



April 2015  
Environmental Update  
for SLEMA Board

Zhong Liu  
April 30, 2015

# Outline

1. Mine Update
2. Inspection Update
3. Regulators' Update
4. Aboriginal Update
5. Stakeholders' Update
6. Agency's Activities
7. SLEMA Reviews
8. Water Licence Amendment Application



# Acronyms

- AANDC – Aboriginal Affairs and Northern Development Canada
- AEMP – Aquatic Effects Monitoring Program
- ARD – Acid Rock Drainage
- DFO – Fisheries and Oceans Canada
- CCME – Canadian Council of Ministers of the Environment
- CEQG – Canadian Environmental Quality Guidelines
- EC – Environment Canada
- ENR – Department of Environment and Natural Resources, GNWT
- EQC – Effluent Quality Criterion
- GNWT – Government of the Northwest Territories
- MVLWB – Mackenzie Valley Land and Water Board
- PK – Processed Kimberlite
- SLEMA – Snap Lake Environmental Monitoring Agency
- SNP – Surveillance Network Program
- SSWQO – Site-Specific Water Quality Objective
- TDS – Total Dissolved Solids
- WEMP – Wildlife Effects Monitoring Program
- WTP – Water Treatment Plant
- WMP – Water Management Pond



# 1.1 Mine Update – March 2015

- Production rate: 105.8% of its capacity (103,281 tonnes of kimberlite processed)
- 23,351 m<sup>3</sup> of water withdrawn from Snap Lake
- 1,415,464 m<sup>3</sup> of treated water discharged into Snap Lake
- 81,675 tonnes of coarse reject and 55,848 m<sup>3</sup> of slimes deposited in the North Pile
- Two Reportable spill
- Water sampled in 7 monitoring stations
  - The monthly average for all parameters met compliance



## 1.2 Spill Reporting in April 2015

- No spill reports received in April 2015



# 1.3 Correspondence re RO Pilot-Feasibility Study-Permit Requirements

- De Beers asked question on RO implementation on April 9, 2015
  - *“The license won’t come into effect until the summer at the earliest but work will need to be undergone sooner- can we assume the work is approved in principle and therefore we only need to provide notice? Would the 90 day timeline still apply?”*
  - *Do we require a land use permit amendment for this work as it is not covered in the consolidated project description?*
  - *To facilitate work can we pour the pad sooner provide the notification for the rest of the work at a later date?”*



# Responses from the MVLWB

- *“Question 1 – you still have to meet the requirements of your current WL and LUP’s.*
- *Question 2 and 3: Because this is an addition to the WTP which was considered in the original Project Description Report Figures 3 and 4 and within site infrastructure please submit notification to the Board and inspector in accordance with conditions 13 and 14 (if applicable) of LUP MV2010D0053.*
- *To be clear this is for the installation of the pilot study RO unit to conduct the feasibility study only. Once the feasibility study is complete and DB submits the final RO treatment request document a larger review process may be required.”*



# 1.4 Piezometer/thermistor Installation

- Notification dated April 15, 2015
  - To provide 48 hour written notification that De Beers intends to carry out piezometer and thermistor instrumentation for the West Cell Development beginning April 18th, 2015



# 1.5 Drinking Water Aesthetic Objective Guideline Chloride Low Action Level Triggered

- Notice dated April 22, 2015
  - The Chloride concentration at SNP 02-20e ( ) 192 mg/L) and SNP 02-20f (191 mg/L) were above 75% of the Aesthetic Objective (250 mg/L) on March 22, 2015, therefore the low action level was triggered
  - The proposed action is to notify stakeholders, and no further action is recommended at this time



# 1.6 Ceriodaphnia Dubia Response Plan

- Submitted on April 30, 2015
  - Titled Ceriodaphnia Dubia Low Action Level Triggered – Context, Significance, and Recommendation



## 2. Inspection Update

- Inspector – Jamie Steele
- Land Use Permit Inspection
  - March 4, 2015
  - Inspected the Incinerators
  - No concerns were noted



The Snap Lake Mine uses two dual chambered forced air incinerators to dispose of combustible waste such as food and camp waste. The west incinerator (nearest to the camera) was burning waste at the time of inspection and the east one was not



Signage posted at the loading point for each of the incinerators indicated to the operators what wastes are not acceptable for incineration



Stack emissions from the West incinerator were clear with no black smoke



Wasted plastics are collected in the kitchen and sent to Waste Management for recycling



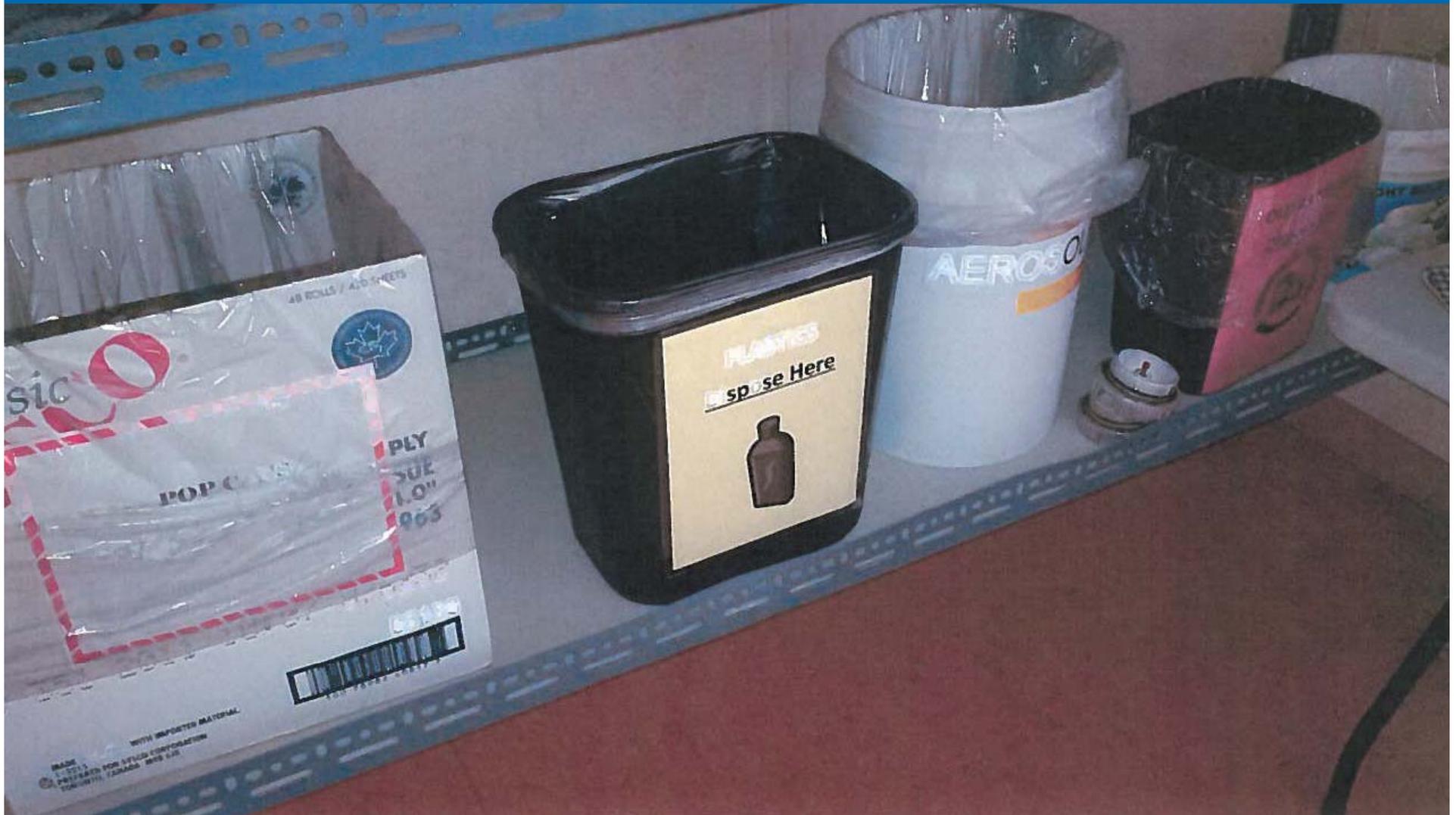
# Waste management poster indicating how to direct each waste stream

## SNAP LAKE MINE DOMESTIC AND MINE DRY WASTE GUIDE

Waste Stream	Destination
<ul style="list-style-type: none"> <li>Paper towels</li> <li>Paper products</li> <li>Food waste</li> <li>Food impacted plastic</li> <li>Food wrappers</li> <li>Used bounce sheets</li> <li>Newspapers</li> </ul>	INCINERATOR
<ul style="list-style-type: none"> <li>Outfitting</li> <li>Shoes</li> <li>Plastics</li> <li>Small tools</li> <li>Ear plugs</li> <li>Rubber boots</li> <li>Rubber gloves</li> <li>Safety glasses and wrappers</li> <li>Drinking water bottle caps</li> <li>Bubble wrap</li> </ul>	LANDFILL
Plastic bottles only	RECYCLING
Aluminum pop cans	RECYCLING
Shaving cream	OFF-SITE DISPOSAL
Deodorant	OFF-SITE DISPOSAL
Aerated air sprays	OFF-SITE DISPOSAL
Alkaline batteries	OFF-SITE DISPOSAL
Household hazardous substances	OFF-SITE DISPOSAL

If you have any further questions contact Environment!

Waste segregation stations are placed in several locations around the Accommodations Facility. This one was located in one of the laundry rooms



The Inspector noted that some waste bags in the Accommodations Facility destined for incineration included small amounts of unavoidable plastics. Tearing open each individual bag for incineration is not practical. The next steps for plastics reduction in the incinerator waste stream could include reduction through substitution or other similar waste reduction strategies



### 3. Regulators' Update – MVLWB (I)

- The MVLWB approved the submission date of April 30, 2015 De Beers proposed for the AEMP Response Plan, on April 23, 2015



# Responses from True North Safari

## ➤ Gary Jaeb

- “I thought that the DeBeers monitoring plan would involve Mackay Lake Lodge as we are down stream from them and have already caught one three eyed grayling on the King River.
- We were informed today that we are not included in the DeBeers monitoring plan with no explanation.
- Please advise what our recourse may be.
- I may apply for a court injunction to stop the activities and effects of the mines on our traditional activities”



## 3. Regulators' Update – MVLWB (II)

- The MVLWB invited reviewers to submit comments on Water Licence 2014 Annual Report on April 30, 2015
  - Due on May 20, 2015



# 3. Regulators' Update - Lands

- The Department acknowledged receipt of the security deposit on April 2, 2015
  - Irrevocable Letter of Credit (ILOC) dated March 31, 2015, for the total amount of \$1,156,826.00



# 4. Aboriginal Update

- YKDFN Commented the AEMP Low Action Level Triggered for Aesthetic Drinking Water via e-mail on April 7, 2015



## 4.1 YKDFN Comments on the AEMP Low Action Level Triggered for Aesthetic Drinking Water (I)

- *“as far as we are aware, there was nothing provided from the project that provided information that would address the triggering of this action level. : If you’re not going to do anything about the drinking water quality (and I think we can all agree that you’re not going to...), why did the project even propose it as a part of the Response Framework?”*



# 4.1 YKDFN Comments on the AEMP Low Action Level Triggered for Aesthetic Drinking Water (II)

- *“It’s getting to the point where I no longer understand the purpose the Response Framework – as you’ve now tripped this low action level and are proposing to do nothing. As far as I can remember (off the top of my head), this response is similar to every other case (TDS, Air Quality, Cesium and Thallium) where the response has been the same – no management action. Just out of interest as this is the 5th or 6th one of these that the project has sent out now. Have any of them actually resulting in action? If not, what comfort should anyone be drawing from this requirement other than we get a notification that something is amiss (which is one improvement over the Adaptive Management Plan they replaced)?”*



# De Beers' Responses (I)

- *“The Aesthetic objective was proposed by stakeholders based on the previous license in the second AEMP technical session that I believe you were present at. As per the response framework, the low action levels are triggered at a very conservative level so that action (if any) and sources can be discussed prior to an objective hitting a “no go” threshold.”*



# De Beers' Responses (II)

- *“As you will recall, in all but one case (aesthetic objective) a special study was triggered. For the Aesthetic objective, it is being changed and as such will be revised in the AEMP update. For the other action level triggers, strontium and cesium a desktop study of impacts and sources was initiated to understand the change. For ceriodaphnia, it triggered additional monitoring to confirm results. Based upon the intent of the response framework it is performing as intended as an early warning system.”*



# De Beers' Responses (III)

- *“Can I understand from your email that in the next iteration of the response framework that the YKDFN would like higher thresholds to be set so that they are action and not study based?”*



# 5. Stakeholders' Update

- Environment and Natural Resources (ENR) commented on AEMP Low Action Level Triggered for Aesthetic Drinking Water on April 1, 2015
- ENR commented Emergency Response Plan on April 16



## 5.1 ENR Comments on AEMP Low Action Level Triggered for Aesthetic Drinking Water

- *“As noted in the memo, De Beers is currently undergoing a regulatory review of its Water Licence to increase the whole-lake TDS limit in their Water Licence as well as adding an end-of-pipe TDS limit.*
- *At this point in time a final Board decision has not been made. However, the cause of the TDS exceedence is understood and there is a potential that TDS limits will be increased in an amended Water Licence. Thus, at this time, no action is warranted. Following a decision by the Board, the current low action level related to this parameter may require revision or updating.”*



# De Beers' Response

- *“De Beers concurs with the GNWT ENR's recommendation and looks forward to re-evaluating the AEMP action levels with all stakeholders upon the conclusion of the Water Licence Amendment.”*



# 5.2 ENR Comments Emergency Response Plan

- ENR “has no comments or recommendations for the consideration of the Board at this time”



## 6. Agency's Activities

- SLEMA staff held a meeting with Matthew Seaboyer (ENR) and Dave Fox (EC), discussing about the air quality issues, especially De Beers incinerators' stack testing results on April 1, 2015
- SLEMA issued a comment letter about the draft Water Licence for the December 2013 Amendment Application on April 13
- SLEMA Executive Meeting held on April 29



# 7. SLEMA Reviews

- 2014 Annual Wildlife Effects Monitoring Program Report
- 2014 Annual Wildlife and Wildlife Habitat Protection Report
  - The above two annual reports will be reviewed by an independent expert
- 2014 Water License Annual Report



# 7.1 2014 Water License Annual Report

- Submitted on March 31, 2015, with 4 Appendices
  - Geotechnical Monitoring Program Summary for the Period 1999-2014
  - Acid/Alkaline Rock Drainage and Geochemical Characterization Plan Adaptive Management Action Levels
  - Summary of September 2014 Geotechnical Site Inspection of North Pile Facility and Water Management Pond Dams
  - Acid/Alkaline Rock Drainage (ARD) and Geochemistry Characterization 2014 Annual Report



# Updates in the 2014 WLAR (I)

- Construction activities undertaken in 2014 included the following:
  - Construction of a 10 million litre tank and containment for fuel.
  - Completion of the modular water treatment plant.
  - Re-commissioning of the 500,000 litre tank farm.
  - Completion of the new sewage treatment plant in the Utilities building.
  - Installation of a new generator
  - Installation of a new overhead crane in the mechanical shop.
  - A permanent winter road access was constructed.
  - Continuation of East Cell construction



# Updates in the 2014 WLAR (II)

- A summary of updates or changes to the process or facilities required for the management of water and wastewater include the following:
  - A clean water pumping system was added with a 4,800 cubic meters per day capacity
  - A portable pump station was installed in a lower ramp with a 12,000 cubic meter per day capacity
  - The underground main settling station receives mine inflow water via a series of sumps with pumps
  - Two water treatment modules for total suspended solids were added to the water treatment plant system. These modules treat 10,000 cubic meters per day total
  - Inline chloride meters were installed and continue to be monitored



# Updates in the 2014 WLAR (III)

- The groundwater model predicts future mine inflow rates will be 60,000 m<sup>3</sup>/day and will occur during 2017. TDS concentration of this inflow water will range from 600-1,500 mg/L. It is generally accepted that inflow rates will decrease once mining advances below the permafrost
- Updates to the *Spill Contingency Plan*
  - Use of the landfarm for storage of hazardous materials



# Updates in the 2014 WLAR (IV)

- The Paste Line (N41) has been tied into the high density slurry line (N46). This will permit using the paste pumps to pump a thicker product into the cells. The centrifugal pump has been replaced with positive displacement pump to reduce waste water to North Pile 25-30%



# Updates in the 2014 WLAR (V)

- There were three exceedances of the Aquatic Effects Monitoring Plan in 2014 which triggered action level responses:
  - a Cesium and Thallium exceedance of the low action threshold,
  - a TDS exceedance for the low action level for whole-lake average at SNP 02-18 stations; and
  - a low action level for toxicity (Ceriodaphnia dubia)



# Updates in the 2014 WLAR (VI)

- Monitoring results for Reference Lake 13 have been included below to provide a comparison between pre-construction and post winter road use. Results demonstrate there were no significant impacts from traffic on the winter road



# Comments from the Environmental Analyst (I)

- It is stated in Section 7 that the total amount of minewater pumped from the mine to the WMP during 2014 was 2,931,362 m<sup>3</sup>. The number might not be right. Based on December 2014 SNP Monthly Report, the amount of minewater from the underground to the WMP is 700,231 m<sup>3</sup>. Correction is requested
- Table 7-1 is titled Minewater Discharge to Water Treatment Plant. The total amount of water from the underground clear water system is 3,899,078 m<sup>3</sup> in Table 7-1, but not all of them was pumped to the WTP. Based on December 2014 SNP Monthly Report, 3,198,847 m<sup>3</sup> of water to the WTP, and 700,231 m<sup>3</sup> of water to the WMP. As a result, Table 7-1 may have to be modified
- There is a typo or calculation error for Table 8-1. The annual total of South Pit to WTP appears to be 42,000, rather than 800



# Water Balance

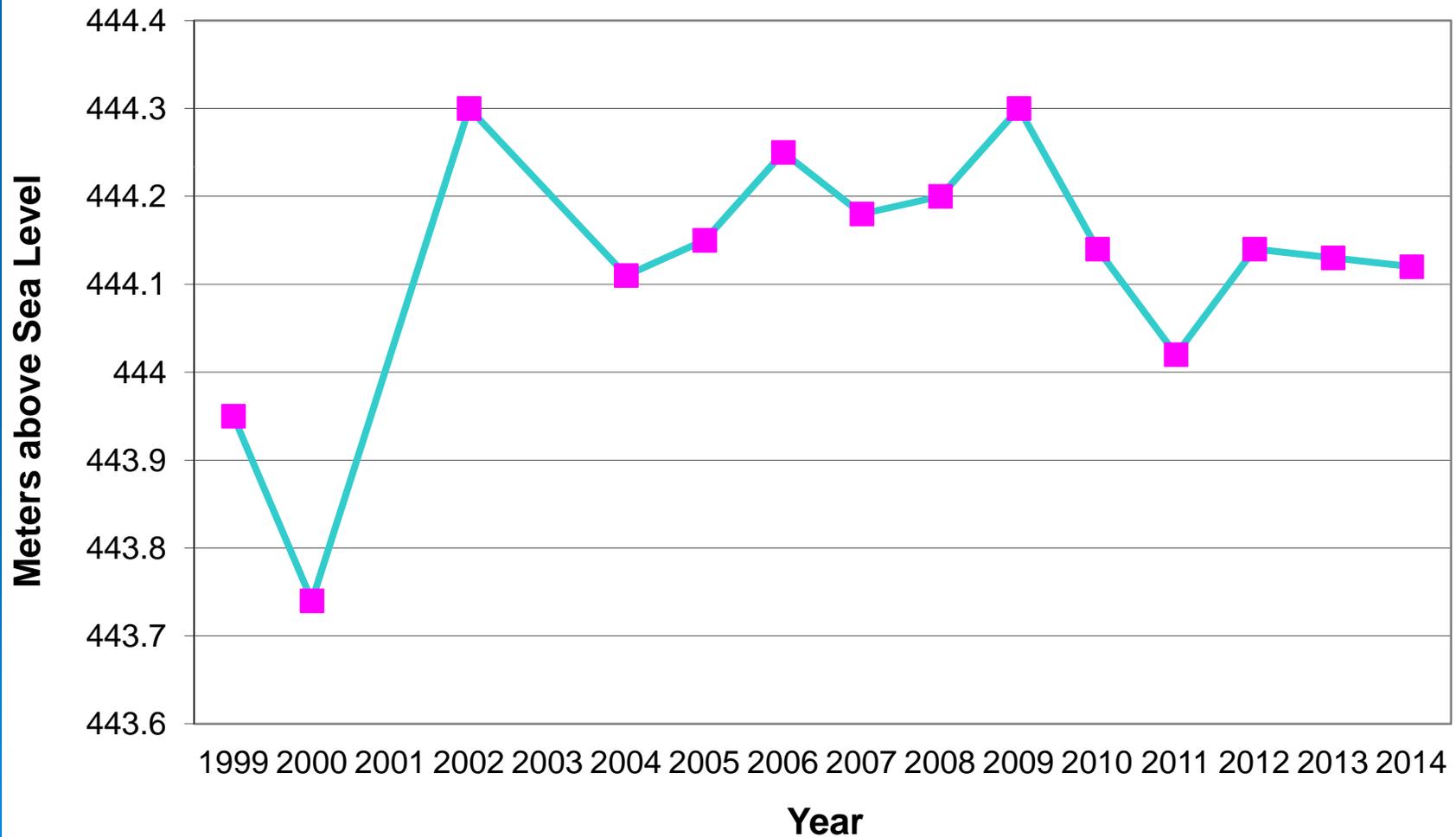
- Based on the data from the WLAR 2014 and SNP monthly reports, the following water balances are established for the Water Management Pond (WMP) and Water Treatment Plant (WTP)

In cubic meters	WMP	WTP
Inflow	2,478,251	18,308,079
Outflow	2,931,362	18,478,061
Note	The outflow is more than inflow, making water level lower and preparing storage room for 2015 freshet. It is acceptable.	The inflow is roughly equal to the outflow. The water balance is acceptable.



# Water Levels in Snap Lake Appear not to Be Impacted by the Mining Operation

## Water Elevations in Snap Lake



# Comments from the Environmental Analyst (II)

- Section 17 does not report the SNP 02-18 data and the monthly average data for SNP 02-17B. Otherwise, the complete data reporting will support the understanding of the following exceedances
  - Section 34 reports the exceedance of whole lake average TDS concentration at SNP 02-18
  - Section 23 and 25 report the exceedances of monthly average chloride concentration at SNP 02-17B
- It is recommended Section 17 report the SNP 02-18 data and the monthly average data for SNP 02-17B in future annual reports



# Comments from the Environmental Analyst (III)

- Table 20-1 reports the annual sampling and SNP exceedances in 2014. It shows there are 5 maximum grab limit exceedances of chloride, but the SNP 02-17B data tables in pages 63 to 67 do not support them.
- It is reported in Section 23 that discharge from the water treatment plant to Snap Lake exceeded the rolling six day average for chloride on April 23, April 29, May 5, July 10, and July 16 during 2014
  - Consistency is requested



# 8. Water Licence Amendment Application (I)

- The MVLWB completed its regulatory process for the amendment of the Water Licence MV2011L2-0004 for the Snap Lake Mine, submitted November 12, 2014
  - A motion was passed by the MVLWB to forward the Water Licence and Reasons for Decision to the ENR Minister for approval
    - Dated March 30, 2015
    - Letter sent out on April 2, 2015



## 8. Water Licence Amendment Application (II)

- EC, ENR, Lands Department, and SLEMA commented the draft Water Licence for the December 2013 Amendment Application, on April 13, 2015
- De Beers responded to draft WL conditions and reviewer comments on the proposed amended Water License MV2011L2-0004 in regards to proceedings of the “December 2013 Amendment Application”, on April 17



## 8. Water Licence Amendment Application (III)

- True North Safaris Ltd., a caribou outfitter, submitted a letter on the consultation of De Beers Water Licence Amendment Application via e-mail, on April 18, 2015
  - The company was impacted by the effects of the mines but received no compensation of benefits
- YKDFN, LKDFN, ENR and EC issued their Closing Comments on the December 2012 Amendment Application on April 27, 2015



# 8.1 Amendment to Water Licence MV2011L2-0004 (I)

- Part F, item 9 concerns the EQC for water and waste from the Snap Lake Project that enters the receiving environment. Maximum average and maximum grab EQC were added to the table for total dissolved solids equal to 850 and 1003mg/L, respectively. The EQC for chloride was removed

- Overall, the Board concludes that the evidence supports the adoption of a SSWQO of 684 mg/L as proposed by De Beers in the November 2014 Amendment Application and that this SSWQO meets the requirements of Measure 1 from EA1314-02



# 8.1 Amendment to Water Licence MV2011L2-0004 (II)

- Part F, item 13 previously set out a compliance limit for the calculated whole lake average of TDS (350 mg/L). This condition was removed from the amended Licence because the EQC for TDS are now applicable at the final discharge point as noted above with regard to Part F, item 9
- Part F, item 20 is a new condition that sets out the requirements for a quarterly Total Dissolved Solids Mitigation Implementation Report, with the first report due October 1, 2015



# 8.1 Amendment to Water Licence MV2011L2-0004 (III)

- Part G, items 13, 14, and 15 are new conditions concerning a special study of the downstream watercourses, which will address existing information gaps, and ultimately inform the establishment of downstream monitoring locations and action levels within the AEMP



# Comments from the Environmental Analyst (I)

- The MVLWB granted De Beers requests on EQCs and required quarterly Total Dissolved Solids Mitigation Implementation Report and special study of the downstream watercourses
  - Measures 1 and 2 of EA1314-02 are reflected in conditions set out in the Water Licence
  - Suggestions 1 and 3 of EA1314-02 are reflected in conditions set out in the Water Licence



# Comments from the Environmental Analyst (II)

- Suggestion 2 of EA1314-02 is not reflected in conditions set out in the Water Licence
  - Suggestion 2: The Mackenzie Valley Land and Water Board should set closure objectives and criteria that ensure drinking water quality in Snap Lake achieves the Health Canada *Guidelines for Canadian Drinking Water Quality aesthetic objective for TDS in drinking water within five years of the end of mining operations*
- It is recommended that the MVLWB add related conditions into Part I. Conditions Applying to Closure and Reclamation



# De Beers' Response

- De Beers strongly disagrees with SLEMA's recommendation. Future interim and final closure and reclamation plans will be developed consistent with MVLWB and AANDC Closure policies, including engagement with all stakeholders.



# Comments from the Environmental Analyst (III)

- SLEMA discussed about the issue of TDS calculated vs. measured on March 6, 2015
  - <http://www.slema.ca/wp-content/uploads/2015/01/2010306-Letter-to-MVLWB-on-Information-Request.pdf>
- TDS is not defined in the Water Licence
  - TDS calculated is great for management purpose, because it is directly related to the mine impacts
  - TDS measured may be better while compared with Drinking Water Guideline aesthetic objective (500 mg/L)
- It is recommended that the MVLWB clearly define TDS in Part A. Scope and Definitions, and require De Beers to report both TDS calculated and TDS measured for SNP 02-15, SNP 02-17B, SNP 02-18 and SNP 02-20.



# De Beers Response

- De Beers agrees with SLEMA that TDS should be defined in Part A. The definition proposed by De Beers' in its intervention refers to the calculated sum of its constituent ions in water:
  - *“Total Dissolved Solids” is the measure of inorganic salts that are dissolved in water. TDS is calculated as per the following equation defined in Standard Methods ( APHA 2005):*
  - $TDS_{calc} (mg/L) = (0.6 \times \text{Total Alkalinity as } CaCO_3) + Na^+ + Mg^+ + K^+ + Ca^{2+} + SO_4^{2-} + Cl^- + NO_3^- + F^- + SiO_3^{2-}$
- De Beers' position is that calculated TDS is the most appropriate, and will be used for future water quality comparisons and assessment



## 8.2.1 EC Comments on the draft Water Licence for the December 2013 Amendment Application (I)

- EC recommends having the Annual Report for Approval of the Mackenzie Valley Land and Water Board (MVLWB)
- EC recommends the MVLWB provide clarity on how uncontrolled surface runoff will be regulated. Given the stations are for uncontrolled surface runoff, could they reasonably be regulated in the absence of control structures and runoff capture mechanisms?



## 8.2.1 EC Comments on the draft Water Licence for the December 2013 Amendment Application (II)

- EC recommends that Total Dissolved Solids (TDS) Mitigation Implementation Plan require the proponent to identify the extent of use of dilution and or blending of water to manage TDS



## 8.2.2 ENR Comments on the draft Water Licence for the December 2013 Amendment Application

- ENR recommends that additional clarification be provided within Part A noting that if there are any inconsistencies between the submissions outlined, the most recent document and Board decisions take precedence
- ENR has no recommendation regarding timelines for submission of engagement plans and would defer to other parties on this matter



## 8.2.2 ENR Comments on the draft Water Licence for the December 2013 Amendment Application (II)

- ENR supports the amendments proposed for SNP 02-016i related to oil and grease and faecal coliforms
- Should the Board proceed with the removal of BOD as a compliance point, additional rationale should be provided in the Reasons for Decision to explain why it is no longer a requirement



## 8.2.2 ENR Comments on the draft Water Licence for the December 2013 Amendment Application (III)

- ENR agrees with the MVLWB regarding the inclusion of total petroleum hydrocarbons in the table in Part F, Item 8
- ENR agrees with the MVLWB regarding the inclusion of annual phosphorus loadings in the table in Part F, Item 8



## 8.2.2 ENR Comments on the draft Water Licence for the December 2013 Amendment Application (IV)

- ENR supports the submission date of July 31, 2016 for the the Strontium Response Plan, the Nitrogen Response Plan and the Total Dissolved Solids Mitigation Implementation Plan
- ENR recommends that given the importance of the modeling predictions to providing an early indication as to whether the EA Measures will be met, the model should be updated annually for the remainder of the Water Licence term or upon a different frequency as approved by the Board upon request



## 8.2.2 ENR Comments on the draft Water Licence for the December 2013 Amendment Application (V)

- ENR recommends that both the Downstream Lakes Special Study Plan and Report include a description of how downstream data will be assessed to determine whether it has been influenced by historic mine discharge. This should be included in the information requirements outlined for these submissions in Schedule 6



## 8.2.3 Lands Department Comments on the draft Water Licence for the December 2013 Amendment Application (I)

- The Inspector is concerned that there could be situations where results from samples taken at SNP Station 02-17b may not be representative of continuous mine effluent. Currently TDS samples (and other parameters required in the SNP) are taken at the prescribed 6 day sample frequency. The possibility exists that through adjustment of dilution rates during the period between samples; mine effluent could be discharged with elevated levels of TDS and not represented in the SNP. The inspector would like to add more certainty to the SNP to alleviate any possible doubts of the integrity of the SNP data.



## 8.2.3 Lands Department Comments on the draft Water Licence for the December 2013 Amendment Application (II)

- The Inspector recommends that the sample frequency for TDS (and other parameters required in the SNP) at SNP Station 02-17b be changed from every 6 days to every 3 days. This increase in sample frequency will allow for closer observation of this important compliance point, and improve our confidence that the SNP data are representative of continuous mine effluent.



## 8.3.1 YKDFN Closing Comments on the December 2013 Amendment Application

### ➤ YKDFN Position

- For TDS, set both the EQC and the whole lake average to 684 mg/L
- Keep a chloride EQC, set to 310 mg/L
- Establish a point of compliance for the EA Measures at the inlet of McKay Lake
- Require taste testing (perhaps via a special study) for the predicted mine water



## 8.3.2 LKDFN Closing Comments on the December 2013 Amendment Application

- LKDFN maintains their opposition to this water license amendment as it stands. LKDFN continues to advocate for a TDS limit of 684 mg/L, with the maintenance of an EQC limit for chloride included in the water license amendment and only on the condition that all of the requirements set forth by the MVEIRB are strictly met to the satisfaction of the Board. LKDFN continues to object to any higher limit than this



# LKDFN's Concerns

- LKDFN considers a change in taste to be a significant impact. This is not acknowledged by the proponent
- LKDFN does not believe that the proponent has adequately engaged with the community
- LKDFN does not believe that the proponent has adequately assessed the impacts of the proposed increases in TDS and chloride
- LKDFN does not have confidence in the predictions made by the proponent based on the failure of their previous predictions, especially given that their failed predictions are why these amendments have been asked for
- LKDFN believes that Mackenzie Valley Environmental Impact Review Board (MVEIRB) and the Mackenzie Valley Land and Water Board (MVLWB) are designed to be independent oversight bodies, and sees this role threatened if project proponents are allowed to make amendments rather than real efforts to address environmental issues or are allowed to “interpret” plain-language directives issued by the MVEIRB



## 8.3.3 ENR Closing Comments on the December 2013 Amendment Application (I)

- In the February 13, 2015 Technical Interventions, it was recommended by the GNWT that an SSWQO of 690 mg/L TDS would ensure adequate protection of the aquatic ecosystem in Snap Lake, and therefore comply with Measured 1 a), b) and c) from the Report of Environmental Assessment for EA1314-02
  - Should the Board decide to include an SSWQO higher than 690 mg/L within the amended water licence (e.g. up to 1000 mg/L SSWQO as proposed by De Beers, it is paramount that the Board couples this decision with strict requirements for the undertaking of additional studies to ensure that these limits do not cause harm to food web dynamics in the short-term and fish in the long-term



### 8.3.3 ENR Closing Comments on the December 2013 Amendment Application (II)

- The GNWT will continue to work with De Beers, the Board, and other parties through the development and update of the revised AEMP
- The GNWT also supports the inclusion of a TDS Mitigation Implementation Plan and Report within the amended water licence
- The GNWT would like to stress to the Board the important of updating the downstream lakes model



## 8.3.4 EC Closing Comments on the December 2013 Amendment Application

- EC provided three recommendations in its intervention on February 13, 2015, and the Draft Water Licence substantially captures EC's recommendations



## 8.3.5 DKFN Closing Comments on the December 2013 Amendment Application

- DKFN's main concerns include the requirement for effective engagement and provisions for the implementation of contingency mitigations in the event that TDS continue to exceed compliance limits

