



Diavik Diamond Mines (2012) Inc.
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Charlie Catholique, Chair
Environmental Monitoring Advisory Board
PO Box 2577
Yellowknife, NT, X1A 2P9
Canada

4 May 2020

Dear Mr. Catholique,

Subject: DDMI Response to EMAB's Recommendation to Sample Yellow Haze at Diavik

This letter is in response to the Environmental Monitoring Advisory Board's (EMAB) letter of March 6, 2020, regarding EMAB's recommendation that Diavik Diamond Mines (2012) Inc. (DDMI) initiate a sampling program for a "yellow haze" at the Diavik Mine.

Recommendation DDMI-EAQ-15:

Sample the yellow haze and report on its chemical make-up and concentration, or develop a program to sample it.

Response to DDMI-EAQ-15:

DDMI notes that it is unaware of a "yellow haze" at the Diavik Mine and is uncertain about EMAB's source of this information. DDMI has not observed a "yellow haze" above the Diavik Mine nor provided a record of such an event in any monitoring report. For these reasons, DDMI is not able to develop a program to sample it and report on the chemical make-up.

Regarding EMAB's theory that combustion gases, particularly nitrogen dioxide (NO₂), may be responsible for the apparent "yellow haze" event at Diavik, DDMI notes the following project predictions, monitoring and adaptive management:

- The 1999 Diavik Environmental Assessment Report predicted the Diavik Diamond Mine Project would not have a significant effect on air quality.
- DDMI's 2012 Air Dispersion Modelling Assessment for the Diavik Mine predicted that maximum 24-hour concentrations of NO₂ is lower than the air quality criteria in the vicinity of the Diavik Mine.
- Annually, DDMI reports on NO₂ output as part of the Federal National Pollutant Release Inventory (NPRI) program and summarizes this information in the Annual Air Quality Report. NPRI substance emissions are derived by DDMI using emission factor calculations in Environment and Climate Change Canada's NPRI Toolbox. Results are tracked year-over-year and any changes in trends are explained as part of the NPRI reporting requirements.

- DDMI monitors the receiving environment that is potentially impacted by air emissions through the Aquatic Effects Monitoring Program and the Lichen and Vegetation Program.
- DDMI continues to implement environmental programs and site-wide initiatives to reduce NO₂ emissions to the atmosphere, including the following:
 - Installation of four (4) wind turbines (4 x 2.3 MW), reducing annual diesel fuel consumption by approximately 10 percent.
 - Implementation of policies that limit vehicle idling and reduce overall vehicle count at the Diavik Mine.
 - Use of ultra-low Sulphur (approximately 4.3 parts per million) diesel fuel.
 - Aircraft/flight optimization to reduce air traffic.
 - Use of heat recovery systems in electrical generators.
 - Utilizing incinerators designed as best available technology.

In summary, DDMI monitoring programs have not recognized significant impacts to the environment linked to air emissions. Despite stable environmental conditions, the operation continuously strives to improve management controls at the Diavik Mine to mitigate potential impacts to the environment, including air quality. In the future, DDMI encourages EMAB to bring forward recommendations of additional measures to improve existing mitigation efforts, where possible.

Please do not hesitate to contact the undersigned if you have any questions related to this submission.

Yours sincerely,



Sean Sinclair,
Principal Advisor, Environment and Closure Readiness

cc: John McCullum, EMAB