

# Environmental Monitoring Advisory Board

Minutes – July 7-8, 2021

EMAB Boardroom, Yellowknife, NT

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## Present:

Charlie Catholique, *Chair (in person)*

Jack Kaniak, *Vice-Chair (in person)*

Violet Camsell-Blondin, *Secretary Treasurer (in person)*

Marc Whitford, *Director (in person)*

Gord Macdonald, *Director (teleconference)*

Ngeta Kabiri, *Director (teleconference)*

Lutsel K'e Dene First Nation

Kitikmeot Inuit Association

Tlicho Government

North Slave Metis Alliance

Diavik Diamond Mines

GWNT-ENR

## Absent:

Sarah Gillis, *Director*

Yellowknives Dene First Nation

## Staff:

John McCullum, *Executive Director*

(minutes)

Dylan Price, *Environmental Specialist*

(minutes)

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## Guests (all by phone):

Femi Baiyewun, *Observer (teleconference)*

Wasef Jamil (Day 1)

Ed Gullberg (Day 2)

Bill Pain (Day 2)

Kofi Boa-Antwi

Rainie Sharpe (Day 2)

Andy Wheeler (Day 2)

Megan Cooley (Day 2)

Lorraine Seale (Day 2)

Barry Zajdlik

Yellowknives Dene First Nation

Arcadis Canada Inc.

Legal counsel

GNWT - ENR

Diavik

Golder

MVLWB

North-South Consultants

GNWT

Zajdlik & Associates

**Wednesday, July 7, 2021**

**Meeting at 09:00 at EMAB Boardroom and by teleconference**

### Call to Order

Meeting called to order at 9:05 by the Chair. Chair gave opening prayer and moment of silence.

Dylan Price, Environmental Specialist, introduces himself to Board.

### Item 2 - Approval of Agenda

Chair reviews agenda

**Motion:** to approve agenda for July 7-8'21 meeting as presented

**Moved:** Marc Whitford

**Second:** Jack Kaniak

Motion carried

### **Item 3 - Conflict of Interest**

No conflicts declared

### **Item 4 – Minutes of Previous Meeting**

**Motion:** to approve June 1-3'21 meeting minutes as presented

**Moved:** Marc Whitford

**Second:** Jack Kaniak

Motion carried

Email motions added to record.

ED reviewed action items

Discussion on caribou monitoring:

Q: Is Diavik going to discontinue monitoring of caribou at the site?

A: No. There are some proposed changes in the draft WMMP, such as, stopping aerial surveys and monitoring caribou collars instead. EMAB recommended aerial surveys not be discontinued completely (possible drone use). They will continue monitoring caribou for now. ENR provided comments to Diavik for response.

Discussion on the Status of Frame Lake Rehabilitation Project Letter of Support

Q: Status of Letter of Support? Noted Board voted to send this

A: Chair hesitant to sign until he's heard back from LKDFN leadership

Discussion:

- DFO is considering this project; EMAB letter of support would be helpful soon
- Noted NSMA has provided a letter of support

Q: could Vice-Chair sign letter since Chair is reluctant?

A: yes, but Vice-Chair is not comfortable signing letter without LKDFN support

Q: Deadline?

A: sooner the better

Review of letter – noted that EMAB support requires that Diavik seeks support from Affected Communities.

Q: has Diavik met with communities?

A: yes

Q: what was the outcome?

A: NSMA letter of support; not sure of others. LKDFN consultation was with WLEC Manager who agreed with project but has now left the position. Diavik is waiting for follow-up

Noted that LKDFN has not replaced the WLEC Manager yet, and also needs to recruit a new SAO. Charlie will try to touch base with Chief following today's meeting.

Business arising from minutes

- Noted that Board has a mandate under EA 4.2(g) to make recommendations regarding participation of Aboriginal Peoples in training and monitoring programs. Also 7.1 (g) and 7.6(b)&(c).
- EMAB should follow up with Diavik to find out their approach and review it.

**Action Item: ED to draft letter for Board approval requesting Diavik provide its plans for addressing qualifications for post-closure monitoring.**

#### **Item 5 - Finance**

Running behind schedule of agenda. The Board agrees to table Item until after the break so that Arcadis can present on Yellow Haze monitoring

#### **Item 6 - EAQMP – Yellow Haze sampling**

Wasef Jamil joined the meeting.

Arcadis Yellow Haze Presentation

- There is a good possibility that there is a Yellow Haze phenomenon at the mine
- Arcadis is proposing further monitoring take place for NO<sub>2</sub> with a handheld air monitoring system at four different sites due to omni-directional winds
- ID hot spots
- Download data quarterly

Discussion

Q: would Diavik pay for this?

A: yes

Q: is there a certain concentration of NO<sub>2</sub> that would cause Yellow Haze

A: no – depends on conditions

Q: how would we know NO<sub>2</sub> is causing yellow haze?

A: correlation

Q: How do we observe yellow haze occurring? Needs to be observed from a distance; can't see it from the mine site

A: typically it is visible

- Noted that Diavik and Ekati both produce yellow haze; need to monitor both.
- Need to find a way to observe yellow haze
  - Could Ekati staff notify Diavik when they see haze over Diavik mine
  - Possible use of remote cameras – preferred because there would be a digital record
  - Get suggestions from Arcadis
- General support for monitoring if the program is designed appropriately – that is to have a systematic way to observe Yellow Haze (perhaps digitally), and determine corresponding NO<sub>2</sub> levels (handheld monitors)

**Action Item: ED to communicate with Arcadis regarding how to observe yellow haze**

**BREAK**

### **Item 5 – Finance**

ED presents variance report (to June '21)

- No questions on the variance report

ED presents audit status – no questions

Revised Community Involvement Funds Policy

ED presents revised policy for EMAB's community involvement funds

Discussion

- Require an itemized budget
- Funds should be auditable; could submit audit schedule
- Provide 90% of approved amount in advance
- Change description of deliverable; can't describe deliverable in advance
  - Describe required format for deliverable

**Action Item: ED to revise policy for tomorrow's meeting based on comments.**

### **Item 7 - TK Monitoring for Closure**

Process for developing TK monitoring program

ED introduces item 7

- Noted that Diavik has been meeting with TG on development of TK monitoring program

TG has been having monthly meetings with DDMI to discuss closure and reclamation. Includes TG representative from economic, environment and human resources about how to work together on TK monitoring. TK and science should be equally considered during closure.

- Looking at TK monitoring approaches in other places.
- Also concerns expressed on the impact that mine closure has on the community – closure planning goes beyond site-based activities: effects on employees, businesses/contracts and IBA. TG will participate in rehabilitation of Diavik mine along with company and governments.
- Believes EMAB's role in development of TK monitoring program could follow TG's process – noted that TG elders have been saying similar things to what the TK Panel has said.
- Helpful to avoid surprises in future by engaging in advance
- Need to ensure community members have required certifications to work on projects. Can be done through organizations such as Arctic Response or Arctic College Guardianship program
- Noted that Board members agreed to consult with leadership on how each Party wanted to develop TK Monitoring for closure at Diavik. When will the reports be done?
  - TG will send a letter to Diavik re TK Camp with guidelines for consultation
  - Each community has its own way of dealing with these decisions
  - EMAB could hire a TK consultant to pull documents together rather than EMAB consulting communities directly

### **Item 8 - WMP Letter – TK in Monitoring**

- Concerns about TK panel Recommendations

- Agreed that the letter that led to this discussion is no long relevant
  - Comments have already been submitted on Diavik’s WMMP

**Additional Item - ICRP 4.1 Reason for Decisions Update**

ES presents condensed version of summary of ICRP 4.1 Reasons for Decisions

- No follow up questions from the Board

**Adjourned for the day- 12:20 pm**

**Thursday, July 8, 2021**

**Meeting at 9:00 am at EMAB Boardroom and by Zoom and Teleconference**

Chair reviews agenda

**Item 9 - Updated Draft Conflict of Interest Policy**

Legal counsel Ed Gullberg presents updated amendment to COI for directors of EMAB: four options, with legal implications for each:

- Option 1 – not recommended: doesn’t acknowledge COI for Board members where employer has an interest
- Option 2 – Prohibit employer conflicts; board members with this conflict can’t participate
- Option 3 – Prohibit employer conflicts but allow participation with Board consent
- Option 4 – Exempt employer conflicts
  
- Ed and ED both favor option 3 as a recommendation to the Board – “Exempt Employer Conflicts Where Employer is Party to Environmental Agreement”
  - Option 1 doesn’t acknowledge existence of conflict; this conflict is part of the common law
  - Option 2 – too restrictive
  - Option 4 – too much opportunity for conflict
  
- Discussion on wording of bullet 4 on page 1 of Option 4
  - Wording should be tightened for situation where Board member is appointed by one Party but works for another Party
  - Would be a rare situation
  - Suggested this point be provided in writing to ensure clarity
  
- The Board decides to table the discussion until later in the meeting since consultants are online for next item (AEMP)

**Item 10 - AEMP Re-evaluation Report 2017-19**

Kofi, Rainie, Megan, Bill and Barry join the meeting

Kofi and Rainie present the report

Key Points:

- Sampling and analysis was done under AEMP Design 4.1 with some updates to reflect AEMP Design 5.2
- Dust deposition has low seasonal variability
- Contribution of mine-related dust to background is decreasing
- Phosphorus (P) in dust is likely apatite; note expected to dissolve at pH in LdG
  - Likely makes little contribution to P in lake
- Eutrophication increased to 2013 and has decreased since; effect is consistent with nutrient enrichment
- Mine-related nutrient enrichment effect on plankton; no evidence to toxicological effect
- Benthics show natural variability with mild nutrient enrichment effect
- Fish (slimy sculpin) are healthy with few abnormalities
  - Parasites are increasing over time; not mine-related
  - Significant increasing trends for several metals from 2017-19; still lower than in 2007. Some metals were above the normal range
  - No increasing trend in mercury in slimy sculpin
  - Mercury in lake trout has occasionally been above CFIA (Canadian Food Inspection Agency) guidelines of 0.5 ug/g; lake trout are safe to eat in LdG
  - Fish salvage from A21 was less than 10% of estimate; likely because construction was done over 2 seasons and many fish left the area due to conditions
- Weight of Evidence shows evidence of nutrient enrichment and weak evidence of toxicological impairment (early warning). Fish size is decreased in the near-field area.
- TK – noted that boat travel was limited in 2018 due to weather

Discussion:

- Overall, Diavik believes water has additional nutrients closer to the mine, but elevated nutrients dissipate quickly with increased distance
  - A few changes in some metals
  - Not much different than what would be expected if there wasn't a mine

Q: was there supposed to be information on metals in lake trout?

A: No new data; mercury data from fish palatability camp included, but no full metals scan in the report.

Q: when do Environmental Effects Monitoring programs under the new Metal and Diamond Mining Effluent Regulations begin?

A: The requirement started in June 2021; Diavik has submitted initial design to ECCC. Diavik hopes the program will become integrated with the AEMP, but for now there will be two parallel programs

- Diavik says increased P is good for the biological state of the lake; allows fish to grow a little more
- Questions arise whether nutrient enrichment was by design, and what will become of it post-closure
  - Original EA predicted nutrient enrichment in LdG – noted that design is never to impact water quality, but nutrient enrichment and toxicity is an unfortunate reality – the lake is expected to return to its pre-development state, and remain oligotrophic (nutrient deficient) post-closure
- LdG was originally called an ultra-oligotrophic lake but this is not a concern; more of a wording issue
- Clarification of graph showing mercury levels; appears to be using 1.0 ug/g instead of CFIA guideline of 0.5 ug/g

- 1.0 ug/g is related to fish health; not a consumption guideline

Q: does Diavik measure pH in sediment

A: Diavik will get back on this

- Barry requested data on pH in sediment
- Kofi requested that Barry send a specific email request

### 15 Minute Break

#### Item 10 - AEMP Re-evaluation Report 2017-19 Continued

Megan Cooley from NSC presents review of AEMP Re-evaluation report 2017-19

- Noted that the analysis and conclusions are still preliminary pending confirmation; draft report will be submitted next week

Key Points

- Change in sediment quality methods may have affected results
- Proposed approach to address phytoplankton sample integrity issue
- Fish health data not consistently analyzed over all years
- Smaller, shorter fish in near-field; possible effect of effluent temperature
- Detection limit effect on slimy sculpin normal ranged for metals; detection limits much higher in 2007.

Q: why is far-field arsenic concentration higher than near-field

A: may raise concern about reliability of 2007 dataset – possibly due to change in methods. Raises the question of whether the 2007 data are appropriate for defining reference conditions.

- Need to analyze individual slimy sculpin for mercury to get better results
- Noted issue with 2014 lake trout mercury samples

Q: what is the overall conclusion of the review?

A: good report; lots of work. A lot of EMAB's comments and recommendations have been included/addressed. Recommending some re-analysis that might change some conclusions

- Useful for EMAB to have an independent review.

Due to time constraints and availability of presenters for next item, ED proposes a conference call once NSC has a final draft version of their review of the AEMP Re-evaluation report 2017-19 – the Board agrees.

Noted that the agenda was too compressed and that it would be good to ensure enough time for a full discussion.

#### Item 11 - 2020 AEMP Report Review

Agreed to postpone presentation to a conference call, once NSC review of the 2020 AEMP Report is ready.

#### Item 12 - Update Closure Estimate Guidelines

Lorraine Seale (GNWT - Lands), Bill Pain (ENR) and Andy Wheeler (MVLWB) review the updates on the MVLWB Guidelines for Closure and Reclamation Cost Estimates for Mines draft document.

- Original guidelines developed in 2017 by MVLWB, Canada, GNWT and Indigenous Governments. Updated version includes MVLWB discussions and decisions on security since that time.
- Several revisions made, largely focused on new section (section 3.0) “Board Expectations for Security Refunds for Completed Closure Activities”, which includes post-closure monitoring and maintenance costs, and requirements for security refunds
- MVLWB kept a northern context in mind, and examined northern examples when creating new Section 3.0

Noted that ED contacted Randy Knapp and Bill Slater about reviewing the draft. Randy declined. Board agrees that it would be valuable to have a technical review from Bill Slater.

#### Discussion

#### Engagement

- Requirements in line with recent MVLWB decisions/directives

#### Post-Closure Monitoring and Holdbacks

- Return of holdbacks requires Reclamation Completion Reports
- Holdback is the portion of security not returned following a refund request to ensure performance

Q: will proponent still be involved after closure?

A: yes – this is true for all proponents.

Q: What other options/jurisdictions were reviewed before developing these guidelines?

A: Tried to keep a northern perspective and keep examples related to the north (Nunavut). Looked at a more comprehensive evaluation approach. The principle is that security held should match the development’s liability.

Q: Is there documentation of the process that we can review?

A: There is nothing published at this point but it is something GNWT can come up with.

#### Holdback refund process

- proponent submits a reclamation completion report for closure component, then requests refund of holdback
- where there is uncertainty about the performance of the reclamation, the guidelines will apply to deciding how much of the security to hold back. The more uncertainty the greater the holdback
- not all activities will require a holdback

Q: Are those holdback percentages bigger or new to the process?

A: These ranges are new.

Noted that these are draft and the proponent can make suggestions during the review.

Q: What happens if the cost is higher to fix an issue than what is held back, who is liable then?

A: Diavik rep states that if Diavik was still involved they would fix the problem

A: GNWT notes that long-term liability/responsibility after closure has been completed and signed off is something that is under discussion and is not expected to be dealt with in the first phase. Right now GNWT is focused on getting these updates done and getting the Public Lands Act and regulations in place.

Holdback refund process (cont.)

- the RECLAIM estimate would be updated when proponents submit a holdback refund request

Q: which Indigenous governments were involved in developing the updated guidelines?

A: TG, Gwichin Tribal Council. Sahtu did not participate. The intent was to involve landowners.

Discussion on abandoned mines and what happens if a current proponent walks away? This is what security is for. In the case of older abandoned mines these are mostly owned by Canada, so Canada is liable for clean-up.

The Board discusses going back to pre-Covid meeting format of full day meetings rather than staying with half days.

- General agreement that more can be accomplished during a full day meeting
- The Board decides that future Board Meetings will be for full days

### **Board Member Update and Community**

Violet Camsell-Blondin:

- Continue to provide briefing notes to Chief and council on all the mines within TG area
- Nearing term of the Grand Chief – new TG Chiefs will be going through orientation and training on a regulatory perspective
- Continued engagement and consultation with Gord since March – positive experience overall
- Would like to participate in a mine site visit this summer or fall if possible
- Using community radio to keep people updated
- Identifying people who have skills needed to participate in environmental work

Q: Request for information about recent TG request for a Regional Strategic Assessment under the MVRMA

A: Will have to get back

Gord will circulate a copy of the request.

Marc Whitford:

- Continue to update NSMA Board members
- Replacing one environmental employee

Jack Kaniak:

- Notes that the spring ice on the ocean was lost very quickly this year; effect of climate change
- Also experienced extreme wind conditions (flying debris) in Kugluktuk recently

Charlie Catholique:

- Preparing for Gathering at Reliance where cousin will be getting married
- Put name forward to Wildlife, Lands and Environment Committee in Lutsel K'e
- left a message for Chief in regards to the Frame Lake Rehabilitation Project – has not heard back

Ngeta Kabiri:

- No updates

Gord Macdonald:

- No updates

**Item 5 (cont.) Community update funding policy**

ED notes that policy has been updated as per Board direction from previous day

**Motion:** to approve updated Community Involvement Funds Policy

**Moved:** Marc Whitford

**Second:** Violet Camsell-Blondin

Motion Carried

**Next Meeting: September 7-9'21**

**Motion:** to adjourn

**Moved:** Marc Whitford

**Second:** Jack Kaniak

Motion Carried

**Meeting Adjourned at 1:05 pm**