

MVLWB Registry

From: Tara Kramers <Tara.Kramers@aandc-aadnc.gc.ca>
Sent: Friday, September 19, 2014 11:33 AM
To: permits@mvlwb.com; Tyree@mvlwb.com
Cc: Fallon Morton; Lisa Colas
Subject: Giant Mine Air Quality Weekly Summary-September 7-13, 2014
Attachments: Giant Mine Air Quality Weekly Summary.pdf

Greetings,

A summary of the Giant Mine ambient air quality monitoring program for the week ending September 13, 2014 is as follows:

- No 15-minute average particulate matter less than 10 microns in diameter (PM₁₀) concentrations above the established Risk Based Action Level (RBAL) criteria were measured at the fenceline locations during the week;
- No 15-minute average total suspended particulate (TSP) concentrations above the established RBAL were measured at the fenceline locations during the week;
- Four (4) real time 15-minute average PM₁₀ concentrations above the established RBAL criteria were measured at the underground vent locations during the week. PM₁₀ concentrations above the RBAL criteria were measured at the UBC Portal (Sampler E10) on September 8, 2014. Elevated concentrations are believed to be the result of the use of an excavator during roadway surface work and not related to remediation activities. No PM₁₀ concentrations above the established RBAL were measured at the Boneyard monitor locations during the week;
- Analytical 24-hour arsenic results measured from underground vent and surface drilling monitoring on August 3, August 6, August 9, August 12, August 15, August 18, and August 21, 2014 were less than the analytical detection limit and/or below the referenced criteria. Analysis of filter results collected after August 21, 2014 is pending;
- Laboratory results from 24-hour and 8-hour asbestos samples collected at three sites surrounding the Boneyard cleanup area from August 24 through September 13, 2014 were below the referenced criteria for protection of public health and worker safety. Analysis of asbestos samples collected after September 13, 2014 are pending;
- No real time 15-minute average PM₁₀ concentrations above the established RBAL were measured during the week at each perimeter monitoring location (upwind and downwind) for the Roaster deconstruction specific air quality monitoring program;
- There were no continuous 24-hour average concentrations of particulate matter less than 2.5 microns in diameter (PM_{2.5}) and no continuous 24-hour average PM₁₀ concentrations above the referenced criteria measured at the community stations during the week;
- Laboratory results from TSP, PM₁₀, and trace metals (including arsenic) samples measured on August 18, 2014 were below the reference criteria at the community stations.
- Laboratory results from samples measured on August 21, 2014 show exceedance of the 24-hour average TSP, PM₁₀, and total iron standard at the NAPS community station. The 24-hour PM₁₀ and PM_{2.5} measured concentrations from the BAM monitors at all community stations on this day were below the 24-hour average PM_{2.5} and PM₁₀ criteria. Winds were predominantly from the SW during the morning then switching to W for the remainder of the day placing the community stations upwind and crosswind of the Giant Mine site for most of the day.
- Laboratory results from makeup samples collected on August 26, 2014 at the NDL community station show exceedance of the 24-hour average PM₁₀ and TSP reference criteria. Winds were predominantly from the N during the morning and afternoon then switching to S for the remainder of the day placing the community stations downwind and crosswind of the Giant Mine site for most of the day. The 24-hour PM₁₀ and PM_{2.5} measured concentrations from the BAM monitors at

all community stations on this day were also above the 24-hour average PM_{2.5} and PM₁₀ criteria and fairly uniform throughout the day. Visual observations of smoke from regional forest fires were also reported on this day indicating elevated concentrations were likely caused by regional forest fires, and not likely caused by PM generated from site activities at the Giant Mine.

- Laboratory results from TSP, PM₁₀, and trace metals (including arsenic) samples measured on August 27, 2014 were below the reference criteria at all community stations.
- Where PM₁₀, TSP, and total iron exceedances were measured on August 21 and August 26, 2014 at the community stations. Visual observations of smoke from regional forest fires; no dust generating activities observed on-site that would impact community stations; and similar concentrations measured across the community stations indicate measured concentrations above the ambient air quality standard were likely caused by off-site regional forest fires. Laboratory results from 24-hour TSP and PM₁₀ samples collected after August 27, 2014 are pending;
- Laboratory results from asbestos samples collected on August 15, August 18, August 21, and August 24 at the community stations were less than the analytical detection limit and/or below the referenced criteria. Laboratory results from asbestos samples collected at the community stations after August 21, 2014 are pending;
- Laboratory results from samples collected on September 2 – 3 and September 5 - 6, 2014 for the roaster deconstruction specific air quality monitoring program, indicated 24-hour average arsenic, PM₁₀, and TSP concentrations were below the referenced applicable criteria;
- The AQM program operated as specified during the week ending September 13, 2014.

Tara Kramers

Giant Mine Remediation Project

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PO Box 1500
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September 19, 2014

Mr. Willard Hagen, Chair
Mackenzie Valley Land and Water Board
7TH FLOOR – 4922, 48TH ST., PO BOX 2130
YELLOWKNIFE, NT X1A 2P6

Dear: Mr. Hagen,

RE: Water Licence MV2012L8-0010 – Air Quality Reports for the Week of September 7th

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.

In discussions with the Giant Mine Working Group, in lieu of the detailed weekly reports the project has decided to provide weekly summaries and a detailed monthly report. This is done to make the reporting more useful to users, while still maintaining the level of details previously provided.

In summary for the week of September 7th – September 13th, 2014, 2014:

- No 15-minute average particulate matter less than 10 microns in diameter (PM₁₀) concentrations above the established Risk Based Action Level (RBAL) criteria were measured at the fenceline locations during the week;
- No 15-minute average total suspended particulate (TSP) concentrations above the established RBAL were measured at the fenceline locations during the week;
- Four (4) real time 15-minute average PM₁₀ concentrations above the established RBAL criteria were measured at the underground vent locations during the week. PM₁₀ concentrations above the RBAL criteria were measured at the UBC Portal (Sampler E10) on September 8, 2014. Elevated concentrations are believed to be the result of the use of an excavator during roadway surface work and not related to remediation activities. No PM₁₀ concentrations above the

established RBAL were measured at the Boneyard monitor locations during the week;

- Analytical 24-hour arsenic results measured from underground vent and surface drilling monitoring on August 3, August 6, August 9, August 12, August 15, August 18, and August 21, 2014 were less than the analytical detection limit and/or below the referenced criteria. Analysis of filter results collected after August 21, 2014 is pending;
- Laboratory results from 24-hour and 8-hour asbestos samples collected at three sites surrounding the Boneyard cleanup area from August 24 through September 13, 2014 were below the referenced criteria for protection of public health and worker safety. Analysis of asbestos samples collected after September 13, 2014 are pending;
- No real time 15-minute average PM_{10} concentrations above the established RBAL were measured during the week at each perimeter monitoring location (upwind and downwind) for the Roaster deconstruction specific air quality monitoring program;
- There were no continuous 24-hour average concentrations of particulate matter less than 2.5 microns in diameter ($PM_{2.5}$) and no continuous 24-hour average PM_{10} concentrations above the referenced criteria measured at the community stations during the week;
- Laboratory results from TSP, PM_{10} , and trace metals (including arsenic) samples measured on August 18, 2014 were below the reference criteria at the community stations.
- Laboratory results from samples measured on August 21, 2014 show exceedance of the 24-hour average TSP, PM_{10} , and total iron standard at the NAPS community station. The 24-hour PM_{10} and $PM_{2.5}$ measured concentrations from the BAM monitors at all community stations on this day were below the 24-hour average $PM_{2.5}$ and PM_{10} criteria. Winds were predominantly from the SW during the morning then switching to W for the remainder of the day placing the community stations upwind and crosswind of the Giant Mine site for most of the day.
- Laboratory results from makeup samples collected on August 26, 2014 at the NDL community station show exceedance of the 24-hour average PM_{10} and TSP reference criteria. Winds were predominantly from the N during the morning and afternoon then switching to S for the remainder of the day placing the community stations downwind and crosswind of the Giant Mine site for most of the day. The 24-hour PM_{10} and $PM_{2.5}$ measured concentrations from the BAM monitors at all community stations on this day were also above the 24-hour average $PM_{2.5}$ and PM_{10} criteria and fairly uniform throughout the day. Visual observations of smoke from regional forest fires were also reported on this day indicating elevated

concentrations were likely caused by regional forest fires, and not likely caused by PM generated from site activities at the Giant Mine.

- Laboratory results from TSP, PM₁₀, and trace metals (including arsenic) samples measured on August 27, 2014 were below the reference criteria at all community stations.
- Where PM₁₀, TSP, and total iron exceedances were measured on August 21 and August 26, 2014 at the community stations. Visual observations of smoke from regional forest fires; no dust generating activities observed on-site that would impact community stations; and similar concentrations measured across the community stations indicate measured concentrations above the ambient air quality standard were likely caused by off-site regional forest fires. Laboratory results from 24-hour TSP and PM₁₀ samples collected after August 27, 2014 are pending;
- Laboratory results from asbestos samples collected on August 15, August 18, August 21, and August 24 at the community stations were less than the analytical detection limit and/or below the referenced criteria. Laboratory results from asbestos samples collected at the community stations after August 21, 2014 are pending;
- Laboratory results from samples collected on September 2 – 3 and September 5 - 6, 2014 for the roaster deconstruction specific air quality monitoring program, indicated 24-hour average arsenic, PM₁₀, and TSP concentrations were below the referenced applicable criteria;
- The AQM program operated as specified during the week ending September 13, 2014.

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>.

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
Giant Mine Remediation Project

c.c.: Distribution List