From: Geneva Irwin <Geneva.Irwin@aandc-aadnc.gc.ca>
Sent: Friday, July 15, 2016 10:47 AM
Subject: Air Quality Monitoring Weekly Summary Week ending in July 9

Good Morning,

A summary of the Giant Mine ambient air quality monitoring program (AQM) for the week ending July 9, 2016 is as follows:

Fenceline Network:

- No 15-minute average particulate matter less than 10 microns in diameter (PM_{10}) concentrations above the established Risk Based Action Level (RBAL) of 159 µg/m^3 were measured at the fenceline monitoring stations during the week. Elevated PM_{10} concentrations above the normal background were measured at fenceline locations during the week and were likely caused by smoke from regional forest fires;

- No 15-minute average total suspended particulate (TSP) concentrations above the established RBAL of 333 µg/m^3 were measured at the fenceline monitoring stations during the week. Elevated TSP concentrations above the normal background were measured at fenceline locations during the week and were likely caused by smoke from regional forest fires;

- Laboratory results of arsenic concentrations from samples collected on June 14 and 17, 2016 at the Fenceline E-Sampler locations were less than the analytical detection limit and/or below the referenced standards. Laboratory analysis of arsenic filter samples collected after June 17, 2016 are pending.

Community Stations:

- Twenty-four (24) hour average concentrations of $PM_{2.5}$ and PM_{10} were measured above the referenced standards at the community stations on July 4, 2016. No other twenty-four (24) hour average concentrations of $PM_{2.5}$ and PM_{10} were measured above the referenced standards at the community stations during the week. $PM_{2.5}$ and PM_{10} concentrations during the week were above normal the normal background and were likely affected by smoke from regional forest fires;

- A $PM_{2.5}$ 24-hour average concentration of 31 µg/m^3 was measured above the referenced standard of 28 µg/m^3 at the NAPS community station on July 4, 2016. Winds on this day were blowing from the north in the morning hours and changed to a southerly wind direction in the afternoon hours, placing the NAPS station downwind of Giant Mine in the morning and upwind in the afternoon and evening. Elevated $PM_{2.5}$ concentrations were observed through the day at the NAPS station and also at the NDL and YCC stations. Elevated $PM_{2.5}$ concentrations appear to be the result of smoke from regional forest fires;

- A PM_{10} 24-hour average concentration of 51 µg/m^3 was measured above the referenced standard of 50 µg/m^3 at the YCC community station. Winds on this day were blowing from the north in the morning hours and changed to a southerly wind direction in the afternoon hours, placing the YCC station downwind of Giant Mine in the morning and upwind in the afternoon and evening. Elevated PM_{10} concentrations were observed throughout the day however one hour concentrations of 256 µg/m^3 measured at 3:00 PM MST and 137 µg/m^3 measured at 7:00 PM MST due to localized vehicle traffic were observed resulting in the PM_{10} 24-hour average exceedance;

- Laboratory results from TSP, PM_{10}, and trace metals (including arsenic) samples collected on June 12, 14, and June 17, 2016 at the community stations were less than the analytical detection limit and/or below the referenced standard. Laboratory analysis of community station filters collected after June 8, 2016 are pending;

    - Laboratory results from asbestos samples collected on June 20, 2016 at the community stations were less than the analytical detection limit and/or below the referenced standard. Laboratory analysis of asbestos samples collected at the community stations after June 20, 2016 are pending.

Stope Borehole Drilling Program:

- Air quality monitoring specific to the stope borehole drilling program was conducted at three locations within the vicinity of A1 Pit and two locations within the vicinity A2 Pit near active drilling operations and at four locations at the mine vents and the intake opening;

- There were no 15-minute average PM_{10} concentrations above the surface drilling RBAL of 260 µg/m^3 measured at the monitors located in the vicinity of drilling operations during the week;

- One 15-minute average PM_{10} concentration above the underground vent monitoring RBAL of 300 µg/m^3 was measured at the mine intakes and vent openings at the 1-38 Portal at 1:30 PM MST on July 8, 2016. Site investigations indicated the 15-minute average PM_{10} concentration above the RBAL was due to underground work crews exiting the mine through the 1-38 Portal. There were no other PM_{10} concentrations measured above the RBAL at vent monitoring sites during the week;

- Analytical 24-hour arsenic results from samples collected after June 17, 2016 are pending.

General Operation:

- The AQM program operated as specified during the week ending July 9, 2016, with the following exception:

    - On Friday July 8, 2016 the DustTrak air monitor monitoring fenceline location G-West did not record five 15-minute average concentrations from 4:30 AM to 5:45 AM MST due to battery failure;

    - On Saturday July 9, 2016 at 5:45 AM MST the E-Sampler air monitor located at the south end of the A1 Pit malfunctioned requiring it to be replaced. Five 15-minute averages were not collected while SLR technicians replaced the unit.

SIncerely,

Natalie Plato