

## MVLWB Permits

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**From:** Adrian Paradis <Adrian.Paradis@aandc-aadnc.gc.ca>  
**Sent:** Friday, August 29, 2014 2:58 PM  
**To:** Lisa Colas  
**Subject:** Giant Mine Air Quality Report for the Week of August 23rd  
**Attachments:** Giant Mine Weekly Air Quality Report for the Week of August 23, 2014.pdf; Adrian Paradis.vcf

Greetings,

This summary 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 August 17<sup>th</sup> – August 23<sup>rd</sup>, 2014:

- No 15-minute average particulate matter less than 10 microns in diameter (PM<sub>10</sub>) concentrations above the established Risk Based Action Level (RBAL) criteria were measured at the fenceline locations during the week;
- No total suspended particulate (TSP) concentrations above the established RBAL were measured at the fenceline locations during the week;
- No real time 15-minute average PM<sub>10</sub> concentrations above the established RBAL criteria were measured at the underground vent locations during the week. No PM<sub>10</sub> concentrations above the established RBAL were measured at the surface drilling monitor locations around the B1 Pit during the week;
- Analytical 24-hour arsenic results measured from underground vent and surface drilling monitoring on July 27 through August 2, 2014 were less than the analytical detection limit and/or below the referenced criteria;
- Multiple real time 15-minute average PM<sub>10</sub> concentrations above the established RBAL were measured on August 21, 2014 at each perimeter monitoring location (upwind and downwind) for the Roaster deconstruction specific air quality monitoring program. At the time of the elevated concentrations it was noted Roaster deconstruction work activities were not generating dust and multiple forest fires in the area were reported;

- There were no continuous 24-hour average concentrations of particulate matter less than 2.5 microns in diameter (PM<sub>2.5</sub>) and no continuous 24-hour average PM<sub>10</sub> concentrations above the referenced criteria measured at the community stations August 17 through August 23, 2014;
- Laboratory results from TSP, PM<sub>10</sub>, and trace metals (including arsenic) samples measured on July 28, 2014 show exceedance of the 24-hour PM<sub>10</sub> criteria at NAPS. The 24-hour PM<sub>10</sub> criterion was also exceeded using measured concentrations from the BAM monitor at NAPS on this day. Winds were predominantly from the S through SE directions placing the NAPS station upwind of the Giant Mine site. Laboratory results from samples collected on July 31, 2014 show exceedance of the 24-hour PM<sub>10</sub> criteria at all community stations and exceedance of the 24-hour TSP criteria at NAPS. The 24-hour PM<sub>10</sub> criterion was also exceeded using measured concentrations from the BAM monitors at NAPS and NDL on this day. Winds were predominantly from the WNW through NW directions placing the community stations crosswind of the Giant Mine site. 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 TSP and PM<sub>10</sub> samples collected after July 31, 2014 are pending;
- Laboratory results from asbestos samples on July 19, July 22, July 28, and July 31, 2014 are below the referenced criteria. Laboratory results from asbestos samples collected after July 31, 2014 are pending;
- Laboratory results from samples collected on July 31 – August 1, August 12 – 13, August 15 – 16, and August 18 – 19, 2014 for the roaster deconstruction specific air quality monitoring program, indicated 24-hour average arsenic, PM<sub>10</sub>, and TSP concentrations were below the referenced applicable criteria;
- The AQM program operated as specified during the week ending August 23, 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](mailto:Adrian.Paradis@aandc-aadnc.gc.ca).

Sincerely,

Adrian Paradis

Regulatory Manager, NWT Region, Giant Mine Remediation Project  
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August 29, 2014

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

Dear: Mr. Hagen,

**RE: Water Licence MV2012L8-0010 – Air Quality Reports for the Week of August 23<sup>rd</sup>**

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- Analytical 24-hour arsenic results measured from underground vent and surface drilling monitoring on July 27 through August 2, 2014 were less than the analytical detection limit and/or below the referenced criteria;
- Multiple real time 15-minute average  $PM_{10}$  concentrations above the established RBAL were measured on August 21, 2014 at each perimeter monitoring location (upwind and downwind) for the Roaster deconstruction specific air quality monitoring program. At the time of the elevated concentrations it was noted Roaster deconstruction work activities were not generating dust and multiple forest fires in the area were reported;
- 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 August 17 through August 23, 2014;
- Laboratory results from TSP,  $PM_{10}$ , and trace metals (including arsenic) samples measured on July 28, 2014 show exceedance of the 24-hour  $PM_{10}$  criteria at NAPS. The 24-hour  $PM_{10}$  criterion was also exceeded using measured concentrations from the BAM monitor at NAPS on this day. Winds were predominantly from the S through SE directions placing the NAPS station upwind of the Giant Mine site. Laboratory results from samples collected on July 31, 2014 show exceedance of the 24-hour  $PM_{10}$  criteria at all community stations and exceedance of the 24-hour TSP criteria at NAPS. The 24-hour  $PM_{10}$  criterion was also exceeded using measured concentrations from the BAM monitors at NAPS and NDL on this day. Winds were predominantly from the WNW through NW directions placing the community stations crosswind of the Giant Mine site. 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 TSP and  $PM_{10}$  samples collected after July 31, 2014 are pending;
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Sincerely,



Adrian Paradis  
Regulatory Manager  
Giant Mine Remediation Project

c.c.: Distribution List