



PO BOX 1500
YELLOWKNIFE NT X1A 2R3

January 2, 2019

Distribution List

RE: Air Quality Reports for the Week of December 1, 2018.

A summary of the Giant Mine ambient air quality monitoring program (AQM) for the week ending December 1, 2018 is as follows:

Fence Line Network:

- No 15-minute average particulate matter less than 10 microns in diameter (PM₁₀) concentrations above the established Risk Based Action Level (RBAL) of 159 µg/m³ were measured at the fence line monitoring stations during the week. PM₁₀ concentrations measured at the fence line stations during the week were typical of seasonal background concentrations;
- No 15-minute average total suspended particulate (TSP) concentrations above the established RBAL of 333 µg/m³ were measured at the fence line monitoring stations during the week. TSP concentrations measured the fence line monitoring locations during the week were typical of seasonal background concentrations;
- Laboratory results for TSP, PM₁₀, and trace metals (including arsenic) analyses from samples collected on November 10, 2018 at the fence line stations were less than the analytical detection limit and/or below the referenced standard. Laboratory analyses of integrated 24-hour arsenic, PM₁₀, and TSP filter samples collected at the fence line stations after November 10, 2018 are pending.

Community Stations:

- No real-time PM_{2.5} or PM₁₀ 24-hour average concentrations above the referenced standards for each were measured at any of the community stations during the week;
- Laboratory results from TSP, PM₁₀, and trace metals (including arsenic) samples collected on November 10, 2018 at the community stations were less than the analytical detection limit and/or below the referenced standard. Laboratory analyses of community station filters collected after November 10, 2018 are pending;

- Laboratory results from asbestos samples collected on November 10 and 13, 2018 at the community stations were less than the analytical detection limit and/or below the referenced standard. Laboratory analyses of asbestos samples collected at the community stations after November 13, 2018 are pending;
- There were no NO₂ concentrations measured at the Niven Lake community air monitoring station above the NWT Ambient Air Quality 24-Hour Standard of 106 parts per billion (ppb) or the 1-Hour Standard of 213 ppb during the week. Table 1 summarizes the daily hourly maximum concentrations and the daily 24-hour average concentrations measured at the Niven Lake community station during the week.

Table 1
Niven Lake Community AQM Station NO₂ Concentrations

Date	Maximum One-hour Average (ppb)	24-hour Average (ppb)
November 25, 2018	1.2	0.3
November 26, 2018	0.8	0.3
November 27, 2018	1.1	0.1
November 28, 2018	1.3	0.5
November 29, 2018	2.0	0.7
November 30, 2018	6.3	1.4
December 01, 2018	7.9	1.7

C5-09 Stope Stabilization Program:

- Air quality monitoring specific to the C5-09 stope stabilization program was conducted throughout the week at four stations within the vicinity of UBC Pit, and at four stations within the vicinity of the North, Central, and South Tailings Ponds;
- There were no 15-minute average PM₁₀ concentrations above the RBAL of 260 µg/m³ measured at the monitors associated with the C5-09 stope stabilization program during the week;
- Laboratory analyses of C5-09 PM₁₀ and arsenic filter samples collected on November 10, 2018 were less than the analytical detection limit and/or below the referenced standard. Laboratory analyses of C5-09 PM₁₀ and arsenic filter samples collected after November 10, 2018 are pending.

General Operation:

- Data completeness for the reporting period was 99.88% for real-time TSP samplers associated with the fence line monitoring network, 99.87% for real-time PM₁₀ samplers associated with the fence line monitoring network, and 99.91% for real-time PM₁₀ samplers associated with the C5-09 monitoring network;

- The AQM program operated as specified during the week ending December 1, 2018, with the following exceptions:
 1. A total of 1.75 hours of real-time TSP data were invalidated from the fence line stations during maintenance and repair;
 2. A total of 2 hours of real-time PM₁₀ data were invalidated from the fence line stations during maintenance and repair;
 3. A total of 1.25 hours of real-time PM₁₀ data were invalidated from the C5-09 stations during maintenance and repair.

Sincerely,

A handwritten signature in blue ink that reads "Natalie Plato". The signature is fluid and cursive, with the first name being larger and more prominent than the last name.

Natalie Plato
Deputy Director
Giant Mine Remediation Project

c.c.: Distribution List