

MVLWB Permits

From: Fallon Morton <Fallon.Morton@aandc-aadnc.gc.ca>
Sent: Friday, September 05, 2014 2:34 PM
To: NWTLands
Cc: Lisa Colas
Subject: Giant Mine AQM summary for the week ending August 30, 2014
Attachments: Weekly Summary Aug 24-30.pdf

Greetings,

Attached is the AQM weekly summary report for Giant Mine for week ending August 30, 2014.

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.

A summary of the report is provided below:

- A total of ninety-two (92) 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. Concentrations above the RBAL were measured at multiple sites on August 26, 2014. Visual observations of smoke from regional forest fires; similar concentrations measured across all fenceline monitoring locations, and no remediation activities generating dust were observed on-site, indicate measured concentrations above the PM₁₀ RBAL were likely caused by off-site regional forest fires;
- A total of thirty (30) total suspended particulate (TSP) concentrations above the established RBAL were measured at the fenceline locations during the week. Concentrations above the RBAL were measured at multiple sites August 26, 2014. Visual observations of smoke from regional forest fires; similar concentrations measured across all fenceline monitoring locations, and no remediation activities generating dust observed on-site, indicate measured concentrations above the TSP RBAL were likely caused by off-site regional forest fires;
- No real time 15-minute average PM₁₀ concentrations above the established RBAL criteria were measured at the underground vent locations during the week. No PM₁₀ 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. Analysis of filter results collected after August 2, 2014 is pending;
- Multiple real time 15-minute average PM₁₀ concentrations above the established RBAL were measured on August 26, 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 six (6) continuous 24-hour average concentrations of particulate matter less than 2.5 microns in diameter (PM_{2.5}) and three (3) continuous 24-hour average PM₁₀ concentrations above the referenced criteria

measured at the community stations August 25 and August 26, 2014. Winds were blowing predominantly from the south on August 25, 2014, placing the community stations upwind of the Giant Mine. Winds on August 26, 2014 were blowing mainly from NW, placing the community stations downwind of the Giant Mine site; however, concentrations were nearly uniform across all community station locations indicating the exceedances were likely caused by smoke from regional forest fires. Visual observations of smoke from regional forest fires; no dust generating activities observed on-site; 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, PM₁₀, and trace metals (including arsenic) samples measured on August 3, 2014 show exceedance of both the 24-hour PM₁₀ and 24-hour TSP criteria at all community stations. The 24-hour PM₁₀ and PM_{2.5} criteria were also exceeded using measured concentrations from the BAM monitor at all community stations on this day. Winds were predominantly from the S through WSW directions placing the community stations upwind and crosswind of the Giant Mine site. Laboratory results from samples collected on August 6, 2014 show exceedance of PM₁₀ criteria at all stations, and exceedance of the TSP criteria at NAPS. The 24-hour PM₁₀ criterion was also exceeded using measured concentrations from the BAM monitors at NAPS and NDL on this day. Winds were predominantly from the NNE direction placing the community stations downwind of the Giant Mine site; however, concentrations were nearly uniform across all community station locations indicating the exceedances were likely caused by smoke from regional forest fires. 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 samples collected on August 9 and August 12, 2014 were below the reference criteria for TSP, PM₁₀, and trace metals (including arsenic). Laboratory results from TSP and PM₁₀ samples collected after August 12, 2014 are pending;
- Laboratory results from asbestos samples on August 3, August 6, August 9, and August 12, 2014 were below the referenced criteria. Laboratory results from asbestos samples collected after August 12, 2014 are pending;
- Laboratory results from samples collected on August 21 – 22 and August 27 – 28, 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 August 30, 2014.

Regards,

Fallon Morton
Giant Mine Remediation Project
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September 5, 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 August 24th

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 August 24th – August 30th, 2014, 2014:

- A total of ninety-two (92) 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. Concentrations above the RBAL were measured at multiple sites on August 26, 2014. Visual observations of smoke from regional forest fires; similar concentrations measured across all fenceline monitoring locations, and no remediation activities generating dust were observed on-site, indicate measured concentrations above the PM₁₀ RBAL were likely caused by off-site regional forest fires;
- A total of thirty (30) total suspended particulate (TSP) concentrations above the established RBAL were measured at the fenceline locations during the week.

Concentrations above the RBAL were measured at multiple sites August 26, 2014. Visual observations of smoke from regional forest fires; similar concentrations measured across all fence line monitoring locations, and no remediation activities generating dust observed on-site, indicate measured concentrations above the TSP RBAL were likely caused by off-site regional forest fires;

- No real time 15-minute average PM_{10} concentrations above the established RBAL criteria were measured at the underground vent locations during the week. No PM_{10} 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. Analysis of filter results collected after August 2, 2014 is pending;
- Multiple real time 15-minute average PM_{10} concentrations above the established RBAL were measured on August 26, 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 six (6) continuous 24-hour average concentrations of particulate matter less than 2.5 microns in diameter ($PM_{2.5}$) and three (3) continuous 24-hour average PM_{10} concentrations above the referenced criteria measured at the community stations August 25 and August 26, 2014. Winds were blowing predominantly from the south on August 25, 2014, placing the community stations upwind of the Giant Mine. Winds on August 26, 2014 were blowing mainly from NW, placing the community stations downwind of the Giant Mine site; however, concentrations were nearly uniform across all community station locations indicating the exceedances were likely caused by smoke from regional forest fires. Visual observations of smoke from regional forest fires; no dust generating activities observed on-site; 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, PM_{10} , and trace metals (including arsenic) samples measured on August 3, 2014 show exceedance of both the 24-hour PM_{10} and 24-hour TSP criteria at all community stations. The 24-hour PM_{10} and $PM_{2.5}$ criteria were also exceeded using measured concentrations from the BAM monitor at all community stations on this day. Winds were predominantly from the S through WSW directions placing the community stations upwind and crosswind of the Giant Mine site. Laboratory results from samples collected on August 6, 2014 show exceedance of PM_{10} criteria at all stations, and exceedance

of the TSP criteria at NAPS. The 24-hour PM₁₀ criterion was also exceeded using measured concentrations from the BAM monitors at NAPS and NDL on this day. Winds were predominantly from the NNE direction placing the community stations downwind of the Giant Mine site; however, concentrations were nearly uniform across all community station locations indicating the exceedances were likely caused by smoke from regional forest fires. 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 samples collected on August 9 and August 12, 2014 were below the reference criteria for TSP, PM₁₀, and trace metals (including arsenic). Laboratory results from TSP and PM₁₀ samples collected after August 12, 2014 are pending;

- Laboratory results from asbestos samples on August 3, August 6, August 9, and August 12, 2014 were below the referenced criteria. Laboratory results from asbestos samples collected after August 12, 2014 are pending;
- Laboratory results from samples collected on August 21 – 22 and August 27 – 28, 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 August 30, 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