

MVLWB Registry

From: Adrian Paradis <Adrian.Paradis@aandc-aadnc.gc.ca>
Sent: Friday, July 10, 2015 11:13 AM
To: Fallon Morton; permits@mvlwb.com
Subject: Giant Mine Air Quality Report for Week of July 4, 2015
Attachments: Giant Air Quality Monitoring Report for Week of July 4, 2015.pdf; Adrian Paradis.vcf

A summary of the Giant Mine ambient air quality monitoring program for the week ending July 4, 2015 is as follows:

Fenceline Network:

- Multiple 15-minute average particulate matter less than 10 microns in diameter (PM₁₀) concentrations above the established Risk Based Action Level (RBAL) criteria (159 µg/m³) were measured at the fenceline monitoring stations between 11 AM to 5 PM on June 30 and 3 AM to 5 AM on July 1, 2015. All other PM₁₀ concentrations measured at fenceline locations were typical of seasonal background concentrations. Elevated particulate concentrations observed on June 30 and July 1, 2015 were likely caused by smoke from regional forest fires as confirmed by site visits;
- No 15-minute average total suspended particulate (TSP) concentrations above the established RBAL (333 µg/m³) were measured at the fenceline monitoring stations during the week. Elevated TSP concentrations were observed across all stations on June 30 and July 1, 2015 and were likely caused by smoke from regional forest fires as confirmed by site visits. All other TSP concentrations measured at fenceline locations were typical of seasonal background concentrations; and
- Fenceline samplers began operating 24 hours per day in support of paste and fill activities on May 31, 2015.

Community Stations:

- There were three (3) continuous 24-hour average concentrations of particulate matter less than 2.5 microns in diameter (PM_{2.5}) and four (4) 24-hour average concentrations of particulate matter less than 10 microns in diameter (PM₁₀) measured above the referenced criteria at the community stations during the week. One 24-hour PM₁₀ concentration above the referenced criteria was measured at the NAPS station on June 28, 2015. Winds on June 28, 2015 were light to moderate blowing predominantly from the west-northwest placing the mine site crosswind of the city. PM₁₀ concentrations at other community stations on June 28, 2015 were much lower than those observed at NAPS, indicating that the PM₁₀ concentrations at NAPS on June 28, 2015 were likely caused by road dust or other local sources located within the immediate vicinity of the NAPS station. Annual street sweeping activities were being conducted in the area by the City of Yellowknife during the reporting period. The remaining 24-hour PM_{2.5} and PM₁₀ concentrations above the referenced criteria occurred at all stations on June 30 and July 1, 2015. Site visits on June 30 and July 1, 2015 indicated smoke from regional forest fires likely caused the high PM_{2.5} and PM₁₀ concentrations;

- Laboratory results from available TSP, PM₁₀, and trace metals (including arsenic) samples collected on June 8, 11, and 14, 2015 at the community stations were less than the analytical detection limit and/or below the referenced criteria. Laboratory analysis of community station filters collected after June 14, 2015 are pending; and
- Laboratory analytical results received for asbestos samples collected on April 15, 2015 at the community stations that were previously unreported were less than the analytical detection limit and/or below the referenced criteria. Laboratory results from asbestos samples collected at the community stations after June 14, 2015 are pending;

Interim Underground Stabilization (IUS) (tailings work):

- Air quality monitoring specific to the IUS program was conducted at:
 1. Four (4) locations within the vicinity of paste fill operations in the B1 and A1 Pits;
 2. Four (4) locations set on the west, north, and south perimeters of the Central and South Tailings Ponds;
 3. Four (4) locations at the mine vents and intake openings.
- There were six (6) 15-minute average PM₁₀ concentrations above the surface drilling RBAL (260 µg/m³) measured at the monitors located in the vicinity of paste fill operations on June 30, 2015. Site visits indicate sampler responses were valid and unaffected by drilling and paste fill operations, and that elevated concentrations were likely caused by smoke from regional forest fires;
- There were multiple 15-minute average PM₁₀ concentrations above the tailings pond work RBAL (180 µg/m³) measured on June 30, 2015. Site visits indicate sampler responses were valid and unaffected by tailings work, and that elevated concentrations were likely caused by smoke from regional forest fires;
- There were no 15-minute average PM₁₀ concentrations above the underground vent monitoring RBAL (300 µg/m³) measured during the week; and
- Laboratory results from available arsenic filter samples collected on June 11, 14, 17, and 20, 2015 at the IUS locations were less than the analytical detection limit and/or below the referenced criteria. Analytical 24-hour arsenic results from samples collected after June 20, 2015 are pending.

Roaster Deconstruction

- Air quality monitoring associated with the Roaster Deconstruction ended on June 20 2015 and no monitoring was conducted during the week ending July 4, 2015;

General Operations:

- The AQM program operated as specified during the week ending July 4, 2015.

Additional air quality information for the Giant Mine can be found on the NWT Air Quality Monitoring Network web page: <http://aqm.enr.gov.nt.ca>.

For information on RBALs, TSP, PM10 and for answers to other commonly asked questions about Air Quality Monitoring, please see the Giant Mine Remediation Project Team's [online FAQs](#). Should you have any questions or comments, please contact Adrian Paradis by Telephone: (867) 669-2425 or by E-mail: Adrian.Paradis@aandc-aadnc.gc.ca.

Sincerely,

Adrian Paradis

Regulatory Manager, NWT Region, Giant Mine Remediation Project
AANDC/ Government of Canada
adrian.paradis@aandc-aadnc.gc.ca / Tel: 867-669-2425

Gestionnaire à la réglementation
AADNC/ Gouvernement du Canada
adrian.paradis@aandc-aadnc.gc.ca / Tel: 867-669-2425



PO BOX 1500
YELLOWKNIFE NT X1A 2R3

NT 700611

July 10, 2015

Mr. Willard Hagen, Chair
Mackenzie Valley Land and Water Board
7TH FLOOR – 4910, 50TH AVE., PO BOX 2130
YELLOWKNIFE, NT X1A 2P6

RE: Water Licence MV2012L8-0010 – Air Quality Reports for the Week of July 4, 2015

Dear: Mr. Hagen,

This report is meant to satisfy commitments made in the May 21, 2013, responses to review comments on the roaster plans. Our commitment was to provide weekly summaries of the following data:

- PM₁₀ measurements captured by the contractor and the fence-line program;
- All other available and quality assured data, including TSP, trace elements (metals) and asbestos data.

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- No 15-minute average total suspended particulate (TSP) concentrations above the established RBAL (333 µg/m³) were measured at the fenceline monitoring stations during the week. Elevated TSP concentrations were observed across all stations on

June 30 and July 1, 2015 and were likely caused by smoke from regional forest fires as confirmed by site visits. All other TSP concentrations measured at fence line locations were typical of seasonal background concentrations; and

- Fence line samplers began operating 24 hours per day in support of paste and fill activities on May 31, 2015.

Community Stations:

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Sincerely,



Adrian Paradis
Regulatory Manager
Giant Mine Remediation Project

c.c.: Distribution List