

From: [Irwin, Geneva \(AADNC/AANDC\)](#)
Subject: Air Quality Monitoring Weekly Summary - Week Ending in November 17
Date: November 23, 2018 3:17:49 PM
Attachments: [November 17.pdf](#)

Good Afternoon,

A summary of the Giant Mine ambient air quality monitoring program (AQM) for the week ending November 17, 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 4, 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 on October 29 and November 1, and after November 4, 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 October 26 and 29, 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 October 29, 2018 are pending;
- Laboratory results from asbestos samples collected on October 23, November 1, and 4, 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 4, 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 11, 2018 | 13.9 | 0.3 |
| November 12, 2018 | 0.0 | 0.0 |
| November 13, 2018 | 0.0 | 0.0 |
| November 14, 2018 | 0.3 | 0.0 |
| November 15, 2018 | 5.2 | 1.2 |
| November 16, 2018 | 13.6 | 5.2 |
| November 17, 2018 | 3.0 | 0.3 |

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 October 26, 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 October 26, 2018 are pending.

General Operation:

- Data completeness for the reporting period was 98.66% for real time TSP samplers associated with the fence line monitoring network, 99.12% for real time PM₁₀ samplers associated with the fence line monitoring network, and 98.88% for real time PM₁₀ samplers associated with the C5-09 monitoring network;
- The AQM program operated as specified during the week ending November 17, 2018, with the following exceptions:
 - A total of 20.25 hours of real-time TSP data were invalidated from the fence line stations during maintenance and repair;
 - A total of 13.25 hours of real-time PM₁₀ data were invalidated from the fence line stations during maintenance and repair;
 - A total of 15 hours of real-time PM₁₀ data were invalidated from the C5-09 stations

during maintenance and repair;

- Fourteen (14) 15-minute average TSP concentrations at fence line monitoring Station G-West were invalidated between 13:45 MST and 17:00 MST on November 11, 2018 due to equipment malfunction. The sampler was evaluated and returned back to service;
- A total of 30 hours of continuous PM_{2.5} data on November 13 and 14, 2018 was lost from the YCC community station due to a sampler malfunction. The SLR on-site technician repaired the instrument and returned it to service;
- The 24-integrated samples for TSP and PM₁₀ collected on November 4, 2018 at Station F-Marina were invalid and were not submitted for laboratory analysis due to an extended run time outside the run-time tolerance.

Sincerely,

Geneva Irwin



PO BOX 1500
YELLOWKNIFE NT X1A 2R3

November 23, 2018

Distribution List

RE: Air Quality Reports for the Week of November 17, 2018.

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Sincerely,

A handwritten signature in blue ink that reads "Natalie Plato". The signature is written in a cursive, flowing style.

Natalie Plato
Deputy Director
Giant Mine Remediation Project

c.c.: Distribution List