Environmental Monitoring Advisory Board

DRAFT Minutes – Feb 27-28, 2018 Behchoko Sportsplex, and EMAB Boardroom, Yellowknife, NT February 27, 2018

Present:

Charlie Catholique, Acting Chair
Julian Kanigan, Secretary-Treasurer (Day 2)
Gord Macdonald, Director
Arnold Enge, Director
Sean Richardson, Director
Jack Kaniak, Director

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

Absent:

Napoleon Mackenzie, Chair

Yellowknives Dene First Nation

Staff:

John McCullum, Executive Director (minutes) Allison Rodvang, Environmental Specialist (minutes) **Environmental Monitoring Advisory Board**

Environmental Monitoring Advisory Board

Guests:

Michael Birlea, Alternate for Tlicho Government (Day 1)
David Wells, Diavik (Day 2, by phone)
Sean Sinclair, Diavik (Day 2, by phone)
Jessica Kozian, Diavik (Day 2, by phone)
Jamie Steele, Lands Inspector (Day 2)
Kelly Fischer, ENR Air Quality (Day 2)
Karin Clark, ENR-Wildlife, (Day 2, by phone)

Board members and staff met at EMAB office and drove to Behchoko.

1. Call to Order

Chair called meeting to order at 10:15 am. Chair opened meeting with moment of silence.

2. Approval of Agenda

Chair read through agenda. There were no changes proposed.

Motion: To approve agenda, as presented.

Moved: Arnold Enge **Seconded:** Jack Kaniak Motion carried.

3. Conflict of interest

No conflicts were declared.

4. Minutes of Previous Meetings

Board members reviewed minutes of December 5-6, 2017 Board meeting. **Motion:** *To approve Board Meeting Minutes from December 5-6, 2017.*

Motion: Sean Richardson Seconded: Jack Kaniak

Motion carried.

Motion: To approve minutes from December 13, 2017 conference call.

Moved: Arnold Enge

Seconded: Sean Richardson

Motion carried.

Email motions:

Letter to Parties on assessment of Environmental Agreement Q: was there any follow-up to the letter on the EA Assessment?

A: Diavik sent a letter saying this should be done. Feels it is up to ENR to bring the Parties to the table.

Letter to GNWT on need for long-term liability policy.

Approval of submission of revised comments on ICRP Ver 4/WRSA Ver 1.1

Comment: same questions that are asked and answered prior to a submission are still included on registry. Is there an easier way, to everyone's benefit, to do this process while keeping information on the record?

- Open to figuring out a better process
- EMAB wants to make sure this information gets put on record
- Possibly include in covering letter but not in comment table

Action Item: Staff and WLWB to work out a process to put information on record while avoiding requiring a response from Diavik and follow-up by Board staff.

Review of Action Items

- Notice for a KIA alternate has been distributed. Alternate may be appointed at May or June 2018 KIA meeting
- Staff to contact Laura Duncan about meeting with CEC
- Neckwarmers and toques make good swag
- Noted 2018 TG Assembly will be in Whati
- Can EMAB cover Jack's costs to travel to update KIA? Yes.

5. Financial Report – to Feb 2018

ED presented Financial statement from kit

Q: how much funding will be rolled over to 2018-19 from Oversight and Monitoring component?

A: this is shown in 18-19 budget under next item

LUNCH 12:00-1:00

6. Workplan and Budget 2018-19

ED presented item from kit. Went through oversight and monitoring reports for next fiscal year. It was noted that the Waste Rock Management Plan should be added to list.

Only item that hasn't been budgeted is for MSES to attend the Regional Wildlife Workshop. Agreed to include this in the budget.

ES informed the Board on Arcadis proposal to review Diavik's application to allow ponded water against the PKC dam.

Motion: To approve the proposal and estimate from Arcadis to review the ponding request at the PKC dam.

Moved: Arnold Enge Seconded: Jack Kaniak Motion carried.

Discussion:

- ED proposed adding surplus to a contingency fund or add to Other Review and Reports. Suggestion to leave in a contingency fund.
- Make a greater effort to involve the Parties at the AGM.
- Put money into TK line item? If EMAB wants to get more involved with the TK Panel. It is possible that EMAB could take a day of the Diavik TK Panel meeting. This option would be cheaper for EMAB.
- Diavik has Fish Camp this year EMAB could be involved.
- Options are for EMAB to hold a TK Panel meeting or go in with Diavik on a TK panel session.
- Item will be tabled until discussion tomorrow on TK recommendations letter.

12. Update on wildlife monitoring at Diavik (moved)

ES presented item from kit.

Discussion:

- Confirm commitments made during call with MSES, Golder and Diavik.
- Recommend written description of monitoring plan, similar to AEMP for WMP.
- Moccasins on the Land is a caribou watching program starting in Lutsel K'e.
- Boots On The Ground is growing, increased interest from community members. Program is looking to monitor in the winter to give more time to write the report.
- EMAB will be looking for Diavik to compose a document to lay out their Wildlife Monitoring Program. EMAB and ENR to approve.
- EMAB to write a letter to Diavik with what we would like included in the WMP before workshop.

- Not expecting to change 2018 program but will expect 2019 program to change.
- Diavik should come to May meeting with basis for program discussion changes.
- When commenting on WMP make sure to state which comments are on report, and which are on the program.
- Noted that it appears ENR Wildlife Div has not reviewed wildlife-related closure criteria

Action Item: confirm in writing that Diavik will undertake actions discussed during call with MSES and Golder.

Action Item: Send letter to Diavik before the Regional Wildlife Workshop in April. Note that EMAB would like to see comprehensive definition of what program entails. EMAB will also follow up after workshop with outcomes from the workshop. Involve ENR in this process. Timing should allow this to be implemented in 2019.

Action Item: Request ENR Wildlife review wildlife-related closure criteria in Diavik ICRP

Meeting adjourned at 3:00 pm to set up for community update.

Day 2

Meeting Reconvened at 9:00am in Yellowknife

7. Water Licence Amendment

Sean Sinclair, David wells, Jessica Kozian joined by phone.

David Wells presented.

- Overview of PKC production and storage, options and analysis, and what this means for amendment to water licence.
- PKC doesn't have a lot of room for growth. When dams are raised, base must expand, but there is little room to do so.
- Diavik has been doing de-grit trials to reverse fine and coarse ratio to produce less fine. Coarse is stacked in PKC. More coarse material is ideal as it doesn't create ice lensing, which takes up more space. They haven't been able to raise the coarse enough to allow storage of all fine PK in the PKC.
- Currently running at 50FPK:50CPF, not 80CPK:20FPK as originally desired.
- Running out of space for dam raises and FPK.
- If Diavik does nothing, the PKC will be full in 2021.
- Diavik is proposing to do a dam raise and put additional FPK in A418. Water licence requires all PK to be placed in PKC, so an amendment is required.
- Two-step process: (1) Asking WLWB to allow deposition of PK in pits first (via amendment to water licence) this would set the requirements for management plans (2) If amendment is approved, build detailed management plan of how work will be completed.
- Would go back to producing 80 percent FPK, and pipe this to A418, put bulkheads in tunnels to plug A154 from 418, and a water cap on PK. Water would also feed into process plant so large amounts of water aren't drawn from LDG.

Q: Effect on closure?

A: potential to remove very fine PK from under PKC pond, then a dry cover on PKC.

Q: Would there be progressive reclamation in the last few years?

A: Potentially. Coarse PK would be going into the facility until the end of operations if this approval is granted, so little scope for this.

Q: is there enough room in A418 for all fine PK?

A: Yes

Q: how high would the FPK go?

A: they would fill the underground and likely go up into the pit; not sure of depth yet.

Q: Fate of A21 PK?

A: same as for PK from other pits.

- Diavik has engaged with all necessary groups.
- Won't need approval until 2022 being proactive.
- Water licence amendment takes one year.
- A dam raise on PKC takes three years. Still working through design. Will submit in May.
- Requesting to extend WL to 2025.
- Submitting amendment application in mid-March. The WLWB will put out workplan for the year long process.

PKC Water Against Dam

Q: If PKC pond water is denied against dam do you have any other options?

A: If it was denied, there will be periods when water is ponding against the dam due to snow and rain, so out of compliance. Other option could be to define what type of water that is allowed to pond against dam.

Q: What terms and conditions need to occur in the licence?

A: If approved in concept, it will need a PKC management plan, schedule plan. EMAB should start thinking about what things we would like included in this plan. Details would be developed after the amendment is approved. Since schedules can be amended without a water licence amendment, this approach provides more flexibility.

Q: Where would pipeline go into A418?

A: Still working out those details, but goes to bottom of pit, not bottom of workings.

Q: How high would it be filled?

A: The more it fills up, the more bulkheads are needed. Material consolidates, how it fractions into water and consolidates is complicated.

Q: Anticipated effects on meromixis?

A: Condition in licence saying max level without impacting meromixis at closure. This research and engineering still needs to happen.

Q: Would PK in pit create fissures or any problems with pit stability?

A: Geotechnical engineering work will figure this out, need to make sure it is stable.

Next Steps:

- Next Board meeting is in May. If staff pick up on something in the amendment request that is
 a concern or wasn't discussed, then we may need to meet or have a conference call. Noted
 that staff will likely need to have this reviewed by an expert.
- WLWB staff put out schedule, technical workshop being the first thing (Randy may be a part of this). Likely wouldn't be until June.

Comment: In principle this would be a good idea and would help the stability of the PKC closure design.

8. Board Governance – discussion of strategic planning update/workshop

ED presented item from kit.

Discussion:

- Meeting out of town is better; possibly Diavik TK Camp
- Would like to start off strategic planning with input from the Parties, not that we have to accept it.
- This strategic plan will be happening during a critical part of Diavik's closure phase.
- Focus on an action plan, likely won't stray away from what is in our EA.
- Look at everything through the lens of closure.
- Should be called a five-year plan versus a strategic plan.
- A consultant has been hired to do this for EMAB in the past. How helpful was this?
- Don't love having facilitators, if we really needed someone to lead us and draw stuff out, can see where we would need some help.
- Start out with outline as it is hard to create from a blank page.

Q: Would this include a letter to the parties?

A: Call it a five-year plan to hopefully get better feedback. Letter should be specific, and outline our key activities. It could be a way to get them to come to AGM.

Comment: Or meet individually with the Parties to find out what they are happy with and what they could use more help with.

Next Steps:

- Contact parties
- Board Members would like to hold off site workshop, ideally within driving distance.
 - o TK Camp will be set up for TK Panel in May
 - Sean noted he will likely not be available in September due to fish camps
- Likely will not have a facilitator
- Find out how IEMA does their planning
- Possible topics: Closure, Engaging with Communities, TK
- Consider doing something different than in the past

9. Status of TK Recommendations Letter

ED presented item from kit.

Discussion:

- Remove "the only way" in memo.
- Would have to ask Panel if EMAB can sit in as some sessions are only panel members and a facilitator.
- EMAB should send a follow-up letter to Diavik requesting to sit in on next Panel meeting.
- Next TK Panel session is May 10-14.
- The main priority for EMAB is to assess the Panel's satisfaction with Diavik's responses to recommendations.
- EMAB will have to join part of Diavik's TK Panel session, or ask Diavik for the budget to host own session.

Action Item: send a follow-up letter to Diavik requesting to sit in on May 10-14 TK Panel meeting.

BREAK 10:50-11:00 am

10. Diavik EAQMP Update

Kelly Fischer, David Wells (phone), Sean Sinclair (phone)

Presentation by Diavik on review and changes to the EAQMP. Main change will be to discontinue TSP monitoring:

- Data verifies model predictions are accurate
- Units are best in class; only certified to -30C
- Not proposing to change to PM 2.5 and PM 10 these are about workplace safety which is monitored differently.
- Air quality is monitored through dust monitoring, via AEMP; Diavik has added two stations near A21 pit.
- Diavik will amend EAQMP and submit for review

Discussion:

Q: What kind of air quality monitoring is done for employees?

A: Determine what the environmental risks are. For example, silica can be ingested from waste rock and road dust. Workers wear monitors that measure area for silica. Exposure to individuals is tracked, but what they are inhaling is not. Done through the WSCC. Also annual pulmonary monitoring.

Comment: BC suggests TSP monitor uptime should be 85%, AB suggests 80%. This was only achieved in one year for both monitors at Diavik.

Comment: In Arcadis' opinion, a lot of data is not reliable due to calibration issues.

Q: Basing decision to remove TSP monitors on 4 years of data, but don't have a solid data set. Only one year has acceptable data capture.

A: Diavik has four years of experience with equipment to base decision on.

Q: Equipment is only certified to minus 30. Can the fact that it is often colder than this be attributed to why the monitors are down so often?

A: Hard to tell but can't discount it. The monitors heat the air up to minus 20. Often moisture build up, and degradation of internal components. There have been other failures, and since there are no local service providers in the NWT, monitors must be shipped off site.

Q: Approach to operating monitors seems all or nothing; is it possible to operate during part of the year? Were any other options considered?

A: Haven't considered any other options. Dustfall is measured as part of the AEMP.

Q: Might want to talk to ENR Wildlife division; they are looking at mechanisms and causes of ZOI. There is a question that very fine air particles could be a large contributing factor to ZOI in comparison to visual or noise stimulation. Know of specific research project with NRCAN that looked at visual disturbance and dust. Had difficult time figuring out noise, now doing TSP. Is there any value in this data? Could Diavik contribute to this research in another way?

A: Open to hearing about other programs.

Q: What is Ekati doing to monitor for TSP?

A: Don't know.

Comment: EMAB consultants don't feel that Diavik's dust monitoring program with AQMP measures often enough.

Diavik noted that TSP monitoring was put in place to validate the model. Again it was pointed out that there is only one valid year of data (subject to calibration issues), so not enough to verify model.

Q: How come there was one year where the program worked well?

A: This year was a significant effort and cost to Diavik. Monitors are getting old and need replacing.

Diavik's next steps include submitting an amended EAQMP report with technical background to EMAB for review.

Noted that ENR reviewed the Air Quality section of the EAAR, not the EAQMP report.

It was noted that this discussion is very similar to the one that took place prior to the EAQMP being developed in 2012/13.

Action Item: Have ENR (Kelly) send EMAB her comments on Diavik's EAAR

Action Item: send ENR (Kelly) 2016 EAQMP

Action Item: Ask ENR if they have any sites that successfully use TSP monitors. Check what kind of

data capture rate Giant Mine has for TSP.

Action Item: EMAB go back to discussion of EAQMP and why TSP was added.

Action Item: Bring ENR (Kelly) back for further discussion on EAQMP.

Comment: Most jurisdictions don't monitor for TSP. Most monitor for PM 2.5 and PM 10. Not sure what other mines are doing. Know that the GNWT doesn't monitor for TSP at all sites. ENR techs have not provided feedback on ways to improve maintenance of Diavik's TSP monitors.

Noted that there are other options than simply removing TSP.

11. Inspector's Report

Jamie Steele, Inspector presented Feb 21, 2018 site visit to the Board.

- No concerns with landfill. Current Waste Management Plan was just approved by Board.
 Landfill is now being moved
- Wants to make sure labels are correct and always used in WTA so if there is a spill you know what it is.
- WTA is gated, so the waste management staff know what is going in and out. No random drop
 offs.
- Fuel transfer from tankers is very clean.
- Removing and stockpiling rock from A21 pending permission to direct haul to NCRP. Still dewatering parts of A21 (~14,000 cu. M./day).
- Encountered different rock in A21 ramp than expected. Stored with Type III, and sent to lab to test.
- Haven't been able to get mixing zone samples of SNP stations at diffuser due to ice thickness.
- Regarding Waste Rock Misclassification, Diavik has narrowed down the Type 3 areas using haul records. Three areas likely to contain type three rock with higher Sulphur content. Area much smaller than originally identified. Looking to drill samples.

Q: How reliable are haul truck records?

A: They are reliable. Diavik narrowed down the areas where Type III might be using pictures and more accurate information. Diavik is proposing three new monitoring locations from where drainage will likely flow on A21 pad. Inspector would personally like to remove the rock instead of monitoring for a long period of time.

LUNCH

12. Update on Wildlife Monitoring at Diavik (moved to first day)

13. BCRP Presentation

Karin Clark presented the updated BCRP by phone.

Discussion:

- Working through second phase of public engagement.
- Interim approach until land use plans (LUP) are developed. Makes more sense to rely on LUP, but range plan can be implemented in meantime.

Q: Plan boundary - combination of traditional and scientific knowledge that have documented that Bathurst herd calved east of Bathurst inlet.

A: That's right scientific information confirmed this as well.

Q: Can't implement this in Nunavut?

A: Recommendations are written in a way that respect all jurisdictions' authority. Nunavut has own co-management boards, and working on own LUP. There does need to be coordination and collaboration between jurisdictions on herds sharing boundaries.

Q: How do barren ground outfitters fit in as a land user?

A: In 2014 brought together a very large group to start thinking about a Range Plan. Two large meetings were held in YK. Formed a group to develop this plan. Looked for organizations who wanted to be in this group. Don't recall exactly how they came on; they may have self-identified.

Comment: Nunavut has a harvest. Wildlife management board has thirty tags and they distribute these to hunters and trappers. Meat is given back to communities.

Comment: Government won't have a budget to support this plan. Guardians/CBMs are meant to be indigenous led programs but government could help leverage funds by helping put together proposals.

Q: What level of protection does Nunavut land use plan provide for caribou calving grounds? A: Draft LUP under discussion. There are differing opinions on level of protection that should be provided. Draft from 2016 restricts all development in calving grounds.

Q: Any talk of establishing official conservation area in the NWT? Why wouldn't this be appropriate for some part of range, eg. Centre of Habitation?

A: Plan protects key areas to facilitate caribou movement on landscape. Most important areas for caribou are calving, post calving grounds and movement corridors especially land bridges and water crossings. Recommendations have to work together.

Q: This is area caribou range contracted to; what other areas besides calving grounds or movement corridors came up? Old growth forests are important to protect.

A: GNWT has recommendation on fire management. Possibly eskers. Noted that fire was not considered in assessing disturbance levels.

Q: How would mobile protection measures affect Diavik and their operations if caribou were in this area?

A: Looking at how to implement this. Could use collar data to identify when herd is coming close to development. Sabina Gold has done work on this.

Q: Plan to bring climate data into plan, since it is a cumulative plan?

A: Plan identifies key areas of research, plan suggests we should track fire, with climate change fire might become more frequent. Still struggling with what is really impacting the Bathurst herd.

Comment: GNWT has already restricted harvest. Can also affect change to development to help the Bathurst herd.

Comment: Roads bring development (talking about Nunavut), green areas don't limit development. Can the GNWT support the Grays Bay Road if it crosses the calving grounds, if this plan is approved?

Process/timelines:

- Complete engagement
- Comment deadline is March 31, 2018
- Present final plan to working group in May
- Final plan by summer 2018; no plans for further engagement after this round
- Could possibly go back to communities to present the final plan

- Q: Concrete actions that GNWT will take in response to Plan?
- A: (1) Guardianship programs meant to be led and implemented by Indigenous Governments, but the GNWT can also play a role upon invitation.
- (2) Conservation of calving and post calving grounds this is largely up to GN. GNWT will have to reconcile position on Grays Bay road and calving grounds.
- (3) Conservation of water crossings and land bridges opportunity to use Wildlife Act and/or Species at Risk Act (SARA). Barren-ground caribou are assessed as Threatened under SARA
- (4) Centre of habitation GNWT can implement these through the Wildlife Act and in Wildlife Management Plans (WMP). Any development that triggers requirement for WMP would have to include use of mobile conservation measures. GNWT still to work on how they will be implemented, especially for companies that don't have a lot of resources. These companies will still have to demonstrate how they will meet this requirement.
- (5) Disturbance levels and having stricter rules This would be a consideration for review boards in giving directions. Could incorporate into WMPs.
- (6) Offsetting role for review board to consider this recommendation and role for GNWT to work through how they evaluate offsetting plans and what will be an appropriate offsetting plan. GNWT has to do this work as a task from MVEIRB as a requirement of new developments.
- (7) Fire management under GNWT authority. There are budget issues that affect extent.
- (8) Online mineral staking under GNWT authority.

There is a prominent role for Government to play in implementing these recommendations.

Q: Are the current LUPs weaker/stronger/useful?

A: TG LUP protects some priority water crossings. Thai Dene Nene may also protect some.

Q: What provisions in SARA protect calving grounds?

A: If a species is listed as threatened a recovery strategy must be developed, which involves identifying critical habitat and protection. Protection and planning comes after the listing. They are being considered as threatened under both federal and territorial legislation, but not sure how this would be coordinated.

Q: Any thresholds for disturbance?

A: Red means no new disturbance until some existing disturbances cease. Thresholds were set based on the Jay Project Assessment (MVEIRB), based on sensitivity of range, with some adjustments.

Q: Will plan have to be accepted by Aboriginal Governments?

A: This will be a GNWT Plan. It was agreed that formal approval is not likely to be achieved from Aboriginal Governments. The hope is that they will support the plan.

Q: Will the GNWT go back to communities once plan is finalized?

A: Don't know what budget will be, but would be respectful to communities to go back and do this.

ES presented review of BCRP and draft comments.

Discussion:

• Work comments from Board members into a letter. Noted that the updated plan did not address many of EMAB's previous comments.

- Guardian researchers should report back to EMAB; programs provide feedback to decisionmakers
- MCCM should be triggered when caribou enter ZOI.
- Is GNWT supportive of the roads through RRA1 (Nunavut), or will they support the protection of sensitive caribou calving grounds?
- More research to fill in gaps
- Concerned how this plan will be used to support development.
- "Some form of protection" Plan does not address what level and form of protection will be given to land and water crossings.

Action Item: EMAB will draft letter to send to GNWT with comments on the BCRP.

14. Performance Evaluations

ED and ES leave for Board discussion

Motion: to ratify performance evaluation recommendation to increase Executive Director salary by 3% effective Nov 2, 2017.

Moved: Julian Kanigan Seconded: Sean Richardson

Motion carried

Motion: to ratify performance evaluation recommendation from ED to increase Environmental Specialist salary by 2% effective Jan 18, 2018; and to increase ES annual leave from three weeks per year to four weeks per year, also effective Jan 18, 2018.

Moved: Jack Kaniak

Seconded: Charlie Catholique

Motion carried

15. Workplan and budget cont. (Item 6)

Discussion continued on follow-up actions regarding assessment of the TK Panel's satisfaction with Diavik response to Panel's recommendations.

Agreed that EMAB needs to hear what Diavik is saying to the TK Panel, and how the Panel comes to recommendations.

Two steps – first step is for EMAB to attend the entire next TK Panel meeting to learn first-hand how the process works and observe/participate in discussion on Panel assessment of recommendations as an agenda topic for a future meeting. Next step is to decide what to do regarding the assessment. Once the first step is complete EMAB can review the TK Panel Assessment budget line.

Noted that TG does an orientation with new staff of TCSA in late August – EMAB could attend to inform them about EMAB.

Motion: To approve 2018-19 budget as amended on Feb 28.

Moved: Julian Kanigan Seconded: Sean Richardson

Motion carried.

16. IEMA update (postponed)

17. Board Member Round Table and Community Concerns

Sean Richardson - Tlicho Government

- Biggest question is how to get better engagement with community and EMAB.
- Community member participation seems to be down.
- Hoping that when new staff is hired, we can work on community member interest and input.
- Bring the interest to youth and have them bring the information back to their parents.

Arnold Enge - North Slave Metis Alliance

- No community concerns.
- Members that came out at public update seemed comfortable with EMAB's activities.

Julian Kanigan – GNWT

- Letter from Diavik to open up EA. Looking to GNWT to initiate this. GNWT is interested in opening up agreement only to address sections that are impacted by devolution. GNWT is not going to initiate a broader review, this would only be done if all Parties agree.
- GNWT amendment process for EA will likely start this summer.
- GNWT looking at wildlife closure criteria in Diavik's ICRP. Has this on their radar, and remind ENR when plan comes out to review this.

Jack Kaniak - Kitikmeot Inuit Association

- KIA alternate will likely be appointed at the April 23-25 board meeting.
- Person looking at Diavik file in the Lands office has left, meaning extra work for Lands staff. Looking to fill this position.
- Jack would like to attend the KIA Board Meeting in April and give summary of EMAB activities. Would like help with summary and potential travel costs.
- Lands Department is happy with EMAB's work.

Charlie Catholique – Lutsel K'e Dene First Nation

- Shonto is back as Land/Wildlife Manager and Ray is SAO.
- Went to meeting on BCRP in Lutsel K'e. Presentation was similar to the one today.

Chair adjourned meeting at 4:50 pm.

18. Next Meeting

Next Meeting: May 22-23, 2018