



PO BOX 1500
YELLOWKNIFE NT X1A 2R3

September 4, 2018

Distribution List

RE: Air Quality Reports for the Week of August 25, 2018.

A summary of the Giant Mine ambient air quality monitoring program (AQM) for the week ending August 25, 2018 is as follows:

Fenceline Network:

- A total of one (1) 15-minute average PM₁₀ concentration above the established RBAL of 159 µg/m³ was measured at fence line monitoring location Site F-Marina on August 25, 2018. No elevated PM₁₀ concentrations were measured at the rest fence line locations on that date during the morning.
 - One (1) 15-minute average PM₁₀ concentration of 243 µg/m³ was measured at Site F-Marina on August 25, 2018 at 08:45 MST. During this time, wind speeds were 2.1 m/s and were blowing from the east-southeast, placing Yellowknife upwind from Giant Mine. There were no reported activities on Giant Mine that may have contributed to this measurement. The SLR technician found the gate to the marina open and it is likely that week end vehicle traffic at the marina were the main contributors to the above RBAL measurement;
- No 15-minute average total suspended particulate (TSP) concentrations above the established RBAL of 333 µg/m³ were measured at the fenceline monitoring stations during the week. TSP concentrations measured the fenceline 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 July 31 and August 3, 2018 at the fence line monitoring locations 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 sampling locations August 3, 2018 are pending.

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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 July 28, 31, August 3, and 6, 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 August 6, 2018 are pending;
- Laboratory results from asbestos samples collected on July 31, August 3, 6, 9, and 12, 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 August 12, 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)
August 19, 2018	2.3	0.3
August 20, 2018	2.6	1.1
August 21, 2018	1.5	0.4
August 22, 2018	0.1	-0.2
August 23, 2018	2.3	0.5
August 24, 2018	3.0	0.7
August 25, 2018	1.0	0.4

C5-09 Stope Stabilization Program:

- Air quality monitoring specific to the C5-09 stope stabilization program was conducted throughout the week at four locations within the vicinity of UBC Pit, and at four locations 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 July 31 and August 3, 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 August 3, 2018 are pending.

General Operation:

- Data completeness for the reporting period was 100% for real time TSP samplers associated with the fence line monitoring network, 99.77% for real time PM₁₀ samplers associated with the fence line monitoring network, and 99.89% for real time PM₁₀ samplers associated with the C5-09 monitoring network;
- The AQM program operated as specified during the week ending August 25, 2018, with the following exceptions:
 - The NVN station did not record one hour of real time PM₁₀ and PM_{2.5} on August 20, 2018 during scheduled monthly quality assurance verifications;
 - The PM₁₀ sampler at C5-09 monitoring location Site T1 – C Pond-W did not record data on August 23, 2018 from 20:45 MST to 24:00 MST during sampler repair. The sampler was repaired and returned back to service;

Sincerely,



Natalie Plato
Deputy Director
Giant Mine Remediation Project

c.c.: Distribution List