



PO BOX 1500  
YELLOWKNIFE NT X1A 2R3

November 23, 2020

### Distribution List

A summary of the Giant Mine Remediation Project ambient air quality monitoring program for the week ending November 14, 2020 is as follows, previously pending results are included:

### Site Perimeter Monitoring 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 site perimeter monitoring stations during the week. PM<sub>10</sub> concentrations measured at the site perimeter monitoring locations 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 site perimeter monitoring stations during the week. TSP concentrations measured at the site perimeter monitoring locations during the week were typical of seasonal background concentrations.
- Laboratory results for integrated TSP, PM<sub>10</sub>, and trace metals (including arsenic) analyses from samples collected on October 30, 2020 at the site perimeter monitoring stations were less than the analytical detection limit and/or below the referenced standard.
- Laboratory results from integrated samples collected from the site perimeter on October 24 and 27, 2020 indicated nickel or iron concentrations above the referenced standard as follows:
  - 24-hour integrated total nickel concentrations measured at the TSP site perimeter Station C-Northwest (0.22 µg/m<sup>3</sup>) on October 24, 2020 exceeded the 24-hour Ontario Standard for iron of 0.20 µg/m<sup>3</sup>. On this day winds were predominantly from the northwest with an average speed of 4.1 m/s placing Yellowknife and the community of Ndilo downwind from Giant Mine.
  - 24-hour integrated total iron concentrations measured at the TSP site perimeter Station H-NW Pond (6.5 µg/m<sup>3</sup>) on October 27, 2020 exceeded the 24-hour Ontario Standard for iron of 4.0 µg/m<sup>3</sup>. On this day winds were predominantly from the east-northeast with an average speed of 4.0 m/s placing Yellowknife and the community of Ndilo crosswind from Giant Mine.



## Community Station Monitoring Network

- No continuous 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. PM<sub>2.5</sub> and PM<sub>10</sub> concentrations during the week were typically representative of seasonal background concentrations.
- Laboratory results for integrated TSP, PM<sub>10</sub>, and trace metals (including arsenic) analyses from samples collected on October 24 and 27, 2020 at the community stations were less than the analytical detection limit and/or below the referenced standard.
- There were no NO<sub>2</sub> concentrations measured at the Niven Lake Community Station above the NWT Ambient Air Quality 24-hour Standard of 106 parts per billion (ppb) or the one-hour Standard of 213 ppb during the week. Table 1 summarizes each day's maximum hourly concentration and each day's 24-hour average concentration at the Niven Lake community station during the week.

**Table 1**  
**Niven Lake Community Station NO<sub>2</sub> Concentrations**

<b>Date</b>	<b>Maximum One-hour Average (ppb)</b>	<b>24-hour Average (ppb)</b>
November 08, 2020	7.3	2.8
November 09, 2020	3.8	1.5
November 10, 2020	15.9	2.7
November 11, 2020	6.3	1.8
November 12, 2020	18.7	3.4
November 13, 2020	1.9	0.5
November 14, 2020	2.5	0.0

## General Operation

- Integrated sampling for TSP, PM<sub>10</sub>, and trace metals (including arsenic) was conducted on November 8, 11, and 14, 2020. The next regularly scheduled sampling is November 17, 2020.
- Data completeness for the reporting period was 99.75% for continuous TSP and 99.52% for continuous PM<sub>10</sub> concentrations measured at the site perimeter monitoring stations.
- The AAQM program operated as specified during the week ending November 14, with the following exception:

- Five hours of PM<sub>2.5</sub> data at the NDL community station were invalidated on November 14, 2020 due to a tape error in the instrument.
- The PM<sub>10</sub> sampler at site perimeter station C-Northwest did not record data from 03:45 to 09:30 on November 8, 2020 due to a battery malfunction.

Sincerely,

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

Natalie Plato  
Deputy Director  
Giant Mine Remediation Project  
c.c.: Distribution List