



PO BOX 1500
YELLOWKNIFE NT X1A 2R3

August 4, 2020

Distribution List

A summary of the Giant Mine Remediation Project ambient air quality monitoring program for the week ending July 25, 2020 is as follows:

Site Perimeter Stations

- 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 site perimeter monitoring stations during the week. PM₁₀ concentrations measured at the site perimeter monitoring locations during the week were typical of seasonal background concentrations;
- A total of four 15-minute average total suspended particulate (TSP) concentrations above the established RBAL of 333 µg/m³ were measured at the Site Perimeter monitoring station I-South Pond on July 23, 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 or reported during these time periods. Filter media collected from all Site Perimeter stations on July 23, 2020 were submitted for laboratory analysis.
- Details of the elevated concentrations are as follows:
 - o Four 15-minute average TSP concentrations of 644 µg/m³, 618 µg/m³, 987 µg/m³, and 565 µg/m³ were measured at the Site Perimeter monitoring station I-South Pond on July 23, 2020 at 00:45 MST, 01:00 MST, 02:15 MST, and 04:45 MST, respectively. During this time winds were from the south with speeds between 2.8 m/s and 3.9 m/s, placing Yellowknife upwind from Giant Mine.
- Laboratory results for integrated TSP, PM₁₀, and trace metals (including arsenic) analyses from samples collected on July 5, 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 after July 5, 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 July 5, 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 July 5, 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)
July 19, 2020	0.9	0.3
July 20, 2020	1.3	0.7
July 21, 2020	1.3	0.7
July 22, 2020	1.1	0.3
July 23, 2020	0.0	0.0
July 24, 2020	0.0	0.0
July 25, 2020	1.0	0.0

General Operation

- Integrated sampling for TSP, PM₁₀, and trace metals (including arsenic) was conducted on July 20 and 23, 2020. The next regularly scheduled sampling is July 26, 2020;
- Data completeness for the reporting period was 99.75% for continuous TSP and 99.55% for continuous PM₁₀ concentrations measured at the site perimeter monitoring stations;

- The AAQM program operated as specified during the week ending July 25, 2020, with the following exceptions:
 - o A total of twelve 15-minute average concentration values were invalidated at Site Perimeter monitoring station B-Townsite on July 21, 2020 between 1:15 AM to 6:15 AM local time (12:15 AM to 5:15 AM MST) due to an instrument error.

Sincerely,

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

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