



PO BOX 1500  
YELLOWKNIFE NT X1A 2R3

June 9, 2020

Distribution List

## **Giant Mine Remediation Project Ambient Air Quality Monitoring Program summary for the week ending May 30, 2020**

### Site Perimeter Stations

- 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 May 3, 6, 9, and 15, 2020 at the site perimeter monitoring 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 site perimeter stations after May 15, 2020 are pending. Validation of laboratory results from May 12, 2020 are pending.

### Community Stations

- 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 from the 24-hour integrated filters for TSP, PM<sub>10</sub>, and trace metals (including arsenic) samples collected on May 12, 2020 at the NDL community station indicated a measured TSP concentration of 249 µg/m<sup>3</sup>, which was above the GNWT 24-Hour Standard of 120 µg/m<sup>3</sup>, PM<sub>10</sub> concentration of 85 µg/m<sup>3</sup>, which was above the Ontario 24-hour standard of 50 µg/m<sup>3</sup>, and a measured total iron concentration of 6 µg/m<sup>3</sup>, above the Ontario 24-Hour Standard of 4.0 µg/m<sup>3</sup>. Measured concentrations for arsenic, antimony, lead, and nickel were below their respective standards;
  - On May 12, 2020 the winds were predominately from the north-northeast with an average speed of 7 m/s, placing the City of Yellowknife downwind from Giant Mine and the community of Ndilo crosswind from Giant Mine. On this day, the NDL community station also measured elevated continuous PM<sub>10</sub> and TSP concentrations above the typical seasonal



background concentrations, but below their respective standards. Also, on this day real-time PM<sub>10</sub> and TSP site perimeter concentrations at all stations on the Giant site were typical of seasonal background concentrations throughout the day. No site activities that may have contributed to the measured concentrations were reported during this time period. SLR on-site technician reported visible dust in the area of the NDL station as the result of spring municipal street cleaning activities.

- Laboratory results from integrated TSP, PM<sub>10</sub>, and trace metals (including arsenic) samples collected on May 6, 9, and 15, 2020 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 May 15, 2020 are pending.
- 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>
May 24, 2020	2.2	0.5
May 25, 2020	1.9	0.5
May 26, 2020	0.7	0.2
May 27, 2020	1.2	0.3
May 28, 2020	2.7	0.8
May 29, 2020	1.7	0.6
May 30, 2020	3.7	1.6

General Operation

- Integrated sampling for TSP, PM<sub>10</sub>, and trace metals (including arsenic) was conducted on May 24, 27, and 30, 2020. The next regularly scheduled sampling is June 2, 2020;
- Data completeness for the reporting period was 99.97% for continuous TSP and 99.70% for continuous PM<sub>10</sub> concentrations measured at the site perimeter monitoring stations.

Sincerely,



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