

From: Geneva Irwin
Subject: Air Quality Monitoring Weekly Summary Week Ending in August 26
Date: September 1, 2017 9:43:16 AM
Attachments: [August 26.pdf](#)

Good Morning,

A summary of the Giant Mine ambient air quality monitoring program (AQM) for the week ending August 26, 2017 is as follows:

Fenceline Network:

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 fenceline monitoring stations during the week. PM₁₀ concentrations measured at most of the fenceline locations during the week were typical of seasonal background concentrations;

A total of twenty-four (24) 15-minute average total suspended particulate (TSP) concentrations above the established RBAL of 333 µg/m³ were measured at the fenceline monitoring stations on August 20 and 22, 2017. Elevated TSP concentrations above typical background concentrations were measured at all fenceline locations on these dates during the late evening and early morning hours. Elevated concentrations appear to be the result of heavy fog observed in the area of the samplers. No site activities that may have contributed to the measured concentrations were reported during this time period;

- o Two 15-minute average TSP concentrations were measured at Site H-NW Pond on August 20, 2017 (410 µg/m³ at 22:15 MST and 443 µg/m³ at 22:30 MST). Winds were calm throughout the night, including the time periods elevated concentrations were measured;
- o Twenty-two (22) 15-minute average TSP concentrations above the established fenceline RBAL were measured at fenceline monitoring Sites E-A1C1, G-West, H-NW Pond, and I-S Pond on August 22, 2017. The concentrations ranged from 355 µg/m³ to 2,070 µg/m³ and were measured between 00:30 and 05:00 MST. Winds were calm throughout the night, including the time periods elevated concentrations were measured.

Laboratory results for TSP, PM₁₀, and trace metals (including arsenic) analyses from samples collected on August 5, 2017 at the fenceline samplers 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 by the fenceline samplers on August 5, 2017 are pending.

Community Stations:

No 24-hour average concentrations of PM_{2.5} and PM₁₀ were measured above the referenced standards at 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 TSP, PM₁₀, and trace metals (including arsenic) analyses from samples collected on August 2, 5, and 8, 2017 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 August 8, 2017 are pending;

- Laboratory results for asbestos analyses from samples collected on August 2, 5, and 8, 2017 at the community stations were less than the analytical detection limit and/or below the referenced standard. Laboratory analyses of samples collected at the community stations after August 8, 2017 are pending;
- There were no NO_x concentrations measured at the recently established 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 NO₂ Concentrations

Date	Maximum One-hour Average (ppb)	24-hour Average (ppb)
August 20, 2017	0.4	-0.1
August 21, 2017	3.9	0.7
August 22, 2017	3.1	1.0
August 23, 2017	0.6	0.1
August 24, 2017	7.4	1.6
August 25, 2017	2.3	0.3
August 26, 2017	1.3	-0.1

General Operation:

The AQM program operated as specified during the week ending August 26, 2017, with the following exceptions:

- o The YCC community station continuous PM₁₀ monitor did not report on August 20 and 21, 2017 while it completed a corrective action three day zero background check;
- o Fenceline location Site G-West did not report ten (10) 15-minute averages on August 23, 2017 from 18:45 to 21:15 MST, due to a battery malfunction.
- o Fenceline location Site C-Northwest did not report eight (8) 15-minute averages on August 24, 2017 from 09:15 to 11:00 MST, due to a battery malfunction;
- o Five hours of PM_{2.5} data from the community station at NDL were invalidated due to reported concentrations of less than -3 ug/m³ on August 26, 2017;
- o The laboratory reported that it was unable to analyze the asbestos samples collected on August 11, 2017 at the YCC, NVN, and NDL community stations due to the filter being overloaded with particulate matter, preventing fibre counting analysis. There were no measured exceedances of TSP or PM₁₀ on August 11th.

Sincerely,

Natalie Plato



PO BOX 1500
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NT 902909

September 1, 2017

Distribution List

RE: Air Quality Reports for the Week of August 26, 2017.

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- Laboratory results for asbestos analyses from samples collected on August 2, 5, and 8, 2017 at the community stations were less than the analytical detection limit and/or below the referenced standard. Laboratory analyses of samples collected at the community stations after August 8, 2017 are pending;
- There were no NO₂ concentrations measured at the recently established 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.

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- The laboratory reported that it was unable to analyze the asbestos samples collected on August 11, 2017 at the YCC, NVN, and NDL community stations due to the filter being overloaded with particulate matter, preventing fibre counting analysis. There were no measured exceedances of TSP or PM10 on August 11th.

Sincerely,



Natalie Plato
Deputy Director
Giant Mine Remediation Project

c.c.: Distribution List