

Environmental Monitoring Advisory Board

DRAFT Minutes – June 23rd & 24th, 2016

9:00 am - 5:00 pm June 23rd

EMAB Boardroom, Yellowknife, NT

Present:

Arnold Enge, *Chair* (Day 1 only)
Charlie Catholique, *Vice-Chair*
Julian Kanigan, *Secretary-Treasurer*
Sean Richardson, *Director*
Napoleon Mackenzie, *Director*
Jack Kaniak, *Director*
Gord Macdonald, *Director* (by phone)

North Slave Metis Alliance
Lutsel K'e Dene First Nation
Government of the Northwest Territories
Tlicho Government
Yellowknives Dene First Nation
Kitikmeot Inuit Association
Diavik Diamond Mines

Staff:

John McCullum, *Executive Director*
(also minutes)

Environmental Monitoring Advisory Board

Allison Rodvang, *Environmental Specialist*
(also minutes)

Environmental Monitoring Advisory Board

Guests:

Andrea Patenaude, ENR Wildlife Division (Day 2 only)

Tracy Covey, Inspector, Diavik Mine (Day 2 only)

Paul Green, ENR Waters (Day 1 only)

Sarah Elsasser and Anneli Jokela, WLWB (Day 1 only)

ERM – Ben Beall, Phillip Porter, Jem Morrison (by phone, Day 1 only)

Aileen Stevens, ENR, Air Quality (Day 1 only)

MSES - Abbie Stewart and Petr Komers (by phone, Day 2 only)

Arcadis – Shelagh Montgomery (in person, Day 1 only); Shawn Roberts, Randy Knapp and Jennifer Kirk (by phone - Day 1 only)

1) Call to Order

The Chair called the meeting to order at 9:10 am.

Chair asked for a minute for silent reflection/prayer for members.

2) Approval of Agenda

The Chair opened the floor for amendments to the agenda. TK Panel session postponed. ED added the North-South (NS) estimate for 2014 AEMP and EAAR review, and suggested moving AQMP workshop discussion all to the TK Panel slot.

Motion: *To approve the June 23 & 24, 2016 agenda.*

Moved by: Jack Kaniak

Seconded by: Charlie Catholique

Motion carried.

3) Conflict of Interest

No conflicts were declared.

Julian Kanigan will be leaving at 10:00 am June 23, but will be back after lunch.

John McCullum will be leaving after lunch on June 24.

Jack Kaniak will be leaving at 2:00 pm on June 24.

4) Approval of Minutes

April 11 Conference Call Minutes

Motion: *To approve the Meeting Minutes for April 11, 2016 conference call as presented*

Moved by: Arnold Enge

Seconded by: Jack Kaniak

Motion carried

April 28-29 Meeting Minutes

The Board reviewed the minutes of April 28 & 29, 2016. Comment from Gord Macdonald about Diavik's plan for PK on caribou trails was changed.

The Action Items were reviewed.

Q – has A21 construction started?

A – ice went off LdG early; Diavik has started installing the turbidity barrier (90% complete)

Q – effect of recommended TSS amendment?

A – WLWB has recommended a more stringent TSS limit; current construction is under “old” limit until Minister decides on WLWB recommendation or 45 days has passed (June 20).

Agreed to wait to contact Diavik in writing regarding cover on the Type 3 rock in the PKC until the comments on the ICRP Progress Report have been submitted and Diavik has responded.

Diavik is not planning to put a special cover on the caribou trails on the NCRP, they will use run of mine. TK Panel has looked at use of run of mine and thinks it is acceptable.

Q - purpose of till layer covering NCRP?

A – active zone is 7m. During thaw period precipitation can contact Type 3 rock. With till, the upper layer would thaw but the lower layer would stay frozen, based on a 100 year climate change model.

Noted that David Wells was to provide KIA participation agreement to Jack

Action: Invite TK Panel to next EMAB Meeting.

Motion: *To approve the Meeting Minutes for April 28 & 29, 2016 as presented.*

Moved by: Sean Richardson

Seconded by: Jack Kaniak

Motion carried.

May 26 Conference Call Minutes

Board discussed submitting the SSRBCC Report. Gord Macdonald said this report is not for approval but Diavik wants to 'circle back' with reviewers/consultants to make sure their responses addressed the comments/recommendations.

Motion: *To approve the May 26, 2016 Conference Call Minutes as presented*

Moved by: Jack Kaniak

Seconded by: Napoleon Mackenzie

Motion carried.

Action: Request Arcadis review Diavik responses to EMAB comments on SSRBCC review.

Email motions read into minutes.

Review of Action Items

- Meeting with Tlicho likely in October
- ED to follow up on alternate member for TG and KIA
 - TG – contact Laura (EO), Eddie (GC), Sjoerd
 - KIA – contact Paul (ED)
- NSMA alternate will be Adrian D'hont; paperwork to follow

5) Financial Report

ED presented item from kit.

Discussion

- Estimate for review of 2014 AEMP and AEMP Re-Design (Version 4.0) still need to be approved.
- Small additional cost for WMP Review due to inclusion of extra material from ENR.
- Chair brought up Direct Deposit would save paper handling exercise.
- Appearing a little underspent, but waiting on invoices from consultants.

Motion: *To accept the financial statement as presented.*

Moved: Jack Kaniak

Second: Sean Richardson

Motion Carried.

Action: ED to look into feasibility of Direct Deposit.

BREAK

6) New Items

Review of 2014 AEMP Report

Chair asked staff about the quality of reviews provided by North-South (N-S) on Aquatic Effects Program at Diavik.

Discussion

- Staff are satisfied with reviews done by N-S.
- N-S is familiar with program history, and identifying larger issues and trends.
- Value in keeping them as reviewer.

Motion: *To accept quote from NS for review of 2014 AEMP report.*

Moved by: Jack Kaniak

Seconded by: Sean Richardson

Motion carried.

EAAR Review

Diavik submitted draft EAAR to EMAB on June 6, 2016.

Translation Discussion:

- This year Diavik asked not to translate the executive summary. ED recommends EMAB's position should follow the Environmental Agreement which states the executive summary will be translated using appropriate media. ED asked if an oral translation might be more acceptable.
- Chair noted Diavik should be able to adapt to what they see as being required. Keeping executive summary only in English is fine for North Slave Metis.
- Sean Richardson said rather than Dogrib, he prefers to see Tlicho. Kindergarten to Grade 3 are being educated in Tlicho only and a translated executive summary would really benefit them. If the summary was translated it would be a good opportunity for youth to present it to elders. Oral translation would be better for elders.
- Jack Kaniak said a written translation would be more appropriate for Kitikmeot Inuit Association as per the Environmental Agreement. Concern about Diavik trying to 'water down' environmental agreement. Having things in writing is good so you can go back and see what was said in the past.
- Charlie Catholique said elders read the annual report with help of a translator and prefer Chipewyan. It might help to have an oral translation.
- Napoleon Mackenzie said he is concerned about losing culture through the loss of language. Most people even chiefs and councillors of YKDFN speak English. He prefers an oral translation.
- Gord Macdonald said the basis for this request is coming from GNWT standard. The GNWT provides translation upon request now.

Action: Inform Diavik that EMAB wants the EAAR to include translation of summary as per EA

Timing Discussion

ED noted that a two-week review period is not long enough. EMAB and Diavik should agree on an earlier submission date that is achievable for both parties.

Action: EMAB staff to discuss a workable submission date for the draft EAAR

Chair encouraged all Board Members to read the 2015 EAAR and if there is a concern to contact EMAB staff.

EMAB Staff Presented Review of EAAR.

Content Discussion:

- Q: Is there a standard among mines for monitoring caribou behavioural observations?

- A: Diavik has own standard procedure for monitoring caribou and it has been very consistent across years. Staff are not aware of a GNWT standard for this.
- Lengthy discussion on documenting issues raised and outcomes from community meetings
- Diavik encouraged EMAB to make suggestions on how to better include the environmental concerns discussed at communities in the EAAR.

Action: Board Members to go through the EAAR and provide any comments to EMAB staff by Thursday, June 30, 2016. EMAB will submit comments to Diavik on June 30.

6) AQMP Workshop Follow-up

Item presented from kit.

Discussion:

- Recipient column does not always mesh with EMAB response
- Joint field studies: EMAB will pass this recommendation on to Diavik as well as additional actions listed
- Do not pass on recommendation about washing pit walls as EMAB feels Diavik has dealt with this issue. Diavik has committed to pit water quality that is protective of aquatic life before breaching dikes. EMAB is reviewing pit water quality closure criteria.
- Inform GNWT about concern about downstream monitoring below outlet from LdG and value of their continued monitoring.
- Recommendation about exhaust purifiers on hold pending EMAB review of air quality monitoring
- Draft letter to Department of Transportation (DOT) if they have regulations or rules for having tanker trucks cleaned before travelling on ice road. If not, make recommendation to DOT.
- Contact ENR and Diavik to identify the concern/recommendation about health of small mammals around the mine site. Note that this is an ongoing concern from communities and ask about ways to address it.
- Direct caribou recommendations to ENR and have ENR give EMAB an update on all research going on.
- Letters should include report and page reference.
- Recommend that GNWT-ENR continue monitoring stations along the Coppermine River.

Action: Send a separate letter to Diavik and ENR about workshop recommendations. Note EMAB's position and response to the workshop recommendations in the letters. For each recommendation, include the corresponding report page number so Diavik and ENR know the context of the recommendations.

LUNCH

7) 2017-2019 Budget Review

ED explained the budget renewal process.

Julian Kanigan said the goal of this process is to get a budget that EMAB and Diavik both agree on. It is helpful when Diavik gives EMAB a forecast of reports to review and an initial response based on the numbers. Rather than shooting for a number, EMAB should aim for what has to be done.

Action: Request Diavik send EMAB a list of upcoming reports that will require review.

Diavik expects it will propose the previous budget amount (16-17) plus inflation **ie. about \$485K in the first year, \$495K in the second year.** They noted that additional activities not covered by the budget can be proposed for additional funding under EA section 4.2(f).

BREAK

7) AQMP Report Review

Shelagh Montgomery and Shawn Roberts (by phone) - Arcadis

Aileen Stevens - ENR

Ben Beall, Phillip Porter, Jem Morrison - ERM

David Wells - Diavik

David Wells presented the 2014 & 2015 AQMP.

Noted that the TSP station on the A154 dike has been out of commission for 2 months. One exceedance in TSP in Feb 2015 at Comms Station. No exceedances in 2014.

Discussion:

- Q: What is the difference in TSP between 2014 and 2015 at the A154 dike?
- A: Likely improved maintenance on equipment in 2015.
- Q: What conditions would lead to the big spike in the data?
- A: Likely ice fog, this may be a false positive. February is not a dusty time of year so it was likely an equipment failure.
- Q: Are the zeros on the graph actual data?
- A: The equipment was being repaired and the data appear on the graph as zeros, but they are actually data gaps. Represented on the graph to show the data as continuous.
- Q: How high above the Water Licence EQC's are the exceedances of aluminum, chromium, nickel and zinc?
- A: In most cases they are about 20% over the Water Licence EQC's. There was only one station with metals above the EQC's in 2015 and none in 2014. Note, the EQC's are for effluent, not for snow cores. Snow core values aren't regulated by the Water Licence; they are just a reference.
- Q: Main concern is location of monitoring stations. There are a lot of easterly winds on site which will bring TSPs to western side, however stations are located on eastern side of site. Is there a comparison of what was measured to what was modelled?
- A: The wind data went back to 1997. The model wasn't completed by ERM so they can't answer question.
- Noted: There needs to be more analysis of site meteorology to see if locations are appropriate.
- Comment: Arcadis would like to see more documentation of QA/QC policies in order to determine the validity of the data.
- Comment: There should be a detailed discussion of the TSP exceedance in the report.
- Comment: Snow core locations should match the TSP locations.
- Comment: More frequent sampling of Dustfall in summer months would be beneficial. By only sampling every three months trends are being smoothed out. As well, standard methods (eg. BCMOE guidelines) require a monthly sample.
- A: Diavik expressed sampling monthly would require a large increase in resources. Diavik has been doing this for 16 years. The dustfall monitoring was designed to meet objectives in the AEMP.
- Comment: it seems that construction air quality and operations air quality were modelled separately, so predictions don't have much value since construction is occurring during operations.
- Comment: does the data collection meet the needs of the EAQMP objectives? If not, can the method be adjusted to meet both EAQMP objectives and AEMP objectives?
- Q: Why do aluminum, chromium, and nickel occasionally have higher values further away from the mine site versus closer to the mine site?
- A: This is true in snow core data. It may be an anomaly with the snow core data.
- Comment: this raises questions about whether the far away sites are acting as a control. Anomalies must be explained.

- Noted that the GHG and NPRI numbers appear reasonable, but calculations aren't shown, so can't be checked.

Aileen Stevens gave an introduction on the GNWT regulatory framework for air quality legislation in the NWT, which is currently under way. Actual regulations will come later. There will be public information sessions on the framework over the next 3 months.

8) Closure Discussion

Sarah Elsasser and Anneli Jokela - WLWB

Shelagh Montgomery, Randy Knapp (by phone), Jennifer Kirk (by phone) - Arcadis

Paul Green - ENR Waters

Bill Slater – Slater Environmental Consulting (by phone)

Randy Knapp presented review of 2015 ICRP Progress Report. Very similar to April 29 presentation. Main issues:

- Good research database
- Some criteria inadequate
- No actual caribou ramps on NCRP; pile will be resloped
- Revegetation – no plans presented; doesn't meet MVLWB guidelines
- Long term care and maintenance needs to go beyond seven years proposed by Diavik; there is no budget proposed beyond seven years.
- Potential toxicity of fine PK needs to be addressed
- A21 dike – a location for the rock pile needs to be provided and a budget for closure
- RECLAIM – missing some items
- Research – very good; only gap is study of metals uptake by vegetation

Discussion

- Q: Most of the things you (Randy) want to see go into the RECLAIM estimate are suggestions from the TK Panel?
- A: That is mostly correct.
- Q: What is a normal time after closure to maintain a site and take responsibility for problems?
- A: When the site requires maintenance due to retaining water or hydraulic structures that could fail then they can never be left alone. The main concern is dams. The cover is also a possible issue. Diavik does not have particularly toxic materials, but the site will still require care and maintenance. You cannot walk away from a water retaining structure.
- Q: what if there was no water in the structure
- A: then the Dam Safety Association would have a guideline
- Q: Why did the PKC Facility Closure Design change?
- A: Diavik stated the original design was not feasible. Randy noted the fine tailings are highly compressible, and do not consolidate, so there is more risk of failure. Simply too many issues.
- Q: NCRP till layer is designed to partially be within the active layer - could this erode over time during the thawed period, and is this a concern?
- A: This is obviously a concern, but not likely to be significant.

Jennifer Kirk presented review on how SSRBCC impact NCRP Closure Criteria.

- Diavik has proposed three criteria that will be based on site specific risk based criteria. Issues are:
 - Choice of adult criterion or toddler criterion
 - Use of Health Canada Drinking Water Guideline
- Diavik applied an inconsistent decision process to select the criteria to use; they have chosen the less stringent criteria
 - Aquatic protection – Diavik developed SSRBCC but then chose metal mining effluent regulation (MMER) criteria, which are not protective of aquatic health

- Dust – not enough information to determine if criteria will be protective
- Post-closure monitoring – Diavik does not have criteria for some parameters that will be monitored after closure.

Discussion

- Q: Are there contaminants of potential concern (COPCs) the till or type I?
- A: Not in till, but COPCs were identified in Type I rock that needed criteria. SSRBCC Report stated that closure criteria need to be developed for Type I rock, as rock will degrade into smaller particles over time and potentially release COPCs.
- Comment: When developing criteria for human health for water Diavik defaulted to generic guidelines instead of using SSRBCC.
- Comment: When developing site-specific concentrations, the exposure could be more than a generic guideline.
- Comment: Diavik stated MMER were used because the runoff/seepage is on land; the SSRBCC were intended to apply to the lake. Diavik does not know the mixing zone that will be used.
- Comment: Diavik stated dust criteria were recommended by ENR; no dust is expected from the rock piles. Dust is only a concern during construction and operations.
- Q: who should set criteria, proponent or government
- A: typically proponent

Bill Slater presented on review of NCRP Final Closure Plan's Closure Criteria.

Looked at all Diavik closure criteria as well as those used in the NCRP plan. Evaluated effectiveness, measurability, thresholds and ability for a timely response.

- Protection of aquatic life – need to work backwards from receiving environment to appropriate level at point of discharge
- Assimilative capacity – need to set lower thresholds or “staged criteria” to provide room for adaptive management if there are other sources of contamination humans, other wildlife and fish may be exposed to
- Compliance with designs – not really a criteria; need performance monitoring. Designs don't always achieve the planned outcome; need to confirm performance over time.
- Wildlife – need an integrated monitoring plan that identifies the causes of changes; this is hard to do
- Removal of criteria – Diavik removed some criteria that were in ICRP 3.2 in NCRP without a rationale

Discussion

- Q: What closure criteria were removed from ICRP Version 3.2?
- A: SW6, SW7, SW9 – these were mostly related to landforms and landscape features. They were more measurable than those that are currently proposed.
- Q: Did EMAB's consultant recommend any closure criteria to replace the ineffective ones?
- A: ED noted this was beyond the contract scope. Consultant did provide some suggestions.
- Diavik noted they did not want to repeat the criteria used in the design; if the design fulfills the objective there is no reason to repeat it.
- Noted that achieving the design is not a demonstration of performance.
- Diavik stated that it is unsure how this could be built into criteria and welcomes suggestions.
- Comment: Developing wildlife objectives are very challenging.
- Comment: Concerned about how a bare rock pile will meet aesthetics and natural conditions of the surrounding area.

Action: Consider issues regarding Diavik's closure criteria, and discuss with the consultant about expanding the contract to include developing more effective, measurable closure criteria.

Paul Green presented on the RECLAIM Model.

Discussion

Q: What is the process for distribution and review when model is updated?

A: Submit to Board and distribute to proponents.

Comment that Diavik has never been provided with an update.

Comment that WLWB has the updates on their website.

Comment that the updated RECLAIM estimate does not get peer reviewed and that there is no public review method.

Q: What is the process for relinquishment?

Q: If the RECLAIM estimate is reviewed annually, should the amount decrease?

A: Yes, if proponent can show they have done progressive reclamation.

Q: Is the security amount zero at the end of the term or is there funding for long-term monitoring?

A: There is an amount for seven years post closure, EMAB also has funding for when mine closes.

Action: Ask ENR to give a presentation about the Diavik RECLAIM estimate at another Board Meeting.

Adjourned for the day

Meeting reconvened at 9:10 am on June 24th, 2016

Present: Charlie, Julian, Napoleon, Jack, Sean, Gord (by phone), Allison, John

Follow up from previous day:

AQMP Report Review

Action: Check whether Arcadis want to update the AQMP Review based on discussion on June 23rd then submit to Diavik

Motion: *Submit AQMP review to Diavik subject to revisions. Include a letter with EMAB's recommendations.*

Moved: Gord Macdonald

Seconded: Jack Kaniak

Carried

ICRP / NCRP closure reviews

Allison gave an update on the Community Engagement section in Diavik's NCRP Final Closure Plan:

- Engagement records not provided
- Little information in plan; gives links to other reports. Report should stand alone.
- Strong emphasis on TK Panel comments in report; the Panel has said it doesn't represent the communities so this is not a substitute for community engagement.

Discussion

- Diavik noted that the communities should decide the format of community engagement meetings.
- Diavik noted the comments on the engagement process are valid. It is hard to get specific answers from communities.
- Q: has Kugluktuk been consulted on the NCRP final closure plan?
- A: Diavik is planning to give community updates in the fall this year.
- Comment: NCRP closure design was submitted to Diavik after Diavik had done its community engagement, so people could not have been consulted on the plan. The engineering design does not mention any input from communities.
- Q: where are the records of engagement from the meetings listed in the plan?
- A: Diavik noted these are participation agreement meetings; most comments are not for public distribution.
 - Diavik has been quite successful getting specific comments from the TK Panel. It is hard to get specific comments from communities. When Diavik proposed on-site land fill, they got very specific responses from Kwe Beh.
 - Diavik has a hard time knowing how to deal with the information they get from communities. Many of the comments are not related to environmental concerns, most are socioeconomic concerns. Sometimes it ends up being the communities' agenda.
- Q: Is the plan set in stone by this point, or will there be room to make changes if need be?
- A: Diavik stated that changes could be addressed.
- Comment: MVLWB Guidelines suggest meetings focus on one topic.
- Diavik said some onus must be put back on the community as well, and asked if EMAB can help with the community engagement
- Comment: Everything has to be driven by communities. EMAB does not speak for the communities. What can you do if you go to the communities and no one shows up? Good communication with elders is necessary, and you need good interpreters. Without this it will be confusing and you won't get to the point. Not comfortable at this time about where the information is at for communities.

- Suggested Diavik consider tabling the NCRP closure plan until it has engaged with communities on it. Don't want to rush; this is an important issue.
- Diavik noted they are trying to get the TK Panel representatives to explain their findings to their community but this has not happened yet.
- Q: Diavik mentioned an interactive model in the report. What is the status?
- A: It has just been completed; it was tried with the TK Panel for the first time, and worked well.

Ideas for engaging community members:

- Provide a "draw" for people to attend meetings
- Invite communities to participate in workshops
- use models to help visualize what rock pile looks like now and what it will look like at closure
- hold a workshop/meeting in Yellowknife – pay for travel, have a social event in the evening, have the workshop/meeting in conjunction with another meeting that attendees would already be going to, fill out surveys
- Try online consultation

Comment: A proposed EMAB activity in the two-year budget is a workshop on effective community engagement. Participants could see models, do surveys etc. This would be better than coming up with rushed ideas at a Board meeting on how to best include communities in review processes.

Motion: *To submit Arcadis' review of 2015 ICRP Progress Report, Arcadis' review of application of SSRBCC to NCRP final closure plan, SEC review of NCRP Final Closure Plan and EMAB comment table to WLWB, with a covering letter, and circulate reviews to Land and Environment Managers.*

Moved: Julian Kanigan

Seconded: Jack Kaniak

Carried

Action: **Submit all closure reviews to Land and Environment Managers so they have sufficient time to review and comment on material and provide own submission to WLWB.**

Motion: *ED to revise terms of reference of contract with Slater Environmental Consulting to develop more effective closure criteria for those that were identified as inadequate and keep board informed.*

Moved: Jack Kaniak

Seconded: Napoleon Mackenzie

Carried

Note that if amount for contract exceeds ED authority an email motion will be required.

Draft Annual Report 2015-16

Comments:

- Include Diavik on the front page; emphasize EMAB monitors Diavik
- Add a communications section.
- Include EMAB's mission and four key activity areas. Add a statement about getting reviews to communities and land managers (show responsiveness to feedback)
- Oversight section should be about a half page for each report. Emphasize how EMAB added value
- TK section is a bright spot – highlight use of TK information by Diavik
- Report Card on Diavik and Regulators is useful; develop a simple scale. Need criteria
- Water Licence update – state what public hearing was about at beginning of section.
- Include acronyms table, current pictures, caribou ramp comment

- Recommendations – do not include all recommendations, just key ones
- Include EMAB’s big picture view on the state of the environment at Diavik

BREAK

Two Year Budget Review Cont.

Discussed list of additional project ideas for EMAB.

- Discussion on whether Diavik is in conflict when discussing budget
- Noted Diavik provides useful input; members can caucus without Diavik if needed
- Q: How difficult would it be to take youth to visit mine site?
- A: TK Panel has youth. Their involvement has been interesting and they are helpful with discussion.
- Comment: Board members could select youth from communities and involve them in a site visit and board meetings. Diavik could likely arrange this.
- Comment: EMAB contact with elders has declined since TK Panel moved to Diavik
- Comment: Retroactive analysis of Diavik’s environmental activities is appealing. This could be helpful in identifying lessons learned, identifying what EMAB has accomplished, and framing future work plans.
- Capacity funding was valuable; noted this was removed during budget disputes with Diavik
- Q: Closure is becoming a big issue, and ICRP V.4 is coming out in December 2016. What are the Aboriginal Party Directors hearing about closure in their communities?
- A: Community members are concerned and worried what will happen if the open pits turn over after closure. Beneficial to have a visual of this.
- EMAB’s previous closure workshop was useful
- Comment: Two things from the list with cost implications: (1) Incorporate youth in EMAB activities; (2) Collaborative workshop with Diavik.
- Comment: There is a clause in the Environmental Agreement that aside from EMAB’s regular budget, there is an opportunity to apply for additional funding for research and monitoring activities. EMAB shouldn’t have to site within regular budget when there is another budget for these types of activities.

Action: Map out projects and develop budgets for the new project ideas.

11) WMP Review

Andrea Patenaude, ENR Wildlife Division

Petr Komers & Abbie Stewart, MSES (by phone)

MSES noted changes to the 2015 WMP review based on information from the April 2016 EMAB meeting.

Discussion

Caribou aerial surveys

- Noted that we won’t know when aerial surveys will restart until the guidance document for ZOI is finalized.
- Q: What are the possible mitigation measures to reduce effects of the larger-than-expected ZOI?
- A: MSES observed that the ZOI for caribou is much larger (14 km) than originally predicted (4 to 7 km). Why hasn’t there been an adaptive management response - this is the point of monitoring. Having a discussion that addresses the ZOI would be a normal procedure in this type of situation. Consider changing operation schedules, changing equipment? MSES doesn’t know what is feasible.
- Q: Diavik noted that information was lacking when the prediction was made.
- A: Yes, but then this should be discussed and decided on. Any prediction is made with some uncertainty. Monitoring programs reveal missing information.
- Comment: If ZOI is bigger than predicted it doesn’t mean that there is a bigger effect on population.

- A: Review of the WMP is based on predictions made under the WMP. These predicted effects were reviewed during the environmental assessment and are part of the basis for the licence to operate. Discussions about population level effects that are not predicted in the WMP are beyond MSES's review scope and should be happening with those responsible for measuring population level effects.
- ENR noted the final draft of ZOI guidance document should be complete this fall
- ENR noted the next Regional Wildlife Workshop will be in November or December
- ENR looks at regional level effects and effects of individual projects. At the regional level they have initiated the Bathurst Caribou Range Management Plan (BCRMP).
- At a project level, they are still figuring out the mechanism of impact - what do you need to change to get a smaller ZOI. When the ZOI extends 30 km away from the mine, it probably has to do with emissions/dust.
- Diavik noted that at those distances the effect is more likely emissions; dust doesn't travel that far

MSES noted that these responses and mitigations were not discussed in documents they reviewed. They look forward to having this information.

Caribou behavioural observations

- Q: What are the consequences of being within the ZOI?
- A: ENR is involved in discussions with respect to the behavioural surveys. Tlicho started Boots on the Ground which is going to monitor caribou behaviour outside of mines' influence to form a control data set. Tlicho are testing a monitoring protocol developed with ENR. Mines are involved in coordinating behavioural monitoring efforts so this information can be used for mitigation. This could also be fed into the range plan model (BCRMP targeted for 2018).
- Q: Is there a timeline when the standardized protocols for behavioural monitoring will be done?
- A: No, there will be more clarity for ENR once we see what comes out of Boots on the Ground. Mines agreed to provide historical behavioural data to see where tweaks can happen to make monitoring more effective. This may happen at a fall workshop.

Regional wildlife processes

- Q: It seems there are bigger processes that are driving wildlife monitoring at Diavik than just the WMP?
- A: ENR noted the mines contribute to cumulative effects. Hopefully mines are learning from each other and sharing information.
- Q: The WMP needs to reflect the broader context so readers can understand the relationship to these other processes. Is there a recommendation EMAB could make to Diavik so the big picture could be included in the WMP Reports?
 - A: Andrea recommended EMAB and MSES attend regional wildlife workshop.
 - Petr mentioned that monitoring used to be very project specific, now there are more regional efforts which is good to see, but it does change the question.
- Comment: There could be a section in the WMP report explaining how data from Diavik has been used in regional efforts to give a larger picture.
- A: Challenge is for Diavik to write something they don't necessarily have the information to write. Question is who should write it.
- Comment: Could bring this up at Regional Wildlife Workshop because likely EMAB isn't the only organization that feels this way.
- Comment: Diavik's WMP Report highlighted that northern and southern caribou migration has shifted. This issue was discussed at workshop but did not describe what would be done.
- A: ENR is hoping to get finer scale information from collars, but no timeline for when this information will come in, and no adaptive management yet.

Grizzly hair snagging

- Comment: ERM Rescan Report presented results of the two-year hair snagging program which was supposed to provide baseline data for long-term monitoring. However, there is no schedule for the continuation of this program. This was supposed to be one of the objectives.
- A: This discussion will happen at the next Regional Wildlife Workshop.
- MSES noted they found information on Ekati and DeBeers but not Diavik
- Gord will get back on this

Action: Request that MSES revise review and approve through email motion. Send to ENR and Diavik.

Action: staff to review WMP reporting with respect to regional context

Action: Gord to check on Diavik information in Grizzly hair snagging report and report back to EMAB

12) Board Member Updates and Community Concerns (moved from Item 15)

Julian Kanigan, GNWT

- Gave update on CIMP
- Cumulative effects studies on Lac de Gras coming out by end of September via WLWB; asking companies for comments first
 - Plankton; Water quality; modifications to AEMP's to detect cumulative effects
 - Reviewers can use the CIMP report to help make comments on the AEMP V.4 update
- Funding to help make ENR caribou cumulative effects model more user-friendly
- Funding TG Boots on the Ground program

Jack Kaniak, KIA

- Regular communications and emails with EMAB
- Gave EMAB community update and meeting with KIA in Kugluktuk, NU
- Heard concerns that aircraft traffic might be causing mercury contamination in northern lakes

Charlie Catholique, LKDFN

- Shared air quality photos of Ekati mine site
- Noted caribou won't pass through a skidoo exhaust cloud

Sean Richardson, Tlicho Government

- No comments

Napoleon Mackenzie, YKDFN

- Noted Dene Nation Assembly July 25-29

Action: staff to circulate standard EMAB presentation

Jack and John leave meeting

LUNCH

13) Inspector's Report

GNWT Lands Inspector Tracey Covey presented.

- Inspected Diavik site on May 9th and May 30th
- A21 dredging started
- Inspected underground

Discussion

- Q: Who determines spill volumes?
- A: Tracey will get back to EMAB on this.

- Q: Will the turbidity curtain blocks be recovered?
- A: Tracey will get back to EMAB on this.

14) AEMP Update

Gord Macdonald presented AEMP V.4

Discussion

- Q: What changed in this Version of the AEMP to make it line up more with Ekati's AEMP?
- A: No new monitoring stations were added. Diavik is quite aligned with Ekati in terms of frequency of monitoring and methodology.

Next Meeting

Board Members discussed next meeting date.

Action: Poll Board Members to see when most people are available for a Diavik site visit in conjunction with next Board Meeting. September 12 & 13 seemed to work for most people present.

Meeting adjourned