

From: Cooper, Kayla (AADNC/AANDC)
To: [Cooper, Kayla \(AADNC/AANDC\)](#)
Subject: Giant Mine ambient AQMP summary report for the week ending April 7, 2018
Date: April 13, 2018 11:08:19 AM
Attachments: [GIANT - REGULATORY AND MONITORING - AQM WEEKLY SUMMARY - WEEK ENDING IN April 7, 2018.pdf](#)

Good morning,

A summary of the Giant Mine ambient air quality monitoring program (AQMP) for the week ending April 7, 2018 is as follows:

Fenceline Network:

- . A total of four (4) 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 fenceline monitoring Site C-Northwest between April 1 - 3, 2018. PM₁₀ concentrations measured at all other fenceline locations during the week were typical of seasonal background concentrations. Elevated concentrations appear to be the result of road dust from vehicle traffic in the area;
 - o Two (2) 15-minute average PM₁₀ concentrations were measured at monitoring location Site C-Northwest on April 1, 2018. Concentrations of 2,783 and 179 µg/m³ were measured at 05:45 MST and 06:00 MST, respectively. During these times the wind direction was from the east-northeast and 1.0 and 1.3 m/s, respectively. Yellowknife was crosswind from Giant Mine during these times;
 - o One (1) 15-minute average PM₁₀ concentration was measured at monitoring location Site C-Northwest on April 2, 2018. A concentration of 1,121 µg/m³ was measured at 08:30 MST. During this time the wind direction was from the north, and the wind speed was 2.8 m/s. Yellowknife was downwind from Giant Mine at this time;
 - o One (1) 15-minute average PM₁₀ concentration was measured at monitoring location Site C-Northwest on April 3, 2018. The concentration of 173 µg/m³ was measured at 07:15 MST. During this time the wind direction was from the north, and the wind speed was 2.6 m/s. Yellowknife was downwind from Giant Mine at this time;
- . A total of one (1) 15-minute average total suspended particulate (TSP) concentration above the established RBAL of 333 µg/m³ was measured at the fenceline monitoring location Site C-Northwest on April 1, 2018. TSP concentrations measured all other fenceline locations during the week were typical of seasonal background concentrations. Elevated concentrations appear to be the result of road dust from vehicle traffic in the area;
 - o One (1) 15-minute average TSP concentration was measured at Site C-Northwest on April 1, 2018. A concentration of 458 µg/m³ was measured at

05:45 MST. During this time the wind direction was from the east-northeast and the wind speed was 1.3 m/s. Yellowknife was crosswind from Giant Mine during this time;

- Laboratory results for TSP, PM₁₀, and trace metals (including arsenic) analyses from samples collected on March 12, 15, and 18, 2018 at the fenceline monitoring locations 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 fenceline sampling locations after March 18, 2018 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 from TSP, PM₁₀, and trace metals (including arsenic) samples collected on March 15, 18, and 21, 2018 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 March 21, 2018 are pending;
- Laboratory results for asbestos analyses from samples collected on March 15, 18, 21, and 24, 2018 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 March 24, 2018 are pending;
- There were no NO₂ concentrations measured at the 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)
April 01, 2018	23.8	4.1
April 02, 2018	4.5	1.5
April 03, 2018	2.4	1.0
April 04, 2018	1.1	0.4
April 05, 2018	6.7	2.0
April 06, 2018	7.6	3.6
April 07, 2018	9.3	4.0

General Operation:

- The AQM program operated as specified during the week ending April 1, 2018, with the following exceptions:
 - TSP real time monitoring data at Site H-Northwest was determined to be invalid from April 2, 2018 to April 9, 2018 due to an instrument malfunction. The affected instrument has been removed from service and replaced with a backup.
 - The PM₁₀ sampler at monitoring Site B–Town did not record data from 09:30 MST to 10:45 MST on April 3, 2018 due to a battery failure;
 - The PM₁₀ sampler at monitoring location Site E–A1C1 did not record data from 06:15 MST to 06:45 MST on April 7, 2018 due to a battery failure.

Kayla Cooper

Administrative Project Coordinator
Giant Mine Remediation Project, INAC
867-669-2425



PO BOX 1500
YELLOWKNIFE NT X1A 2R3

April 13, 2018

Distribution List

RE: Air Quality Reports for the Week of April 7, 2018.

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fenceline locations during the week were typical of seasonal background concentrations. Elevated concentrations appear to be the result of road dust from vehicle traffic in the area;

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Community Stations:

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Sincerely,



Natalie Plato
Deputy Director
Giant Mine Remediation Project

c.c.: Distribution List