

**From:** [Irwin, Geneva \(AADNC/AANDC\)](#)  
**Subject:** Air Quality Monitoring Weekly Summary - Week ending in November 10  
**Date:** November 16, 2018 2:18:50 PM  
**Attachments:** [November 10.pdf](#)

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Good Afternoon,

A summary of the Giant Mine ambient air quality monitoring program (AQM) for the week ending November 10, 2018 is as follows:

Fence Line Network:

- No 15-minute average particulate matter less than 10 microns in diameter (PM<sub>10</sub>) concentrations above the established Risk Based Action Level (RBAL) of 159 µg/m<sup>3</sup> were measured at the fence line monitoring stations during the week. PM<sub>10</sub> 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/m<sup>3</sup> 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, PM<sub>10</sub>, and trace metals (including arsenic) analyses from samples collected on October 8, 14, 17, 20, 23, and 26, 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, PM<sub>10</sub>, and TSP filter samples collected at the fence line stations after October 26, 2018 are pending.

Community Stations:

- No real time PM<sub>2.5</sub> or PM<sub>10</sub> 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, PM<sub>10</sub>, and trace metals (including arsenic) samples collected on October 17, 20 and 23, 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 23, 2018 are pending;
- Laboratory results from asbestos 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 asbestos samples collected at the community stations on October 23, and after October 29, 2018 are pending;
- There were no NO<sub>2</sub> 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 NO<sub>2</sub> Concentrations**

<b>Date</b>	<b>Maximum One-hour Average (ppb)</b>	<b>24-hour Average (ppb)</b>
November 04, 2018	28.5	5.3
November 05, 2018	14.5	3.8
November 06, 2018	15.9	5.2
November 07, 2018	9.3	3.1
November 08, 2018	2.6	1.2
November 09, 2018	13.0	0.4
November 10, 2018	24.4	1.4

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 PM<sub>10</sub> concentrations above the RBAL of 260 µg/m<sup>3</sup> measured at the monitors associated with the C5-09 stope stabilization program during the week;
- Laboratory analyses of C5-09 PM<sub>10</sub> and arsenic filter samples collected on October 14, 17, 20, and 23, 2018 were less than the analytical detection limit and/or below the referenced standard. Laboratory analyses of C5-09 PM<sub>10</sub> and arsenic filter samples collected after October 23, 2018 are pending.

General Operation:

- Data completeness for the reporting period was 98.86% for real time TSP samplers associated with the fence line monitoring network, 99.02% for real time PM<sub>10</sub> samplers associated with the fence line monitoring network, and 98.88% for real time PM<sub>10</sub> samplers associated with the C5-09 monitoring network;
- The AQM program operated as specified during the week ending November 10, 2018, with the following exceptions:
  - A total of 17.25 hours of real-time TSP data were invalidated from the fence line stations during maintenance and repair;

- A total of 14.75 hours of real-time PM<sub>10</sub> data were invalidated from the fence line stations during maintenance and repair;
- A total of 15 hours of real-time PM<sub>10</sub> data were invalidated from the C5-09 stations during maintenance and repair;
- The PM<sub>10</sub> and TSP samplers at fence line station B-Town did not record data on November 4, 2018 from 01:00 MST to 03:45 MST due to battery failure. SLR technicians have identified the failed battery and removed it from service;
- The 24-integrated filter for PM<sub>10</sub> collected on October 8, 2018 at Station E-A1C1 was not analyzed for particulate matter due to an error with the laboratory analysis. Integrated arsenic analysis of this filter was not affected.

Sincerely,

Geneva Irwin



PO BOX 1500  
YELLOWKNIFE NT X1A 2R3

November 16, 2018

Distribution List

**RE: Air Quality Reports for the Week of November 10, 2018.**

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Sincerely,



Natalie Plato  
Deputy Director  
Giant Mine Remediation Project

c.c.: Distribution List