

Environmental Monitoring Advisory Board

DRAFT Minutes – June 17-19 2019

Diavik mine site and EMAB Boardroom, Yellowknife, NT

Present:

Charlie Catholique, *Vice Chair*

Laurie McGregor (Day 2 & 3), *Alternate*

Violet Camsell-Blondin, *Director*

Arnold Enge (Day 1 & 2), *Director*

Jack Kaniak, *Director*

Gord Macdonald (Day 2 & 3, by phone), *Director*

Lutsel K'e Dene First Nation

Government of the Northwest Territories

Tlicho Government

North Slave Metis Alliance

Kitikmeot Inuit Association

Diavik Diamond Mines

Absent:

Machel Thomas

Yellowknives Dene First Nation

Staff:

John McCullum, *Executive Director*
(minutes)

Environmental Monitoring Advisory Board

Janyne Matthiessen, *Environmental Specialist*
(minutes)

Environmental Monitoring Advisory Board

Guests:

Loretta Ransom, GNWT-ENR (Day 1)

Lynn MacKinnon, Diavik (Day 1)

Winter Bailey, Diavik (by videoconference, Day 1)

Myra Berrub, Diavik (by videoconference, Day 1)

Mike Lowing, TCWR (Day 2)

Andrea Patenaude, GNWT-ENR-Wildlife (Day 3)

Heather Sayine-Crawford, GNWT-ENR-Wildlife (Day 3)

Sean Sinclair, Diavik (Day 1, Day 3, by phone)

Dan Coulton, Golder (Day 3, by phone)

Abbie Stewart, MSES (Day 3, by phone)

Petr Komers, MSES (Day 3, by phone)

Jennifer Kirkaldy, Arcadis (Day 3, by phone)

Jamie Steele, Lands Inspector (Day 3)

Joe Heron, Lands Inspector (Day 3)

Bill Slater, Slater Environmental (Day 3, by phone)

Rasheeda Slater, Slater Environmental (Day 3, by phone)

Megan Cooley, NSC (Day 3, by phone)

Friederike Schneider-Vieira, NSC (Day 3, by phone)

Monday, June 17, 2019 – Site Visit and Item 18

Sean Sinclair, Diavik, toured EMAB Board and Staff around the mine-site. Short briefing prior to tour – status of PK to Pits proposal; preliminary consideration of options for underground mining of A21 – this would involve a water licence amendment application.

Tour included the North Country Rock Pile, PKC storage facility, North Inlet and water treatment plant, A418/A154 and A21 pits, Waste Transfer Area, and the WRSA test piles.

18. Qualifications for Post-Closure Monitoring (at Diavik, after site visit)

Lynn MacKinnon and Sean Sinclair from Diavik were at the meeting; Winter Bailey and Myra Berrub sat in via videoconference).

Lynn McKinnon said Diavik is developing a new role/position in the near future that will be responsible for looking at the qualifications for post-closure monitoring.

Discussion on training opportunities:

- Should work to establish training programs well before onset of closure so interested people can be sure they meet qualifications
- Lynn - Aurora College provides environmental monitoring training – NRTP as well as shorter environmental monitoring program (12-16 weeks)
- Make training options well known to people in communities
- Sean - Types of monitoring will be similar to those done now
 - AEMP
 - Wildlife
- Noted that Aurora College is considering developing a guardianship program
- Some community people who are interested in post-closure monitoring don't have the academic pre-requisites (high school graduation or equivalent) to get into the Aurora College programs.
- Lynn – may be a way to build on existing programs in a way that doesn't require prerequisites. Noted that Aurora College's short environmental monitoring program does not require GED/high school diploma
- Sean – a range of different types of monitors will be required
- Will Diavik visit communities to explain what they have in mind?
- Winter – this would likely be done as part of regular community visits; also trade shows, SEMA updates or at invitation from schools
- Would drug testing be required post-closure?
- Lynn – yes, this is a safety issue. Criminal records are not necessarily a barrier; they are evaluated case-by-case (noted that GNWT ECE will support applications for pardons)

Discussion on contracting out post-closure monitoring

- Lynn – Diavik could look at contracting out as an option
- Could be done through JV's with communities
- Sean – any Aboriginal owned business could bid
- Noted there is an existing JV with TG, LKDFN and Inuit – LDG Contractors
- Winter – would be a good opportunity for JVs. This would be an ongoing conversation; Diavik needs a good understanding of capabilities of the various organizations.
- Does Diavik work with Aurora College on this?
- Lynn – Diavik needs to define its objectives first. They work with the college on other initiatives.
- Elders have talked about making a TK proposal to Diavik for TK monitoring after closure. This could be a business or employment opportunity.
- Timelines?

- Lynn - Diavik is developing timelines towards closure. Planning for post-closure monitoring will be completed by 2021.
- How does the life of mine strategy mesh with IBA's?
- Winter – this will be part of the planning
- Contact for follow-up or further information? – start with Gord

Meeting adjourned. Return to Yellowknife.

Tuesday, June 18, 2019
Meeting at 9:00am in Yellowknife

1. Call to Order

Vice Chair opened meeting at 9:23 am.

Moment of silence for Napoleon Mackenzie

2. Approval of Agenda

Noted that Item 18 was done at Diavik yesterday, the ED Performance Review needs to be re-scheduled after Jack is able to meet with Julian and there is an additional item on Diavik engagement on some parts of AEMP Ver. 5 as directed by WLWB that can be added to Wednesday afternoon.

Motion: *to approve agenda for June 18/19 meetings as amended*

Moved: Violet Camsell-Blondin

Seconded: Laurie McGregor

Motion carried

3. Conflicts

No conflicts declared

4. Election of Chair

Tabled until later. Present members agree that whole board should participate. Charlie will act as interim chair until next meeting

5. Introduction of Environmental Specialist

Janyne Matthiessen introduces herself and provides background. Board members introduce themselves to Janyne.

6. Minutes of Previous Meetings

Email motions:

Mar 13'19 – approve Board Calendar

Mar 20'19 – approve WEMP letters to GNWT and Diavik

Mar 22'19 – approve scoping comments to MVEIRB

April 12'19 – approve MSES proposal to review 2018 WEMP report

April 12'19 – approve revisions to EMAB Travel Policy

April 24'19 – approve NS proposal to review 2018 AEMP report

May 10'19 – approve comment table on MVEIRB scoping update

June 11'19 – approve Arcadis proposal to review revised SSRBCC report

June 13'19 – approve NSC and SEC proposals to review Diavik's SIS report

Motion: To approve minutes of Feb 26-27'19 meeting, March 26-27'19 meeting and May 23'19 conference call.

Moved: Jack Kaniak

Seconded: Arnold Enge

Motion carried

Violet: Abstaining

Laurie: Abstaining

Action Items List

Executive Director (ED) reviewed the status of EMAB's action items. Review of NSC proposal for lake trout/mercury is on hold as new Environmental Specialist (ES) is getting up to speed. Same for updating incoming/outgoing correspondence on the website.

Discussion on action items:

Comments on removal of equipment (e.g. machines, trailers, recreation materials, cooking equipment, PPE, etc) from site after closure in follow-up to notification that some trailers were bulldozed and landfilled at site.

- Original plan was to bury inert items in landfill
- In the future, effect of climate change on permafrost could affect things buried underground
- Violet and members of her community (Tlicho) discourage Diavik to bury anything. Elders want everything taken out and sent south or recycled
- Corporations and communities could take advantage of reusing items.

Action Item: send letter to Diavik on communities accessing Diavik infrastructure as per action items list

7. Financial Report

ED presented the 2018-2019 and 2019-2020 financial statements.

Discussion:

- Explanation of two-year budget process; funds not spent at end of second year must be returned to Diavik unless Diavik accepts an EMAB request to roll-over the funds. Diavik accepted EMAB's request to roll over ICRP review funds, but not to roll over the remaining Water Licence Amendment Review funds.
- Noted that community consultation funds were cut following the reduction of EMAB's budget by the Minister's decision in 2015. This was partly due to lack of uptake by Board members.
- Board equipment budget typically not used up
- Question on budget for conferences and professional development – this was reduced to zero when budget was reduced. Process is that Board members apply and Board reviews and approves on a case-by-case basis. Board could decide to allocate funds from another budget line
 - Noted that there are many useful conferences on EMAB-related topics such as engagement consultation
 - Climate change is an issue affecting many aspects of northern environment

2019-20 Financial Statement

Discussion about proposal to increase budget for review of Diavik's application to deposit PK to Pits now that the process will include and Environmental Assessment.

Motion: *To amend budget to reallocate \$10,000 from interim closure plan review budget and \$10,000 from other reviews and reports budget to the Water License Amendment budget line*

Moved: Violet Camsell-Blondin

Seconded: Laurie McGregor

Motion carried

2018-19 Financial Statement

Discussion about returning surplus to Diavik

- We had \$60,000 surplus but were able to roll over about \$36,000
- Expecting to return \$24,000 (as indicated on March 2019 financial statement)

Discussion about hosting big workshops for all communities eg. closure

- Likely not enough surplus to do big activity
- Option to request more money from Diavik for things like this through EA, although they may not approve it
- Could partner with IEMA
- Consider using translators and more plain language for the events
- Some of the communities might also have funding to contribute to a larger workshop

Board calendar

- Cancel July meeting
- Still want to have meeting before the public hearing in September
- Agreed to have next meeting August 13/14

Discussion about community hearings

- Some have heard that community hearings will take place before public hearings
- Also have heard that MVEIRB will be holding technical sessions in Yellowknife before the hearing

Discussion about board contribution to Napoleon's estate

Motion: *to contribute Napoleon Mackenzie's May 2019 honorarium to his estate.*

Moved: Jack Kaniak

Seconded: Arnold Enge

Motion carried

Discussion about board dinners and transition from Sean to Violet as Tlicho representative

- Used to have board dinners after AGM's
- Could have them at any meeting though
- Decided that we should invite Sean Richardson to a board dinner at August meeting
- Suggestion to show appreciation to Sean for his service to EMAB such as a plaque

Question about preparation days honorarium for May for Tlicho Government representative. Agreed that Sean and Violet will each receive two preparation days honorarium for May.

Motion: *Violet and Sean will both get paid an honorarium for two preparation days in May.*

Moved: Jack Kaniak

Seconded: Arnold Enge

Motion carried

Discussion about signing authority

- Need to remove Napoleon Mackenzie and Sean Richardson
- Recommend adding another local board member, suggested Violet Camsell-Blondin since she is frequently in Yellowknife on other business.

Motion: *remove Napoleon Mackenzie and Sean Richardson from EMAB signing authority and add Violet Camsell-Blondin*

Moved: Laurie McGregor

Seconded: Arnold Enge

Motion carried

Action Item: invite Sean Richardson to Board dinner August 13.

Gord joined the meeting by phone

Return to Item 4 – Election of Chair

Agreed to postpone this item until all members are present.

Suggested to wait until AGM and hold elections as normal, with Vice-Chair fulfilling Chair role until then. All agreed.

9. Draft 5-year Action Plan

The ED presented item from kit.

Discussion on item 1.3 of the plan (that EMAB should operate through closure)

- Survey and Board meeting showed consensus that EMAB should continue after closure
- Conversation about whether the EA or EMAB or both continue to exist after closure
- Confirmed that the EA remains in effect after closure
- Minister decides if EMAB will remain, and for how long
- Party engagement influences minister decision
- EMAB should request letters from each party confirming that they want EMAB to continue into closure
 - No Government of Canada member, but EMAB will also draft a letter to them and include that they have no member appointed.

Q: Who writes Diavik's TK reports?

- Facilitators go through TK reports/observations. They basically write the report and then send it back to the panel representatives. Panel representatives then revise/finalize the report.
- Try to avoid conflict between elders recommendations at other meetings, and TK Panel recommendations
- Violet would like to review May 2018 TK Panel report.

Discussion on next TK panel meeting

- Was planned for September 6-7, but may be a time conflict with the MVEIRB public hearing
- Trying to reschedule for September 14-15 but this is not confirmed
- EMAB staff are invited to the meetings and want to know who to contact about arrangements
- Gord said the organizers should be sending out information on this soon

The ED explained how EMAB staff review Diavik's technical reports (i.e. the WMP, AEMP, EAQMP) and provide this information to Board members. Noted that in addition to Board meetings, EMAB staff will brief board members on any EMAB issue on request

On item 3.1.1: Tlicho and YKDFN are still developing their engagement plans.

- Noted that TG Engagement Plan is intended for proponents or governments. Not sure this applies to EMAB.
- TG Lands Dept. reports to the Tlicho Government through the Chief's Executive Council, and sometimes to the Tlicho Assembly

Action Item: Send letter to each Party requesting confirmation that they want EMAB to continue after Diavik operations are finished.

Action Item: Send copy of May 2018 TK Panel report to Violet

Lunch Break: 12:00pm – 1:10pm

9. Draft 5-year Action Plan Continued

ED continued reviewing items on the 2019-2024 Action Plan draft

Related to item 4.1.2 and 4.1.3: Discussion about how IEMA formats their annual report

- EMAB has 'report card on the environment' in our annual report
- Suggestion to produce a summary of the annual report. A ~2-page document similar to IEMA's
- We can work out a format for this with the board and hopefully start doing that this year

Suggestions for additions to the Action Plan

- Community radio stations could be used to communicate information in communities.
- Board members are in best position to do this; allocate additional honorarium to cover time

Motion: *To approve the 5-year Draft Action Plan with added item for Board members to update communities via local radio.*

Moved: Violet Camsell-Blondin

Seconded: Jack Kaniak

Motion carried

10. TK Recommendations Review

ED presented TK item from kit.

Item is a table including summary of TK Panel recommendations, comments from Diavik, EMAB assessment of response, as well as questions to follow up with Diavik on what was done to address TK recommendations. Analysis of review is still being drafted.

- EMAB should follow up with Diavik to find out what happened as a result of TK recommendations.
- Was not always clear whether recommendations were accepted by Diavik
- ED is looking for direction from board for what we should do next. It is the first time reviewing the entire TK recommendation table.

Discussion on utilization of TK

- It is part of the EA to use TK knowledge
- Board member feels that Aboriginal people get frustrated because TK is not always taken seriously.
- Suggestion to organize a meeting about this. Board member would like to know first hand from Diavik how TK has been incorporated into the closure plan.
- Would this be a big workshop with representatives from all parties?
 - A 2-3 day workshop with the TK panel and industry. Board would also participate

Discussion about TK framework for reports

- Dominion attaches TK framework to reports
 - Unsure if this is only happening for Jay Project reporting or all of Ekati
- ED: based on conversations with IEMA he thinks that Diavik's TK panel organization seems to be better: facilitators with expertise in collecting and verifying TK, strong verification process, Panel process controlled by elders.
- Board member mentioned Snap Lake closure session. They invited elders to the sessions and gave them an opportunity to respond. Elders wanted a site visit and De Beers agreed.
- ED: staff can prepare a proposal for a workshop, but EMAB doesn't have the budget. May have to approach Diavik for funding.
- Could surplus be used here or is it tied to the ICRP budget
 - If the workshop is on closure review then it could be used to cover a TK closure workshop. Need to ensure adequate funds are available to review closure plan.
 - Could be a collaborative partnership on TK and closure

ED will finish the TK Recommendation review and analysis for next meeting.

Action Item: draft proposal for a TK Closure workshop

11. WMP Recommendations Review

Noted that neither Diavik or ENR has responded to EMAB recommendations sent in March. Sixty day deadline for response has passed for both.

Action Item: EMAB to draft letters to Diavik and ENR to let them know that they are past their 60-day deadline to respond to March 2019 EMAB comments.

BREAK

12. Update on Winter Road Monitoring

Mike Lowing, Director of Operations with Tibbit to Contwoyto Winter Road JV (TCWR) presented on last year's winter road conditions.

Noted that ice is very highly monitored now and there are no incidents of vehicles breaking through during the operating season any more. Also notes that safety and environment are a TCWR value, not just a priority (because priorities change).

A few third party commercial users are allowed.

All carriers need to be approved by JV – demonstrate strong planning for all aspects (spills, breakdowns etc.). They are judged on environmental performance (among other factors).

TCWR is very compliant to regulator requests.

Spills are a major concern – worst potential is driver going off-road on a portage.

Incidents, infractions and cautions have been decreasing.

- Two reportable spills last year
- 199 non-reportable
- Drip trays required under all equipment parked for more than two hours.

Discussion: EMAB would like more information on wildlife monitoring

- Winter road wildlife observations are reported to ENR
- Truckers do not keep records of wildlife sightings, only actual encounters (e.g. a collision with an animal)
- Smaller animals such as fox and wolverine are typically not reported; rarely see caribou.
- Generally don't see a lot of wildlife on the road.
- Contractors (maintenance, enforcement etc.) are supposed to report any wildlife sightings
 - There is a wide variety of drivers and determination of what is unusual is up to the drivers discretion
- There could be long stretches between vehicles where wildlife could be present but not observed
- Concern about winter road disruption caribou migration route
 - Mike says they do not see a lot of caribou around the road these days, but will try to find historical data on this
- TCWR does not have much contact with ENR about wildlife. Most discussion with ENR is about public safety
- Can provide incident reports on request
- Winter road summary for each year usually available in mid-April.

Mike will distribute large maps of the winter road for EMAB.

Action Item: Mike to provide maps of winter road.

Action Item: EMAB to follow up with request for wildlife sighting reports

3:25pm - Meeting Adjourned for the Day

Motion: *to end meeting for the day*

Moved: Jack Kaniak

Seconded: Laurie McGregor

Motion carried

June 19, 2019
Meeting reconvened at 9:10 am

13. WMP Report Review

Heather Sayine-Crawford and Andrea Patenaude from ENR-Wildlife joined the meeting Dan Coulton (Golder) and Sean Sinclair (Diavik) joined the meeting by phone as well as Abbie Stewart and Petr Komers from MSES.

Sean Sinclair presented Diavik's 2018 WMP Report

Behavioural scans

- 56 onsite
- 4 offsite

Discussion on caribou collaring:

- Caribou migration routes shown on map are derived from collar data
- About 50 caribou are collared; 40 cows, 10 bulls
- ENR has received permission to increase number of collars to 70

Q: What season does collaring take place?

- A (ENR): Collaring takes place in March/April before caribou migrate north to give birth

Q: Why not wait until after the cows give birth?

- A (ENR): it is better to collar while there is still snow cover. It provides a more stable ground and results in less injuries to the animals. They are considering trying collaring at water crossings.

Q: What is the process to collar?

- A (ENR): They fly over and immobilize the animal with a net-gun. No drugs are used. The animal is then untangled from the net and blindfolded to minimize stress. They take samples from the animal (i.e. poop and hair). Then they put the collar on and release the animal. This process takes about 15 minutes.

Discussion over confusion about 90 reported bear sightings but 128 bear observations

- Observations are reported by anyone; sightings are by Environment staff.
- Sightings are per day
- Need to clarify

Discussion on grizzly hair-snagging

- Results to date show population is stable to increasing
- Diavik is waiting for direction from ENR on timing of the next hair snagging
- ENR will facilitate a discussion; they need to figure out staffing logistics first
- ENR does not have plans to initiate the discussion soon. Maybe in a year or so.

Wolverine

- No mortalities
- Track surveys show variation is not related to mine activity

Q: When does Diavik plan to do the next comprehensive analysis?

- A: Diavik no longer does this as a stand-alone analysis. It will be integrated into the WMP report. There will be a 3-year schedule for completion of comprehensive wolverine analysis. Pretty sure that 2020 is the next comprehensive year, but will double check that.

Discussion about loss of raptor nests/habitat in pits after flooding due to PK to Pits proposal

- Diavik would make sure nests and eggs/nestlings are not present before flooding pits.
- Plan is for pits to be flooded whether or not PK goes in

Waste Management

Q: Does all the waste oil get burnt or is some shipped away?

- A: most is burnt but some has to be shipped off. We don't have the capacity to burn it all.

Noted that a table in the report responds to EMAB's comments on the 2017 WMP report.

Discussion about TK comments on wildlife:

- Board member noted that there was no mention of TK in Diavik's presentation. How are TK Panel comments incorporated?
- Sean/Dan noted that TK comments are largely focused on closure; they are responded to by Diavik directly and incorporated into design plans (e.g. the increased number of transects in the wolverine snow track design plan).
- Sean agreed there is no TK section in the report.
- Board member is not disputing that this is done, but is specifically noting that they would like to see TK addressed in the presentations provided by Diavik, alongside scientific information. Suggested two tables side-by-side
- Diavik said they will make sure to discuss TK in future wildlife presentations

More discussion on caribou collaring:

- Aboriginal groups are consulted about collaring. This has been happening since the late 90's.
- Some Aboriginal groups have been opposed to collaring because they used to be big and heavy and would trap snow.
- ENR noted that collars have improved and gotten lighter.

More discussion about TK comments on wildlife:

- ED recalls 2-3 comments from elders about enhancing behavioural observation charts
 - Thinks Diavik committed to address these in TK recommendations table
 - Can't find anything in the WMP report that addresses the comments
- There are suggested additions to caribou behaviour program. Seems like the suggestions are not linked to the WMP report. There is a potential for linkage here. Not sure how to address moving forward
- Board member says it is easy for them to see all the comments but can't see how the comments are addressed or added to plans
- Board and Diavik discussed how reporting on insect harassment was suggested by TK and added to the plan. But, now that caribou are only present in winter there is no insect harassment.
- Diavik noted they have a separate form for community observers in caribou behavior monitoring. Also noted that the methods need to remain consistent.

Discussion about TK camps

- Discussed whether it is possible to move camp materials to another site closer to caribou
 - Not possible as buildings are not tents
- Doesn't need to be the full setup. People know how to take care of themselves.
- Can discuss further plans closer to the 2021 TK camp

Q: Where does the direction to increase caribou collars to 70 come from?

- A (ENR): We discuss it with local government partners including Tlicho. There has been a lot of talk about current population estimates. Management actions, surveys, mines, and harvests rely on collar data. We have heard from communities that increasing the number of collars will help provide more information to the parties who use collar data. The proposal to add more collars has gone to all communities. We have got permissions for more collars.
- Q: does this include the KIA?
- A (ENR): we only need their permission if we are on the Nunavut side. But they would definitely receive the proposal.

Abbie Stewart Presented MSES' review of Diavik's WMP Report

Noted that closure needs to address indirect caribou habitat loss outside the actual mine footprint.

Discussion on ZOI/Aerial Surveys

- Mines are waiting for direction from ENR on when to resume ZOI monitoring. Now that mine activity has changed with open-pit mining starting at A21, ZOI should be assessed again.
- Noted Boulanger's proposed method for assessing ZOI using collar data presented at last year's Regional Wildlife workshop might be helpful. Waiting for a journal article to assess.
- Diavik believes that aerial surveys are not ideal under current situation with low caribou numbers; few caribou near Diavik, aircraft disturb caribou.
 - ENR disagreed with this, says collar analysis does not provide same level of detail. Aerial surveys are useful and provide the best data
- ENR stated that the intent of suspending aerial surveys in 2012 was not to stop ZOI monitoring forever, it was to reevaluate how to provide the best estimates and avoid unnecessarily disturbing caribou
- ENR thinks it is about time for another aerial survey in combination with Ekati
 - ENR plans on sending a letter of direction, but is still working on staffing the position that would direct this
- Further discussion about using collar data vs. aerial surveys for ZOI analysis
 - Collar data does not require a timeline because collars are collecting data 24/7. Noted there are more collared caribou than in the past, and number of collars will increase soon.
 - Might be possible to analyze collar data for ZOI assessment; more information is needed on Boulanger's proposed methods.
 - Aerial surveys provide more precise estimates, but low numbers leads to fewer observations so can't draw useful conclusions.
- ENR apologizes for their delay on this. Has to do with staffing issues but it is on their radar.

Noted that the upcoming Environmental Assessment of Diavik's PK to Pits proposal will provide an opportunity to review all this data as well as success of mitigation proposed in CSR.

Discussion on Behaviour

Noted that caribou behavior data was collected but not analyzed.

Q: Why was so little caribou data collected far from mine?

- A: Caribou are rarely around the area in summer any more. Behaviour data now has to be collected in the winter because that is when the caribou are around. We have to fly out to get the far-from-mine data and this creates logistical and safety issues, especially when it's very cold. Helicopter can only be turned off for a short time; people can't be exposed to extreme temperatures for long periods.

Comment: We went through all the work to get Ekati on board with collecting compatible data. Now that Ekati is finally on board it seems like Diavik is not holding up their end of the agreement to collect far-from-mine data.

Q: Are there no far from mine caribou to sample when it's warmer, or is it just easier to make opportunistic observations near the mine?

- A: it's because the observations are made in winter

Q: Yes, but in order to do any analysis you need more far from mine samples. Are there so few caribou that you can't get more than 4? Are you not getting the observations because there are no caribou or is it something else?

- A: we record them when we see them around

Q: how does Diavik look for far-from-mine caribou to observe?

- A: collar data

Comment: Close to mine observations used to be limiting, now it seems the opposite.

Comment: EMAB board member thinks that they shouldn't not analyze data just because there were few caribou observations

- Diavik says in order to detect anything meaningful they need a certain number of observations and it is difficult to get enough.
- Board member thinks they should collect and report whatever data they can
- Could also provide information about cumulative impact
- There appears to be enough data to do an analysis over the period since 2011.

Gord Macdonald joins by phone

Discussion on formatting of behaviour data:

- EMAB and contactors think the presentation of the behaviour data is confusing and varies from year to year; eg. information presented in 2018 is in a different format than 2017
- MSES included a format suggestion in their review
- Diavik says they are trying to do what they can with the data and pointed EMAB to Appendices A and D of the WMP.
- Noted that in 2018 there are quite a few scans recorded, but many are the same group of caribou.

Noted that Aboriginal organizations want to participate in monitoring and closure planning and want to see TK used and reported on in the WMP and others, not just science. People are concerned about the effects of all the mines.

Caribou behavior (cont'd.)

- Last year Diavik did an analysis and concluded there was no change in feeding behavior inside the ZOI compared to outside – the analysis should present comparisons of all behaviours, not just feeding.

Caribou distribution

- Diavik is proposing to drop this part of the WMP because data show no fragmentation of herd
- Need to review the original prediction / study objective; had understood this was related to energetics, not herd fragmentation
- If Diavik is trying to monitor herd fragmentation they are using an inappropriate method; collar data might provide more useful results

Adaptive Management

Noted that TK is saying caribou are avoiding the mines. DDMI could explore this. For example there may be a link with dust and deposition; and dust seems to have exceeded predictions. Mines could coordinate dust mitigation and assess effect on ZOI.

Grizzly

- Mines do not seem to be affecting Grizzly populations
- ENR does not have timelines for providing direction on the next hair snagging.

Golder requested an example of the table proposed by MSES.

Q: will EMAB Chair participate in the EA hearing on the PK to pits proposal along with staff

A: yes

Noted that EMAB needs more resources to participate adequately in hearings. Also important to include elders' comments in the closure plan.

Motion: *to approve MSES's recommendations*

Moved: Jack Kaniak

Seconded: Violet Camsell-Blondin

Motion carried

Action Item: request clarification on bear sightings vs. bear observations

Action Item: Diavik to confirm timing of next comprehensive analysis

Action Item: Diavik to present data on caribou behavior observations in format proposed by MSES

Action Item: EMAB to follow up lack of TK section in WMP report

Abbie, Petr, Sean, Dan, Heather, and Andrea left the meeting

14. EAQMP Review and Next Steps

Jennifer Kirkaldy from Arcadis joined the meeting by phone

Jennifer presented Arcadis's review of Diavik's EAQMP

In general Diavik has not met the requirement in the Environmental Agreement for Air Quality Monitoring. Other mines have been more successful at TSP monitoring. Just takes resources and dedication.

TSP is the best way to assess mitigation measures.

Comment: one argument Diavik has made is that they've demonstrated that it is rare that they go above the guidelines for TSP, so they don't need to monitor anymore. But, the reason you monitor is to detect change over time, not until you've seen that effects have been minimal up to now.

- Not unusual to see programs step back during closure phase, but in this case mining activity is increasing with the opening of A21
- There has never been any TSP monitoring during open pit mining

Discussion on TSP versus PM 10 & PM 2.5

- TSP is broadly categorized as visible dust
 - Focused on in mining because by focusing on larger dust particles you also control smaller particles
- More recent air quality monitoring criteria have shifted away from TSP and moved focus to PM 10 and PM 2.5
 - These finer particulates are typically related to combustion activity
 - More hazardous to human health than TSP
 - If the EA was happening today, PM 10 and PM 2.5 probably would have been included as a parameter to look at.

Discussion on mitigation measures

- Water trucks can be effective
- More would should be done to test constituents of the dust and determine if that has an effect on caribou.
- Monitoring visible dust allows the most immediate reaction time; why are samplers needed?
 - i.e. you can see a dust plume and send out water truck right away
 - Although possibly not in winter when dark (and cannot see dust)
 - Doing this can also provide immediate feedback on if your mitigation method worked (i.e. if the dust plume is gone)
- More documentation would be good
 - Visual observations provide immediate data, need to be less reliant on instruments that frequently break.
- Real time observations would be a good source of information to compare to monitoring data
- Diavik is wondering if dust deposition data can be used in the same way as visual observations
 - No because this is only recorded quarterly and there are a lot of confounding factors
 - But it is a good supplement

Discussion on intent of TSP monitoring

- Diavik just needs to measure dust
 - One thing to make visual observations on what is in the air but we want to know what is on the ground
 - Some dust in the air gets transported away from site by wind
- Can't verify TSP by dust canisters.

- Supposed to be an air quality monitoring program. Canisters are a part of it but they don't measure the air.
- Uncertainty about what was considered under TSP monitoring requirement in EA and CSR
 - If they only need to measure what is deposited, then why should Diavik measure the air?
 - Was said we should go back and check on the intent of TSP monitoring

Discussion on TSP regulations

- GNWT and the Federal Government have TSP guidelines but no regulations
- GNWT regulations are in development but probably will not be finalized until after closure

Jennifer and Gord left the meeting.

Lunch Break: 12:30pm – 1:00pm

15. Inspectors Report

Land Inspectors Jamie Steele and Joe Heron joined the meeting

Jamie presented the Inspector's Report

Key points:

- PKC ponding
- Realignment of airport road
- Winter road and waste backhaul
- New refueling station

Realignment of airport road will use A21 rock.

New land use planning permits have stricter rules about minor spills and cleanup; don't apply to Diavik

- Secondary containment, Drip trays

Discussion about contaminated soils

- Thought at one point Diavik had been allowed to bury some contaminated soil
 - Contaminated rock pieces bigger than 10cm would get put with type 3 rock
 - Contaminated soil goes to WTA
- This is covered under the water licence.

Jamie and Joe left the meeting

16. Water Licence Amendment – PK to Pits and Next Steps (SIS review)

Gord, Bill Slater (SEC), Rasheeda Slater (SEC), Megan Cooley (NSC), and Friederike Schneider-Vieira (Rike – NSC) joined the meeting by phone

Rike presented NSC's review of the Summary Impact Statement

Key points:

- Report doesn't consolidate all the documents to date; it makes lots of references to other documents and responses

- Questions about criteria for breaching dikes and how water quality will be measured
- Stability of meromixis in A21; seems to break down after about 50 years
- Methods for sensitivity analysis not provided
- Results show porewater concentration decreasing over time; this is likely because it is diffusing into Lac de Gras, but report doesn't say that
- Need a rationale for use of fresh PK instead of from PKC, and more sampling to reduce variance
- Chemical oxygen demand will deplete oxygen at depth
- Shows good mixing of water to 40m but no good rationale
 - Key assumption is that fish won't go below 40 m.
- Water quality monitoring is not well developed
- Explain criteria for closing dike breaches

General comment: Board member looking for plain language summary of review

Discussion on Local Assessment Area

- EMAB strongly opposed application of LAA to determination of significance in the closure plan
- NSC doesn't think the determination of significance using the 1 km zone is reasonable
- NSC says the 1km zone for the LAA is not that unreasonable on a spatial scale
 - However, this depends on what is considered a significant effect
- Seems too large to have the water sampling stations be 1km from the dikes at closure
- Note that determination of significance is not decided by Diavik, it was determined by the Responsible Authorities (RA's).

Discussion about exceedance of benchmarks in modelling

- Confusion if graphs are showing water quality at base of pits or at 40m depth
- Diavik notes to keep in mind the graph has 2 axes

Discussion about IR's

- Diavik notes that some proposed IR's in the review have already been addressed eg. monitoring
- Responses to MVEIRB IR's were not included in the SIS
 - EMAB staff and consultants were under the impression that the SIS included all information relative to the PK to pits project proposal
 - All details were not included, so reviewing MVEIRB IR responses was not included in scope of consultant review.

Bill presented SEC's review of the Summary Impact Statement

Some discussion on which material should be reviewed and confusion over MVEIRB system. Gord noted that there is material on the public registry and on the online review system.

SEC review took an environmental assessment perspective. Noted that the criteria for significance used by Diavik are the same as in the CSR. Also noted that Diavik proposed those criteria during the CSR and the RA's accepted them.

- A stronger rationale is needed as to why these criteria are appropriate
- Context and conditions have changed
- Model doesn't include all loading sources

- Agrees with NSC that a better rationale is needed for use of fresh PK as representative of PK in pits
- Need water quality benchmarks for wildlife

Q: are there water quality benchmarks for wildlife?

- A (SEC): yes but they are listed in the closure criteria
- Wildlife benchmarks in closure criteria have not been approved. Only ones approved are for aquatic organisms.
- Although the guidelines are not approved, they provide some guidance

Q: are there equivalent guidelines by a regulator?

- A (SEC): in some cases there are generic guidelines

Comment: concerned if it would be safe for wildlife to drink water with high TDS (i.e. water in pit lakes)

Comment: the IR request (about water quality benchmark for wildlife) is important, but there is not much that Diavik could respond with since there are no strict guidelines.

- If the change caused by Diavik to water quality in pits is measurable then its effect should be considered as part of the cumulative effect on Lac de Gras
- Model shows contaminants slowly diffusing up and into Lac de Gras. This would happen least in A418. A21 should be avoided for storage of PK as meromixis will break down.
- Lack of inclusion of reming of slimes from PKC is a weakness. This reming would be a major benefit.

Q: Did Diavik demonstrate how long it would take extra-fine PK to settle over time?

- A (SEC): no, the modelling did not include settleable component. We do not know the characteristics of extra fine PK or how long it would take to settle.

Q: can EMAB make a recommendation saying that guidelines should be developed?

- A: yes, where guidelines don't exist (wildlife health, air quality) but would have to make it outside of the EA process

Further discussion on IR's

- Diavik says there are a number of IR's proposed in the SIS reviews that have been addressed in MVEIRB IR requests and other documents
- Board feels that if the information is complicated for us and the reviewers to find, it is probably difficult for others to find. Given time constraints EMAB should just submit the IR's.
- Diavik feels it is unfair to blame Diavik for reviewers not reviewing all of the information
 - EMAB could indicate that the review was limited only to information presented in the main SIS document
 - Diavik: would like to leave it on record that EMAB wasn't more proactive in ensuring reviewers looked at all the information provided
 - EMAB noted it was disappointed that Diavik's SIS did not include the responses to MVEIRB IR's, since it was submitted after them.
 - Noted that the SIS was intended to be a replacement for a Developer's Assessment Report.

- the information is not provided by MVEIRB in a way that makes the whole picture clear. Maybe there is a way for Diavik to communicate with review boards as to how to make the information more accessible.
- Diavik feels EMAB should be the ones to bring it up with the review board since they are the ones having difficulty here
 - EMAB staff and Board Members maintain that they believed the purpose of the SIS was to compile all information in one place.
 - EMAB will comment on the confusing nature of the process in a covering letter to MVEIRB

Bill, Rasheeda, Megan and Rike left the meeting

Motion: to submit IR's to the Review Board, with a cover letter

Moved: Laurie McGregor

Seconded: Jack Kaniak

Motion carried

Gord left the meeting

17. ICRP Engagement and Status Update

During the March meeting, EMAB gave Diavik their views on closure items that the WLWB directed Diavik to engage on. Diavik was to engage with communities as well. They planned to set up meetings to do this. ED was invited to attend but was unable or did not receive meeting details. ED was able to obtain notes from some communities on the meetings.

ED provided an update from the notes from community meetings

- EMAB may wish to submit the notes we have from community meetings to WLWB.

Comment: Tlichio does not want to revisit the 1998 EA, but they want to add TK into the ICRP.

ED presents summary table of notes from community engagement meetings.

Comment: Tlichio elders do not want anything to be buried on site at closure.

Comment: Tlichio Elders do not support breaching dikes if PK is added to pits.

BREAK

8. ED Performance Review

Motion: to go in camera

Moved: Laurie McGregor

Seconded: Jack Kaniak

Motion carried

Motion: come out of camera

Moved: Laurie McGregor

Seconded: Jack Kaniak

Motion carried

Motion: to approve Executive Director performance appraisal and recommendation for two additional days holidays.

Moved: Laurie McGregor

Seconded: Jack Kaniak

Motion carried

21. Additional Item: Proposal for NSC to Review EMAB Comments on AEMP Design Plan V. 5

The WLWB asked Diavik to engage with EMAB on biological action level changes proposed in Design Ver. 5 response framework. EMAB asked NSC for the cost to go through all of Diavik's answers to EMAB's comments on the AEMP Design Plan V. 5. The price is \$2625.

- Option to ask how much it would cost for NSC to only review comments on biological action levels.
- Board decided to approve proposal for NSC to review all comments

Motion: to approve NSC proposal to review comments & responses on AEMP D.P. Ver 5.

Moved: Laurie McGregor

Seconded: Jack Kaniak

Motion carried

General comments on conflict of interest

- Noted that Diavik holds the purse strings on EMAB's budget, which can affect ability to review technical documents – this is a conflict of interest
- Some board members feel like Gord's position on the Board conflicts with his position at Diavik
 - Perhaps Diavik's board member could be someone that is not a manager.
 - Other boards have measures in place to prevent this, for example not allowing management on the board.
 - With the way the EA is structured, Diavik is allowed to appoint anyone as its member.
 - It could be possible to not allow Gord to contribute to parts of the meeting where there is a conflict of interest.

Action Item: request opinion from legal counsel on Conflict of Interest at meetings by Diavik or other Parties.

19. Board Member Round Table and Community Concerns

Jack Kaniak - Kitikmeot Inuit Association

- KIA having board meeting from July 10-11 2019. He would like to do an EMAB update with staff attending.
- EMAB had a very heavy agenda for this meeting. Better to add more time for an agenda like this.

Laurie McGregor – GNWT

- The GNWT is an intervener for the Diavik EA
- Lee-Ann Malley (primary GNWT contact for EMAB) is on mat leave. Currently running staffing competition to fill her position. Might know a new contact in about a week. Will have to figure something else out if there isn't a replacement for Lee-Ann.
- Laurie usually works in Environmental Assessment but is now on Climate Change but returns soon.
- Laurie will be involved in the Diavik EA on behalf of GNWT. She is concerned about potential conflict of interest with EMAB if she has to present information for the GNWT during the EA.
- It was generally felt that this would not present a problem, and that if Laurie feels conflicted she could withdraw from related EMAB decisions.

Violet Camsell-Blondin – Tlicho Government

- Tlicho community reporting is through the Tlicho government system
- She also reports to monthly resource management committee meetings that all managers and directors sit in on
- Diavik EA is a key activity; Violet reports on activities related to the EA
- Also reports to Tlicho Annual Gathering taking place on July 9-10 in Gameti this year
- May also do a report on CKLB

Charlie Catholique – Lutsel Ke

- Nothing to report
- WLEC is monitoring hunters

Noted that public meetings are valuable. ED asked if there was a specific Tlicho community EMAB should update.

Request for Board members to receive meeting materials as far in advance as possible.

20. Next Meeting

Next meeting was tentatively set for August 13-14, 2019.

Chair adjourned the meeting at 4:15

Motion: to end the meeting

Moved: Jack Kaniak

Seconded: Laurie McGregor

Meeting adjourned