MVLWB Registry

From: Fallon Morton <Fallon.Morton@aandc-aadnc.gc.ca>
Sent: Friday, May 15, 2015 5:20 PM
To: NWTLands
Subject: Giant Mine AQM weekly summary report for the week ending May 9, 2015
Attachments: Weekly AQM Summary May 3-9, 2015.pdf

Greetings,

Attached is the AQM weekly summary report for Giant Mine for week ending May 9, 2015.

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:
Fenceline Network:

- Fenceline air quality monitoring started operations at all sites Friday April 10, 2015. Fenceline samplers are scheduled to run daily from 7 AM to 7 PM local time;

- No 15-minute average particulate matter less than 10 microns in diameter (PM_{10}) concentrations above the established Risk Based Action Level (RBAL) criteria were measured at the fenceline monitoring stations during the week. PM_{10} concentrations measured at all fenceline locations remained typical of background concentrations;

- No 15-minute average total suspended particulate (TSP) concentrations above the established RBAL were measured at the fenceline monitoring stations during the week. TSP concentrations measured at all fenceline locations remained typical of background concentrations;

Community Stations:

- There were no continuous 24-hour average concentrations of particulate matter less than 2.5 microns in diameter ($PM_{2.5}$) and particulate matter less than 10 microns in diameter (PM_{10}) above the referenced criteria measured at the community stations during the week;

- Laboratory results from available TSP, PM_{10}, and trace metals (including arsenic) samples measured on April 18 and 24, 2015 at the community stations were less than the analytical detection limit and/or below the referenced criteria;

- Laboratory results for April 3, 2015 show exceedances of TSP and total iron were above the referenced criteria at the NAPS community station. Winds on April 3, 2015 were light and blowing from the south and southwest, thereby orienting the city upwind of the Giant Mine site. The 24-hour PM_{10} BAM concentrations at NAPS were above the referenced criteria on April 3, 2015, and by contrast, 24-hour PM_{10} BAM concentrations at the YCC and NDL community stations remained well below the standard, further indicating the high particulate concentrations observed at the NAPS station were likely caused by sources located within the immediate vicinity of the NAPS station. Conditions at the time, including: visual observations of road sand and road dust from snow melt; that the city was upwind of the Giant Mine site; and that elevated particulate concentrations isolated to the NAPS station, indicate measured concentrations

above the ambient air quality standard were likely caused by local road dust.The PM_{10} HiVol sample collected on April 3, 2015 at NAPS was invalidated due to sampler motor;

- Laboratory results from available TSP, PM_{10}, and trace metals (including arsenic) samples measured on April 3, 2015 at the NDL and YCC community stations were less than the analytical detection limit and/or below the referenced criteria. Laboratory results from samples collected at the community stations after April 24, 2015 are pending;

- Laboratory results for April 21, 2015 show exceedances of TSP and total iron were above the referenced criteria at the NDL community station. The PM_{10} sample collected on April 21, 2015 at NDL was equal to the referenced criteria. YCC and NAPS community station TSP, PM_{10}, and trace metals (including arsenic) results from April 21, 2015 were below the referenced criteria. Winds on April 21, 2015 were light to moderate and blowing from the east, thereby orienting the NDL station upwind of the Giant Mine site. The 24-hour PM_{10} BAM concentrations at NDL were above the referenced criteria on April 21, 2015. Meanwhile, 24-hour PM_{10} BAM concentrations at the YCC and NAPS community stations remained well below the standard, further indicating the high particulate concentrations observed at the NDL station were likely caused by sources located within the immediate vicinity of the NDL station. Fenceline concentrations remained low on April 21, 2015, with fenceline 15-minute PM_{10} concentrations below 10 $\mu g/m^3$. Visual observations of road dust from snow melt and road sand; that the NDL station was upwind of the Giant Mine site; low fenceline PM_{10} concentrations; and elevated particulate concentrations isolated to the NDL station indicate measured concentrations above the ambient air quality standard were likely caused by local road dust;

- There were no new laboratory analytical results received during the current reporting period for asbestos samples measured at the community stations. Laboratory results from asbestos samples collected at the community stations after April 12, 2015 are pending;

- The 3-day sampling schedule for 24-hour integrated TSP, PM_{10}, trace metals, and asbestos monitoring at the community stations has resumed as of March 19, 2015;

<u>Interim Underground Stabilization (IUS) (tailings work):</u>

- Air quality monitoring of surface drilling in the B1 Pit was initiated on May 9, 2015 in preparation for remediation injection of tailings and paste mix materials;

- There were no 15-minute average PM_{10} concentrations above the surface drilling RBAL (260 $\mu g/m^3$) measured during the week;

<u>General Operations:</u>

- The AQM program operated as specified during the week ending May 9, 2015.

Regards,

Fallon Morton
Giant Mine Remediation Project
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May 15, 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 May 3

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:

- PM_{10} 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 May 3 – May 9, 2015:

Fenceline Network:

- Fenceline air quality monitoring started operations at all sites Friday April 10, 2015. Fenceline samplers are scheduled to run daily from 7 AM to 7 PM local time;

- No 15-minute average particulate matter less than 10 microns in diameter (PM_{10}) concentrations above the established Risk Based Action Level (RBAL) criteria were

measured at the fenceline monitoring stations during the week. PM_{10} concentrations measured at all fenceline locations remained typical of background concentrations;

- No 15-minute average total suspended particulate (TSP) concentrations above the established RBAL were measured at the fenceline monitoring stations during the week. TSP concentrations measured at all fenceline locations remained typical of background concentrations;

Community Stations:

- There were no continuous 24-hour average concentrations of particulate matter less than 2.5 microns in diameter ($PM_{2.5}$) and particulate matter less than 10 microns in diameter (PM_{10}) above the referenced criteria measured at the community stations during the week;

- Laboratory results from available TSP, PM_{10}, and trace metals (including arsenic) samples measured on April 18 and 24, 2015 at the community stations were less than the analytical detection limit and/or below the referenced criteria;

- Laboratory results for April 3, 2015 show exceedances of TSP and total iron were above the referenced criteria at the NAPS community station. Winds on April 3, 2015 were light and blowing from the south and southwest, thereby orienting the city upwind of the Giant Mine site. The 24-hour PM_{10} BAM concentrations at NAPS were above the referenced criteria on April 3, 2015, and by contrast, 24-hour PM_{10} BAM concentrations at the YCC and NDL community stations remained well below the standard, further indicating the high particulate concentrations observed at the NAPS station were likely caused by sources located within the immediate vicinity of the NAPS station. Conditions at the time, including: visual observations of road sand and road dust from snow melt; that the city was upwind of the Giant Mine site; and that elevated particulate concentrations isolated to the NAPS station, indicate measured concentrations above the ambient air quality standard were likely caused by local road dust.The PM_{10} HiVol sample collected on April 3, 2015 at NAPS was invalidated due to sampler motor;

- Laboratory results from available TSP, PM_{10}, and trace metals (including arsenic) samples measured on April 3, 2015 at the NDL and YCC community stations were less than the analytical detection limit and/or below the referenced criteria. Laboratory results from samples collected at the community stations after April 24, 2015 are pending;

- Laboratory results for April 21, 2015 show exceedances of TSP and total iron were above the referenced criteria at the NDL community station. The PM_{10} sample collected on April 21, 2015 at NDL was equal to the referenced criteria. YCC and NAPS community station TSP, PM_{10}, and trace metals (including arsenic) results from April 21, 2015 were below the referenced criteria. Winds on April 21, 2015 were light to moderate and blowing from the east, thereby orienting the NDL station upwind of the Giant Mine site. The 24-hour PM_{10} BAM concentrations at NDL were above the referenced criteria on April 21, 2015. Meanwhile, 24-hour PM_{10} BAM concentrations at the YCC and NAPS community stations remained well below the

standard, further indicating the high particulate concentrations observed at the NDL station were likely caused by sources located within the immediate vicinity of the NDL station. Fenceline concentrations remained low on April 21, 2015, with fenceline 15-minute PM_{10} concentrations below 10 µg/m^3. Visual observations of road dust from snow melt and road sand; that the NDL station was upwind of the Giant Mine site; low fenceline PM_{10} concentrations; and elevated particulate concentrations isolated to the NDL station indicate measured concentrations above the ambient air quality standard were likely caused by local road dust;

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Interim Underground Stabilization (IUS) (tailings work):

- Air quality monitoring of surface drilling in the B1 Pit was initiated on May 9, 2015 in preparation for remediation injection of tailings and paste mix materials;

- There were no 15-minute average PM_{10} concentrations above the surface drilling RBAL (260 µg/m^3) measured during the week;

General Operations:

- The AQM program operated as specified during the week ending May 9, 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.

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