



PO BOX 1500
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NT 928159

October 13, 2017

Distribution List

RE: Air Quality Reports for the Week of September 23, 2017.

A summary of the Giant Mine ambient air quality monitoring program (AQM) for the week ending September 23, 2017 is as follows:

Fenceline Network:

- No 15-minute average particulate matter less than 10 microns in diameter (PM_{10}) concentrations above the established Risk Based Action Level (RBAL) of $159 \mu\text{g}/\text{m}^3$ were measured at the fenceline monitoring stations during the week. PM_{10} concentrations above typical background concentrations were measured at all fenceline locations on September 18 and 19, 2017, and although there was no visible smoke, staff noted smell of smoke on those days;
- No 15-minute average total suspended particulate (TSP) concentrations above the established RBAL ($333 \mu\text{g}/\text{m}^3$) were measured at the fenceline monitoring stations during the week. Elevated TSP concentrations above typical background concentrations were measured at all fenceline locations on September 18 and 19, 2017, and although there was no visible smoke, staff noted smell of smoke on those days;
- Laboratory results for TSP, PM_{10} , and trace metals (including arsenic) analyses from samples collected on August 26, 29, September 1, 2, 3, and 4, 2017 at the fenceline sampling locations were less than the analytical detection limit and/or below the referenced standard. Laboratory analyses of integrated 24-hour arsenic, PM_{10} , and TSP filter samples collected at the fenceline sampling locations after September 4, 2017 are pending

Community Stations:

- No 24-hour average concentrations of $PM_{2.5}$ and PM_{10} were measured above the referenced standards at the community stations during the week. $PM_{2.5}$ and PM_{10} concentrations during the week were slightly elevated on September 18 and 19, 2017 likely due to smoke from regional forest fires, all other days were typically representative of seasonal background concentrations;
- Laboratory results from TSP, PM_{10} , and trace metals (including arsenic) samples collected on August 23, 26, 29, September 1, and 4, 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 September 4, 2017 are pending;

- Laboratory results for asbestos analyses from samples collected on August 29, 2017 at the community stations were less than the analytical detection limit and/or below the referenced standard. Laboratory analyses of asbestos samples collected at the community stations after September 4, 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.

**Table 1
Niven Lake Community AQM Station NO₂ Concentrations**

Date	Maximum One-hour Average (ppb)	24-hour Average (ppb)
September 17, 2017	2.5	0.7
September 18, 2017	5.3	1.0
September 19, 2017	2.2	0.3
September 20, 2017	-0.2	-0.4
September 21, 2017	3.7	0.2
September 22, 2017	14.1	2.3
September 23, 2017	1.2	0.5

General Operation:

- The AQM program operated as specified during the week ending September 23, 2017, with the following exceptions:
 - o The onsite technician determined that the PM₁₀ sampler at fenceline location I-South Pond was malfunctioning and replaced the sampler with a new sampler on September 22, 2017, resulting in data loss of one (1) 15-minute average;
 - o NDL community station real-time PM₁₀ and PM_{2.5} particulate samplers did not report four (4) hours of data on September 19, 2017 due to maintenance on the computer data logging system.

Sincerely,



Natalie Plato
Deputy Director
Giant Mine Remediation Project

c.c.: Distribution List