



Snap Lake Environmental Monitoring Agency
Main Floor, Lahm Ridge Tower
4501 Franklin Avenue
P.O. Box 95, Yellowknife, NT X1A 2N1
Phone: 867-765-0961 FAX: 867-765-0963
Website: www.slema.ca

File: Air Quality, Meteorological Monitoring and Emissions Reporting 2006
Annual Summary

Comments – Air Quality, Meteorological Monitoring and Emissions Reporting
2006 Annual Summary (2006 AQMMERAS)

Author – Zhong Liu

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General Comments

- The document presents necessary information and discussion for air quality, meteorological monitoring and emissions reporting.
- The data recovery rate for air quality monitoring is a problem. Equipment failure and field accessibility in cold weather seem to be the reasons. De Beers should take more proactive measures (both appropriate equipment and proper management) to improve air quality monitoring, especially for TSP, PM₁₀ and PM_{2.5}.

Comments on Chapter 3

- Section 3.1.3, p20: It is stated that the data recovery for total suspended solids (TSP) was only 29.4%. The data collection was from May to October. The data recovery is too low and the data collected would not reflect the year-round TSP distribution. The measure to improve the TSP monitoring under cold weather (<-20°C) was confirmed by the site visit of SLEMA Environmental Analyst on October 4, 2007.
- Section 3.1.3, p24: No data for fine and coarse particulate (PM_{2.5} and PM₁₀) were collected in 2006. Even if the cold weather resulted in equipment failure, a certain data recovery rate should be reached for fine and coarse particulate monitoring while the temperature is above 0°C from May to October. De Beers should provide further explanation/discussion for the data absence of PM_{2.5} and PM₁₀.
- Section 3.2.3, p25: The dustfall monitoring results are not available in June and October “when the field samples were not accessible”. It is noticed that the dustfall station DF-008 is co-located with TSP station HV-005 and DF-009 is co-located with HV-004. If TSP monitoring result is available in June for HV-005 (155µg/m³ on June 13, 2003, page 24), how come dustfall monitoring was not accessible for DF-008, which is co-located with HV-005?

Comments on Chapter 5

- Section 5.1, p40: The total amount of 2006 diesel consumption (16,164,194 L/yr) in Table 5-1 and Table 5-3 is different from the number (16,156,285 L/yr) in page ii of the Executive Summary. One of them might



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be a typo, because the gasoline consumed (7,910 L/yr) was considered as equivalent diesel. One more note for the equivalent diesel amount was recommended to be added into Table 5-1 and Table 5-3 to clarify the ambiguity. In addition, how was the gasoline divided into “equivalent” regular sulphur diesel fuel (RSD) and “equivalent” low sulphur diesel fuel (LSD)?

- Section 5.1, p40: The emission rates of SO₂ and NO_x in Table 5-1 and Table 5-2 are slightly different. Correction is recommended.
- Section 5.1, p41: The total emission rate in Table 5-2 is the sum of SO₂, NO_x, TSP, PM₁₀ and PM_{2.5}. That is not reasonable, because both PM₁₀ and PM_{2.5} are subsets of TSP. The emissions and predictions of TSP include the PM₁₀ and PM_{2.5} fractions. As a result, if the total emission rate is calculated, it will be the sum of SO₂, NO_x, and TSP. Correction is recommended.
- Section 5.1, p42: Based on the Air Quality and Emissions Management Plan (February 2006), fugitive emissions of particulate matters from road dust resulting from vehicular traffic, within facility roads, may be significant. No estimation of this part emission seemed to be carried out. Why?
- Section 5.2, p43: There is a typo in the last sentence, and it should be “the change from 2004 is 37.59kt and the change from 2005 is 20.31kt”.