Cobalt (Co), total µg/m ³	Copper (Cu), total µg/m ³	Iron (Fe), total µg/m ³	Lead (Pb), total µg/m ³	Magnesium (Mg), total µg/m ³	Manganese (Mn), total µg/m ³	Molybdenum (Mo), total µg/m ³	Nickel (Ni), total µg/m ³	Phosphorus (P), total µg/m ³	Potassium (K), total µg/m ³	Selenium (Se), total µg/m ³	Silicon (Si), total µg/m ³	Silver (Ag), total µg/m ³	Sodium (Na), total µg/m ³	Strontium (Sr), total µg/m ³	Sulphur (S), total µg/m ³	Tin (Sn), total µg/m ³	Titanium (Ti), total µg/m ³	Vanadium (V), total µg/m ³	Zinc (Zn), total µg/m ³	Zirconium (Zr), total µg/m ³
Ontario AQC (24-hr avg)	25	0.3	10	0.01	120	0.025		0.5	0.1	50	4	0.5		0.4	120	2			10		1		120			10	120	2	120	
26-Nov-2016	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.1167	0.03472	0.035	0.044	0.05556	0.021	0.024	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.00417	0.1	0.05556	0.014	0.021	0.0139	0.035
27-Nov-2016	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.0875	0.03472	0.035	0.051	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.00625	0.1	0.05556	0.014	0.021	0.0139	0.035
28-Nov-2016	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.0778	0.03472	0.035	0.104	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.00556	0.1	0.05556	0.014	0.021	0.0139	0.035
27-Dec-2016	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.0931	0.03472	0.035	0.071	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.021	0.0139	0.035
29-Dec-2016	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.1111	0.03472	0.035	0.068	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.00468	0.1	0.05556	0.014	0.021	0.0139	0.035
30-Dec-2016	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.1181	0.03472	0.035	0.089	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.00528	0.1	0.05556	0.014	0.021	0.0139	0.035
29-Jan-2017	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.0861	0.03472	0.035	0.072	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.00458	0.1	0.05556	0.014	0.021	0.0139	0.035
29-Jan-2017	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.0764	0.03472	0.035	0.021	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.00556	0.1	0.05556	0.014	0.021	0.0139	0.035
30-Jan-2017	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.0889	0.03472	0.035	0.021	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.00486	0.1	0.05556	0.014	0.021	0.0139	0.035
18-Feb-2017	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.0778	0.03472	0.035	0.085	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.00528	0.1	0.05556	0.014	0.021	0.0139	0.035
19-Feb-2017	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.0750	0.03472	0.035	0.153	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.00764	0.1	0.05556	0.014	0.021	0.0139	0.035
20-Feb-2017	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.0972	0.03472	0.035	0.129	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.00764	0.1	0.05556	0.014	0.021	0.0139	0.035
15-Jun-2017	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.0889	0.03472	0.035	0.075	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.021	0.0139	0.035
16-Jun-2017	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.0847	0.03472	0.035	0.082	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.021	0.0139	0.035
20-Jun-2017	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.1319	0.03472	0.035	0.247	0.05556	0.047	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.021	0.0139	0.035
18-Jul-2017	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.0819	0.03472	0.035	0.068	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.431	0.00208	0.1	0.05556	0.014	0.021	0.0139	0.035
20-Jul-2017	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.0903	0.03472	0.035	0.068	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.021	0.0139	0.035
21-Jul-2017	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.0917	0.03472	0.035	0.067	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.458	0.00208	0.1	0.05556	0.014	0.021	0.0139	0.035
02-Aug-2017	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.0708	0.03472	0.035	0.139	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.021	0.0139	0.035
08-Aug-2017	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.1583	0.03472	0.035	0.192	0.05556	0.021	0.012	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.021	0.0139	0.035
06-Aug-2017	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.1167	0.03472	0.035	0.232	0.05556	0.046	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.021	0.0139	0.035
20-Sep-2017	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.0844	0.03472	0.035	0.069	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.021	0.0139	0.035
26-Sep-2017	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.361	0.0764	0.03472	0.035	0.042	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.021	0.0139	0.035
29-Sep-2017	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.472	0.1458	0.03472	0.035	0.074	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.021	0.0139	0.035
03-Oct-2017	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.1431	0.03472	0.035	0.125	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.021	0.0139	0.035
05-Oct-2017	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.1306	0.03472	0.035	0.072	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.021	0.0139	0.035
06-Oct-2017	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.1153	0.03472	0.035	0.067	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.021	0.0139	0.035
30-Nov-2017	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.0889	0.03472	0.035	0.047	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.021	0.0139	0.035
05-Dec-2017	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.458	0.0792	0.03472	0.035	0.060	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.021	0.0139	0.035
07-Dec-2017	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.500	0.0847	0.03472	0.035	0.071	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.694	0.00208	0.1	0.05556	0.014	0.021	0.0139	0.035
12-Dec-2017	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.472	0.0972	0.03472	0.035	0.082	0.05556	0.046	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.569	0.00208	0.1	0.05556	0.014	0.021	0.0139	0.035
31-Jan-2018	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.139	0.0792	0.03472	0.035	0.044	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.514	0.00208	0.1	0.05556	0.014	0.021	0.0139	0.035
07-Feb-2018	0.139	0.13889	0.05556	0.0021	0.00556	0.021	0.01389	0.389	0.0764	0.03472	0.035	0.061	0.05556	0.021	0.006	0.03472	0.03472	0.208	0.694	0.03472	0.208	0.02083	0.208	0.00208	0.1	0.05556	0.014	0.021	0.0139	0.035
10-Feb-2018	0.139	0.13889	0.05556																											

ATTACHMENT A5
METAL CONCENTRATIONS (24-HOUR), TSP-3, DEC. 2014 - DEC. 2021

Sample Date	Aluminum (Al), total µg/m³	Antimony (Sb), total µg/m³	Arsenic (As), total µg/m³	Barium (Ba), total µg/m³	Beryllium (Be), total µg/m³	Boron (B), total µg/m³	Cadmium (Cd), total µg/m³	Calcium (Ca), total µg/m³	Chromium (Cr), total µg/m³	Cobalt (Co), total µg/m³	Copper (Cu), total µg/m³	Iron (Fe), total µg/m³	Lead (Pb), total µg/m³	Magnesium (Mg), total µg/m³	Manganese (Mn), total µg/m³	Molybdenum (Mo), total µg/m³	Nickel (Ni), total µg/m³	Phosphorus (P), total µg/m³	Potassium (K), total µg/m³	Selenium (Se), total µg/m³	Silicon (Si), total µg/m³	Silver (Ag), total µg/m³	Sodium (Na), total µg/m³	Strontium (Sr), total µg/m³	Sulphur (S), total µg/m³	Tin (Sn), total µg/m³	Titanium (Ti), total µg/m³	Vanadium (V), total µg/m³	Zinc (Zn), total µg/m³	Zirconium (Zr), total µg/m³
Ontario AOC (24-hr avg)	25	0.3	10	0.01	120	0.025		0.5	0.1	50	4	0.5		10	1					10			120			10	120	2	120	
24-Apr-2019	0.014	0.00035	0.00035	0.00022	0.00035	0.021	0.00007	0.514	0.0646	0.00035	0.000	0.068	0.00099	0.021	0.005	0.00053	0.00186	0.056	0.035	0.00035	0.139	0.00014	0.069	0.00094	69.4	0.00035	0.014	0.014	0.1279	0.003
30-Apr-2019	0.036	0.00035	0.00035	0.00018	0.00035	0.021	0.00014	0.528	0.0631	0.00035	0.000	0.054	0.00125	0.050	0.003	0.00043	0.00085	0.056	0.035	0.00035	0.139	0.00014	0.069	0.00093	69.4	0.00035	0.014	0.014	0.1265	0.003
01-May-2019	0.036	0.00035	0.00035	0.00034	0.00035	0.021	0.00015	0.069	0.0668	0.00035	0.001	0.064	0.00035	0.021	0.001	0.00021	0.01016	0.056	0.035	0.00035	0.139	0.00014	0.069	0.00079	69.4	0.00035	0.014	0.014	0.0035	0.003
08-May-2019	0.049	0.00035	0.00035	0.00014	0.00035	0.021	0.00028	0.139	0.0769	0.00035	0.001	0.089	0.00083	0.021	0.002	0.00021	0.01016	0.056	0.035	0.00035	0.139	0.00014	0.069	0.00083	69.4	0.00035	0.014	0.014	0.0076	0.003
09-May-2019	0.040	0.00035	0.00035	0.00009	0.00035	0.021	0.00007	0.139	0.0771	0.00035	0.001	0.062	0.00071	0.021	0.002	0.00021	0.01014	0.056	0.035	0.00035	0.139	0.00014	0.069	0.00035	69.4	0.00035	0.014	0.014	0.0035	0.003
29-Jun-2019	0.060	0.00035	0.00035	0.00022	0.00035	0.021	0.00146	0.472	0.0808	0.00035	0.002	0.124	0.00183	0.047	0.005	0.00042	0.00239	0.056	0.207	0.00035	0.139	0.00014	0.361	0.00107	69.4	0.00035	0.014	0.014	0.0560	0.003
21-Jul-2019	0.014	0.00035	0.00035	0.00021	0.00035	0.021	0.00051	0.486	0.0793	0.00035	0.001	0.089	0.00161	0.044	0.006	0.00104	0.00174	0.056	0.110	0.00035	0.139	0.00014	0.139	0.00079	69.4	0.00035	0.014	0.014	0.0569	0.003
30-Jul-2019	0.014	0.00035	0.00035	0.00008	0.00035	0.021	0.00007	0.347	0.0747	0.00035	0.001	0.021	0.00035	0.021	0.000	0.00021	0.00142	0.056	0.035	0.00035	0.139	0.00014	0.069	0.00075	69.4	0.00035	0.014	0.014	0.0756	0.003
31-Jul-2019	0.014	0.00035	0.00035	0.00011	0.00035	0.021	0.00007	0.444	0.0935	0.00035	0.001	0.060	0.00086	0.021	0.001	0.00021	0.00124	0.056	0.035	0.00035	0.139	0.00014	0.208	0.00035	69.4	0.00035	0.014	0.014	0.0511	0.003
22-Aug-2019	0.039	0.00035	0.00035	0.00013	0.00035	0.021	0.00007	0.194	0.0901	0.00035	0.001	0.090	0.00175	0.021	0.001	0.00021	0.00150	0.056	0.035	0.00035	0.139	0.00014	0.069	0.00083	69.4	0.00035	0.014	0.014	0.0228	0.003
27-Aug-2019	0.050	0.00035	0.00035	0.00016	0.00035	0.021	0.00018	0.069	0.0746	0.00035	0.001	0.104	0.00139	0.021	0.002	0.00021	0.00162	0.056	0.035	0.00035	0.139	0.00014	0.181	0.00035	69.4	0.00035	0.014	0.014	0.0226	0.003
30-Aug-2019	0.064	0.00035	0.00035	0.00017	0.00035	0.021	0.00017	0.069	0.0865	0.00035	0.002	0.125	0.00379	0.021	0.004	0.00021	0.00132	0.056	0.035	0.00035	0.139	0.00014	0.069	0.00035	69.4	0.00035	0.014	0.014	0.0283	0.003
24-Sep-2019	0.014	0.00035	0.00035	0.00003	0.00035	0.021	0.00018	0.069	0.0665	0.00035	0.001	0.043	0.00076	0.021	0.000	0.00021	0.00146	0.056	0.035	0.00035	0.139	0.00014	0.069	0.00035	69.4	0.00035	0.014	0.014	0.0228	0.003
25-Sep-2019	0.014	0.00035	0.00035	0.00003	0.00035	0.021	0.00014	0.069	0.0750	0.00035	0.001	0.071	0.00215	0.021	0.002	0.00021	0.00157	0.056	0.035	0.00035	0.139	0.00014	0.139	0.00035	69.4	0.00035	0.014	0.014	0.0226	0.003
27-Sep-2019	0.036	0.00035	0.00088	0.00011	0.00035	0.021	0.00019	0.069	0.0699	0.00035	0.001	0.088	0.00157	0.021	0.002	0.00021	0.00101	0.056	0.035	0.00035	0.139	0.00014	0.069	0.00035	69.4	0.00035	0.014	0.014	0.0262	0.003
24-Oct-2019	0.032	0.00035	0.00017	0.00012	0.00035	0.021	0.00007	0.069	0.0722	0.00035	0.007	0.060	0.00035	0.021	0.001	0.00021	0.00129	0.056	0.035	0.00035	0.139	0.00014	0.069	0.00035	69.4	0.00035	0.014	0.014	0.3500	0.003
25-Oct-2019	0.033	0.00035	0.00635	0.00003	0.00035	0.021	0.00007	0.069	0.0785	0.00035	0.004	0.060	0.00468	0.021	0.002	0.00021	0.00122	0.056	0.035	0.00035	0.139	0.00014	0.069	0.00035	69.4	0.00035	0.014	0.014	0.0469	0.003
29-Oct-2019	0.028	0.00035	0.00768	0.00007	0.00035	0.021	0.00007	0.069	0.0779	0.00035	0.004	0.054	0.00074	0.021	0.002	0.00021	0.00167	0.056	0.035	0.00035	0.139	0.00014	0.069	0.00035	69.4	0.00035	0.014	0.014	0.1299	0.003
27-Nov-2019	0.014	0.00035	0.00035	0.00009	0.00035	0.021	0.00021	0.417	0.0640	0.00035	0.002	0.043	0.00035	0.021	0.000	0.00042	0.00107	0.056	0.035	0.00035	0.139	0.00014	0.194	0.00086	69.4	0.00035	0.014	0.014	0.0462	0.003
29-Nov-2019	0.014	0.00035	0.00035	0.00101	0.00035	0.021	0.00051	0.458	0.0482	0.00035	0.002	0.060	0.00035	0.021	0.001	0.00062	0.00085	0.056	0.035	0.00035	0.139	0.00014	0.139	0.00035	69.4	0.00035	0.014	0.014	0.0462	0.003
24-Dec-2019	0.036	0.00035	0.00035	0.00014	0.00035	0.021	0.01286	0.514	0.0525	0.00035	0.002	0.076	0.00222	0.021	0.004	0.00021	0.00267	0.056	0.035	0.00035	0.444	0.00014	0.167	0.00072	69.4	0.00035	0.014	0.014	0.0761	0.003
25-Dec-2019	0.040	0.00035	0.00035	0.00012	0.00035	0.021	0.00028	0.403	0.0569	0.00035	0.002	0.075	0.00200	0.021	0.002	0.00021	0.00235	0.056	0.035	0.00035	0.431	0.00014	0.139	0.00075	69.4	0.00035	0.014	0.014	0.0654	0.003
27-Dec-2019	0.014	0.00035	0.00035	0.00011	0.00035	0.021	0.00076	0.444	0.0654	0.00035	0.001	0.021	0.00035	0.050	0.001	0.00021	0.00108	0.056	0.035	0.00035	0.403	0.00014	0.194	0.00090	69.4	0.00035	0.014	0.014	0.0643	0.003
21-Feb-2020	0.014	0.00035	0.00035	0.00011	0.00035	0.021	0.00007	0.458	0.0682	0.00035	0.002	0.074	0.00097	0.021	0.001	0.00021	0.00167	0.056	0.035	0.00035	0.139	0.00014	0.250	0.00075	69.4	0.00035	0.014	0.014	0.0400	0.003
25-Feb-2020	0.014	0.00035	0.00035	0.00003	0.00035	0.021	0.00007	0.264	0.0843	0.00035	0.001	0.053	0.00035	0.021	0.001	0.00021	0.00139	0.056	0.035	0.00035	0.542	0.00014	0.250	0.00035	69.4	0.00035	0.014	0.014	0.0246	0.003
26-Feb-2020	0.028	0.00035	0.00035	0.00009	0.00035	0.021	0.00042	0.069	0.0818	0.00035	0.001	0.062	0.00035	0.021	0.001	0.00021	0.00111	0.056	0.035	0.00035	0.139	0.00014	0.069	0.00035	69.4	0.00035	0.014	0.014	0.0261	0.003
26-Mar-2020	0.014	0.00035	0.00035	0.00014	0.00035	0.021	0.00053	0.417	0.0661	0.00035	0.001	0.068	0.00035	0.060	0.001	0.00021	0.00101	0.056	0.035	0.00035	0.139	0.00014	0.278	0.00099	69.4	0.00035	0.014	0.014	0.1708	0.003
31-Mar-2020	0.033	0.00035	0.00035	0.00013	0.00035	0.021	0.00007	0.375	0.0543	0.00035	0.001	0.069	0.00181	0.044	0.002	0.00021	0.00121	0.056	0.035	0.00035	0.139	0.00014	0.194	0.00082	69.4	0.00035	0.014	0.014	0.0858	0.003
24-Apr-2020	0.033	0.00035	0.00035	0.00014	0.00035	0.021	0.00015	0.431	0.0789	0.00035	0.001	0.075	0.00128	0.021	0.001	0.00021	0.00103	0.056	0.035	0.00035	0.139	0.00014	0.181	0.00100	69.4	0.00035	0.014	0.014	0.2125	0.003
29-Apr-2020	0.054	0.00035	0.00035	0.00017	0.00035	0.021	0.00017	0.528	0.0762	0.00035	0.001	0.088	0.00097	0.021	0.002	0.00043	0.00093	0.056	0.035	0.00035	0.139	0.00014	0.153	0.00132	69.4	0.00035	0.014	0.014	0.4125	0.003
27-May-2020	0.032	0.00035	0.00035	0.00010	0.00035	0.021	0.00024	0.389	0.0781	0.00035	0.001	0.047	0.00088	0.021																

ATTACHMENT A5
METAL CONCENTRATIONS (24-HOUR), TSP-3, DEC. 2014 – DEC. 2021

Sample Date	Aluminum (Al), total µg/m³	Antimony (Sb), total µg/m³	Arsenic (As), total µg/m³	Barium (Ba), total µg/m³	Beryllium (Be), total µg/m³	Boron (B), total µg/m³	Cadmium (Cd), total µg/m³	Calcium (Ca), total µg/m³	Chromium (Cr), total µg/m³	Cobalt (Co), total µg/m³	Copper (Cu), total µg/m³	Iron (Fe), total µg/m³	Lead (Pb), total µg/m³	Magnesium (Mg), total µg/m³	Manganese (Mn), total µg/m³	Molybdenum (Mo), total µg/m³	Nickel (Ni), total µg/m³	Phosphorus (P), total µg/m³	Potassium (K), total µg/m³	Selenium (Se), total µg/m³	Silicon (Si), total µg/m³	Silver (Ag), total µg/m³	Sodium (Na), total µg/m³	Strontium (Sr), total µg/m³	Sulphur (S), total µg/m³	Tin (Sn), total µg/m³	Titanium (Ti), total µg/m³	Vanadium (V), total µg/m³	Zinc (Zn), total µg/m³	Zirconium (Zr), total µg/m³
Ontario AAQC (24-hr avg)		25	0.3	10	0.01	120	0.025		0.5	0.1	50	4	0.5		0.4	120	2			10		1		120		10	120	2	120	
01-Jun-2021	0.029	0.00035	0.00035	0.001	0.00035	0.021	0.00022	0.486	0.081	0.00035	0.001	0.064	0.00187	0.021	0.001	0.00021	0.00221	0.056	0.035	0.00035	0.139	0.00014	0.139	0.00092	69.4	0.00035	0.014	0.014	0.0236	0.003
02-Jun-2021	0.014	0.00035	0.00035	0.0009	0.00035	0.021	0.00007	0.417	0.1076	0.00035	0	0.054	0.00212	0.021	0.002	0.00021	0.00136	0.056	0.035	0.00035	0.139	0.00014	0.069	0.0009	69.4	0.00035	0.014	0.014	0.0114	0.003
07-Jun-2021	0.032	0.00035	0.00035	0.0011	0.00035	0.021	0.00007	0.444	0.099	0.00035	0.001	0.081	0.00656	0.021	0.003	0.00049	0.00081	0.056	0.035	0.00035	0.139	0.00014	0.167	0.00093	69.4	0.00035	0.014	0.014	0.0238	0.003
27-Dec-2021	0.043	0.00035	0.00035	0.0012	0.00035	0.021	0.00026	0.403	0.0694	0.00035	0.005	0.065	0.00389	0.021	0.002	0.00021	0.00125	0.056	0.035	0.00035	0.139	0.00014	0.194	0.00035	69.4	0.00078	0.014	0.014	0.0133	0.003
28-Dec-2021	0.119	0.00035	0.00035	0.0012	0.00035	0.021	0.00015	0.528	0.0633	0.00035	0.004	0.065	0.00539	0.046	0.002	0.00021	0.00149	0.056	0.035	0.00035	0.139	0.00014	0.208	0.00099	69.4	0.00162	0.014	0.014	0.016	0.003
30-Dec-2021	0.05	0.00035	0.00035	0.001	0.00035	0.021	0.00017	0.403	0.0744	0.00035	0.002	0.05	0.002	0.044	0.001	0.00021	0.00101	0.056	0.035	0.00035	0.139	0.00014	0.236	0.00083	69.4	0.00035	0.014	0.014	0.0087	0.003

* Criteria effective on July 1, 2016

ATTACHMENT B

STATISTICAL TESTS RESULTS

Table B-1: Non-parametric (Kruskal-Wallis) Test Results for Dust Metals Data for 2021

Parameter	Non-parametric	Median	
	Mann-Whitney p-value	TSP-2	TSP-3
Al	0.551428	0.029000	0.032000
Sb	0.317833	0.000350	0.00035
As	0.023966	0.00035	0.00035
Ba	0.733187	0.001200	.001100
Be	1.00000	0.00035	0.00035
B	1.000000	0.021	0.021
Cd	0.188794	0.0002900	0.00019
Ca	0.694093	0.36100	.36100
Cr	0.743619	0.073600	.074900
Co	1.000000	0.00035	0.00035
Cu	0.063348	0.002	0.001
Fe	0.190192	0.07800	.06500
Pb	0.010671	0.0202800	.0027900
Mg	0.439140	0.021	0.021
Mn	0.011925	0.00600	.00200
Mo	0.972813	0.00021	0.00021
Ni	0.811091	0.0014000	.0014700
P	1.000000	0.056	0.056
K	0.852443	0.035	0.035
Se	1.000000	0.00035	0.00035
Si	0.451755	0.139	0.139
Ag	0.004987	0.00014	0.00014
Na	0.145489	0.069	0.139
Sr	0.829060	0.00082	0.00089
S	1.000000	69.4	69.4
Sn	0.408419	0.00035	0.00035
Ti	1.000000	0.014	0.014
V	1.000000	0.014	0.014
Zn	0.076102	0.04225	0.0232
Zr	1.000000	0.003	0.003

Bold values p<<0.05

Table B-2: Non-parametric (Kruskal-Wallis) Test Results for Dust Metals Data for 2012 through 2021

Parameter	Non-parametric	Median		
	Kruskal-Wallis p-value	TSP-1	TSP-2	TSP-3
Al	0.000156	0.139	0.139	0.139
Sb	0.000208	0.13889	0.13889	0.13889
As	0.000069	0.05556	0.05556	0.05556
Ba	0.017488	0.0021	0.0021	0.0021
Be	0.000203	0.00556	0.00556	0.00556
B	0.437715	0.021	0.021	0.021
Cd	0.000232	0.01389	0.01389	0.01389
Ca	0.341377	0.139	0.139	0.139
Cr	0.594856	0.075	0.07750	0.07640
Co	0.000200	0.03472	0.03472	0.03472
Cu	0.000054	0.035	0.035	0.035
Fe	1.9823E-12	0.09	0.124	0.065
Pb	8.431E-7	0.05556	0.05556	0.05556
Mg	0.036880	0.021	0.021	0.021
Mn	6.4382E-13	0.006	0.006	0.006
Mo	0.000257	0.03472	0.03472	0.03472
Ni	0.000193	0.03472	0.03472	0.03472
P	0.000282	0.208	0.208	0.208
K	0.000042	0.694	0.694	0.694
Se	0.000136	0.03472	0.03472	0.03472
Si	0.001290	0.208	0.208	0.208
Ag	0.000093	0.02083	0.02083	0.02083
Na	0.027391	0.208	0.208	0.208
Sr	0.003012	0.00208	0.00208	0.00208
S	0.003139	0.1	0.1	0.1
Sn	0.000192	0.05556	0.05556	0.05556
Ti	0.700292	0.014	0.014	0.014
V	0.000203	0.02	0.02	0.02
Zn	0.001399	0.0139	0.0139	0.0139
Zr	0.000203	0.035	0.035	0.035

Bold values p<<0.05