

MVLWB Registry

From: Adrian Paradis <Adrian.Paradis@aandc-aadnc.gc.ca>
Sent: Monday, June 8, 2015 11:12 AM
To: Fallon Morton
Subject: Giant Mine Weekly Air Quality Report for the Week Ending May 30, 2015
Attachments: YELLOWKN-#690261-v1-giant_monitoring_weekly_air_quality_report_may_30_2015.PDF; Adrian Paradis.vcf

A summary of the Giant Mine ambient air quality monitoring program for the week ending May 30, 2015 is as follows:

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;
- There were no 15-minute average particulate matter less than 10 microns in diameter (PM₁₀) concentrations measured above the established Risk Based Action Level (RBAL) criteria at the fenceline monitoring stations during the week. PM₁₀ concentrations measured at fenceline locations were typical of seasonal 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 fenceline locations were typical of seasonal 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 (PM₁₀) above the referenced criteria measured at the community stations during the week;
- Laboratory results from available TSP, PM₁₀, and trace metals (including arsenic) samples collected on May 12, 18, and 19, 2015 at the community stations were less than the analytical detection limit and/or below the referenced criteria with exception to a total iron exceedance at the NAPS community station on May 6, 2015. Total iron concentrations at YCC and NDL community stations were more than ten times lower than concentrations at NAPS indicating the exceedances at NAPS were likely caused by sources in close proximity to the NAPS station. Laboratory analysis of community station filters collected on May 9 and after May 19, 2015 are pending;
- Laboratory analytical results received for asbestos samples collected on May 12, 2015 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 on April 15, 21, May 9, and after May 15, 2015 are pending;

Interim Underground Stabilization (IUS) (tailings work):

- Air quality monitoring at three (3) locations centred on surface drilling in the B1 Pit was initiated on May 9, 2015 in preparation for the injection of paste. An additional two (2) monitoring locations centred on the surface drilling near the freeze plant were added on May 18, 2015 and one (1)

more monitor was added on May 20, 2015. Two (2) monitors were removed on May 30, 2015, following conclusion of drilling in this area;

- Air quality monitoring at three (3) locations set on the west, north, and south perimeters of work activities in the Central and South Tailings Ponds was initiated on May 12, 2015. Two (2) additional samplers were deployed on May 14, 2015 to the western perimeters of the North and Central Tailings Ponds. One of the additional samplers was removed from the western perimeter on May 14, 2015;
- There were no 15-minute average PM₁₀ concentrations above the surface drilling RBAL (260 µg/m³) measured in the B1 Pit or freeze plant surface drilling during the week;
- There were no 15-minute average PM₁₀ concentrations above the tailings work RBAL (180 µg/m³) measured during the week;
- Analytical 24-hour arsenic results measured at four (4) locations near IUS work activities around the North and Central Tailings Ponds on May 15, 2015 were less than the analytical detection limit and/or below the referenced criteria with exception of Site T7 located on Dam 3 at the south perimeter of the South Tailings Pond. A 24-hour arsenic concentration (0.52 µg/m³) was measured at Site T7 that was above the Ontario Ambient Air Quality Standard (AAQS) of 0.3 µg/m³ however it was well below the risk based worker protection criteria of 10 µg/m³;
- Analysis of unanalysed filter results collected May 9 – May 23, 2015 for the monitoring of tailings work areas and surface drilling is pending and/or on hold pending request for analysis;

General Operations:

- The AQM program operated as specified during the week ending May 30, 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@aadnc-aadnc.gc.ca.

Sincerely,

Adrian Paradis

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June 8, 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 30, 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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- There were no 15-minute average particulate matter less than 10 microns in diameter (PM₁₀) concentrations measured above the established Risk Based Action Level (RBAL) criteria at the fenceline monitoring stations during the week. PM₁₀ concentrations measured at fenceline locations were typical of seasonal background concentrations;

- No 15-minute average total suspended particulate (TSP) concentrations above the established RBAL were measured at the fence line monitoring stations during the week. TSP concentrations measured at fence line locations were typical of seasonal 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 (PM₁₀) above the referenced criteria measured at the community stations during the week;
- Laboratory results from available TSP, PM₁₀, and trace metals (including arsenic) samples collected on May 12, 18, and 19, 2015 at the community stations were less than the analytical detection limit and/or below the referenced criteria with exception to a total iron exceedance at the NAPS community station on May 6, 2015. Total iron concentrations at YCC and NDL community stations were more than ten times lower than concentrations at NAPS indicating the exceedances at NAPS were likely caused by sources in close proximity to the NAPS station. Laboratory analysis of community station filters collected on May 9 and after May 19, 2015 are pending;
- Laboratory analytical results received for asbestos samples collected on May 12, 2015 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 on April 15, 21, May 9, and after May 15, 2015 are pending;

Interim Underground Stabilization (IUS) (tailings work):

- Air quality monitoring at three (3) locations centred on surface drilling in the B1 Pit was initiated on May 9, 2015 in preparation for the injection of paste. An additional two (2) monitoring locations centred on the surface drilling near the freeze plant were added on May 18, 2015 and one (1) more monitor was added on May 20, 2015. Two (2) monitors were removed on May 30, 2015, following conclusion of drilling in this area;
- Air quality monitoring at three (3) locations set on the west, north, and south perimeters of work activities in the Central and South Tailings Ponds was initiated on May 12, 2015. Two (2) additional samplers were deployed on May 14, 2015 to the western perimeters of the North and Central Tailings Ponds. One of the additional samplers was removed from the western perimeter on May 14, 2015;
- There were no 15-minute average PM₁₀ concentrations above the surface drilling RBAL (260 µg/m³) measured in the B1 Pit or freeze plant surface drilling during the week;
- There were no 15-minute average PM₁₀ concentrations above the tailings work RBAL (180 µg/m³) measured during the week;

- Analytical 24-hour arsenic results measured at four (4) locations near IUS work activities around the North and Central Tailings Ponds on May 15, 2015 were less than the analytical detection limit and/or below the referenced criteria with exception of Site T7 located on Dam 3 at the south perimeter of the South Tailings Pond. A 24-hour arsenic concentration ($0.52 \mu\text{g}/\text{m}^3$) was measured at Site T7 that was above the Ontario Ambient Air Quality Standard (AAQS) of $0.3 \mu\text{g}/\text{m}^3$ however it was well below the risk based worker protection criteria of $10 \mu\text{g}/\text{m}^3$;
- Analysis of unanalysed filter results collected May 9 – May 23, 2015 for the monitoring of tailings work areas and surface drilling is pending and/or on hold pending request for analysis;

General Operations:

- The AQM program operated as specified during the week ending May 30, 2015.

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Sincerely,



Adrian Paradis
Regulatory Manager
Giant Mine Remediation Project

c.c.: Distribution List