



PO BOX 1500
YELLOWKNIFE NT X1A 2R3

October 6, 2020

Distribution List

A summary of the Giant Mine Remediation Project ambient air quality monitoring program for the week ending September 26, 2020 is as follows:

Site Perimeter Stations

- A total of two (2) 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 site perimeter monitoring station I South Pond on September 22, 2020. Heavy fog was observed on this day and was the likely cause of the measured PM₁₀ exceedances. No site activities that may have contributed to the reported exceedances were observed by or reported to SLR personnel. Filter media collected from all Site Perimeter stations on September 22, 2020 were submitted for laboratory analysis;
 - Two (2) 15-minute average PM₁₀ concentrations of 215 µg/m³ and 173 µg/m³ above the established RBAL of 159 µg/m³ were measured at site perimeter station I-South Pond at 06:00 and 06:15 MST, respectively. During this time, the average wind speed was 3.1 m/s from the southeast, placing Yellowknife upwind from Giant Mine.
- A total of eighty-eight (88) 15-minute average total suspended particulate (TSP) concentrations above the established RBAL of 333 µg/m³ were measured at all Site Perimeter monitoring stations, with the exception of B-Town on September 22, 2020. Heavy fog was observed on this day and was the likely cause of the measured TSP exceedances. No site activities that may have contributed to the reported exceedances were observed by or reported to SLR personnel during these time periods. Filter media collected from all Site Perimeter stations on September 22, 2020 were submitted for laboratory analysis.
 - Thirteen (13) 15-minute average TSP concentrations ranging from 336 µg/m³ and 1,470 µg/m³ were measured from 01:45 to 08:15 MST. During this time the average wind speed was 2.6 m/s from the south-southeast, placing Yellowknife upwind from Giant Mine.
- Laboratory results for integrated TSP, PM₁₀, and trace metals (including arsenic) analyses from samples collected on September 3, 6, 9, 12, 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, PM₁₀, and TSP filter samples collected at the site perimeter stations on August 13 and 25, 2020, and after September 15, 2020 are pending.

Community Stations

- No continuous 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. PM_{2.5} and PM₁₀ concentrations during the week were typically representative of seasonal background concentrations;
- Laboratory results for integrated TSP, PM₁₀, and trace metals (including arsenic) analyses from samples collected on September 3, 6, 9, 12, 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 September 15, 2020 are pending;
- There were no NO₂ 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 NO₂ Concentrations**

Date	Maximum One-hour Average (ppb)	24-hour Average (ppb)
September 20, 2020	2.8	0.0
September 21, 2020	2.1	0.0
September 22, 2020	1.8	0.5
September 23, 2020	1.4	0.4
September 24, 2020	1.1	0.4
September 25, 2020	1.1	0.1
September 26, 2020	0.7	0.0

General Operation

- Integrated sampling for TSP, PM₁₀, and trace metals (including arsenic) was conducted on September 21 and 24, 2020. The next regularly scheduled sampling is September 27, 2020;

- Data completeness for the reporting period was 100% for continuous TSP and 100% for continuous PM₁₀ concentrations measured at the site perimeter monitoring stations;
- The AAQM program operated as specified during the week ending September 26, 2020.

Sincerely,

A handwritten signature in purple ink that reads "Natalie Plato".

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