



SLEMA  
October 2010  
Environmental Update

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October 31, 2010

# Outline

1. Mine Update
2. Inspection Update
3. Regulator Update
4. Reviews
5. SLEMA 2009-2010 Annual Report



# Acronyms

- AEMP – Aquatic Effects Monitoring Program
- ARD – Acid Rock Drainage
- DFO – Fisheries and Oceans Canada
- ENR – Department of Environment and Natural Resources, GNWT
- GNWT – Government of the Northwest Territories
- INAC – India and Northern Affairs Canada
- MVLWB – Mackenzie Valley Land and Water Board
- PK – Processed Kimberlite
- SLEMA – Snap Lake Environmental Monitoring Agency
- SNP – Surveillance Network Program
- TDS – Total Dissolved Solids
- WEMP – Wildlife Effects Monitoring Program
- WTP – Water Treatment Plant
- WMP – Water Management Pond



# 1.1 Mine Update – September 2009

- Production rate: 80.9% of its capacity (76,495 tonnes of kimberlite processed)
- 5,459 m<sup>3</sup> of water withdrawn from Snap Lake
- 625,403 m<sup>3</sup> of treated water discharged into Snap Lake
- 63,700 tonnes of coarse reject and 56,651 m<sup>3</sup> of slimes deposited in the North Pile
- 10 spills (no reportable spills)
- Water sampled in 6 monitoring stations
  - The monthly average for all parameters met compliance
    - except for Faecal Coliform of Member Bioreactor effluent
- Ongoing construction of the East Cell Sump #3-5 and permanent camp



# 1.2 De Beers Response to Inspector's Questions on June and July 2010 SNP Reports

- Dated October 5, 2010
  - Assurance for future TSS compliance
  - Elevated TSS and Zinc concentrations in uncontrolled runoff
  - Calibration of field pH meter
- INAC Inspector requested further detail on the above questions on October 6
  - De Beers replied on October 18, 2010



## 2. Inspection Update

- INAC Inspector – Tracy Covey
- No inspection reports received in October 2010



## 2.1 Overdue SNP Report

- INAC Inspector letter dated October 4, 2010
  - One report summarizing SNP data and related information was due on September 30
  - No report received by October 4
  - Timely SNP reports submission required
- Response from De Beers on October 4
  - SNP August Report submitted on October 4
  - Technical problem with De Beers servers on the week of September 27 to October 1 caused the delay



# 3. Regulator Update

- Community Workshop
  - Diamond Mines Wildlife Monitoring Program Revisions





# 3.1 Community Workshop for Diamond Mines Wildlife Monitoring Program Revisions

- Tree of Peace, Yellowknife
- October 5 and 6, 2010
- Facilitated by Joe Handley and Joanne Barnaby
- Participants
  - Elders from 5 aboriginal communities
    - Tlicho, YKDFN, LKDFN, Kugluktuk, and NSMA
  - Representatives from Ekati Mine, Diavik Mine, and Snap Lake Mine
  - Observers from GNWT/ENR, IEMA, EMAB, SLEMA, NSMA, Tlicho



# 3.1 Community Workshop for Diamond Mines Wildlife Monitoring Program Revisions

## ➤ Agenda

- Traditional Knowledge discussion
  - Presentations and discussions
    - Raptor
    - Wolverine
    - Grizzly bear
    - Dust and caribou
  - TK presentations
    - Tlicho study group
    - Lutsel Ke study group
- GNWT/ENR



# 3.1 Community Workshop for Diamond Mines Wildlife Monitoring Program Revisions

- Diamond mine presented their proposed change of wildlife monitoring and asked help from elders for their TK to refine wildlife monitoring programs
- Elders shared their opinions with participants



# 4. Reviews

- Annual Reports Submission
  - Environmental Agreement 2009 Agreement was submitted on October 27, 2010
    - Being reviewed
- 5-Year AEMP Review and Conceptual AEMP Update



# 4.1 Annual Reports Submission

- Annual reports except Water Licence 2009 Annual Report (including AEMP and ARD) were past due

Reporting Requirements	Submission Due Date
Water Licence •AEMP, ARD, <i><u>Hydrology</u></i>	March 31 of Each Year
Fisheries Authorization • <u>DO, TDS</u>	July 31 of Each Year
<u>Environmental Agreement</u> • <u>Wildlife, Air Quality, Vegetation</u>	June 30 of Each Year (De Beers voluntary due date, based on the agreement with Jason Ash, De Beers Permitting/ Environmental Superintendent, on January 21, 2010)



## 4.2 5-Year AEMP Review and Conceptual AEMP Update

- Submitted on September 30, 2010
- Overall the document is of good quality, and presents reasonable details on the update of the AEMP 5-year review



## 4.2 5-Year AEMP Review and Conceptual AEMP Update

- De Beers committed an engagement process with stakeholders for Modeling, TDS benchmark, Effluent Quality Criteria and best available technologies study
- Under each AEMP component, key results/trends would be illustrated graphically or in table format, with statistical testing of trends where appropriate



## 4.2 5-Year AEMP Review and Conceptual AEMP Update

- Weight-of-evidence analysis will be used to integrate the results of individual monitoring components such as water quality, sediment quality, plankton, benthic invertebrate and fish
- Updated AEMP will function within an adaptive management framework, in which pre-defined effect levels will be linked to mitigation in a Management Response Plan outside the AEMP





# 5. SLEMA 2009-2010 Annual Report

- Being drafted
- Outline
  - Message from the Chairperson
  - What is SLEMA
  - Snap Lake Diamond Mine
  - Agency Activities 2009-2010
  - Assessment of the Mine
  - Assessment of Regulators
  - Financial Report

