

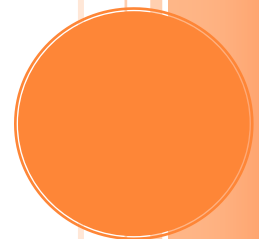
WORKING WITH THE PEOPLE FOR THE ENVIRONMENT

*Environmental Monitoring Advisory Board Workshop
with Community Elders held in Yellowknife at the
Tree of Peace, March 17-19, 2015*

Objective: To provide an opportunity for participants to comment and make recommendations on EMAB findings on Air and Water quality, land and wildlife monitoring.

Joanne Barnaby, Facilitator

3/23/2015



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BACKGROUND

The Environmental Monitoring Advisory Board is a public watchdog of the Environmental management of the Diavik Diamond Mine. It was established in 2001 through a legally binding environmental agreement between Diavik, the Yellowknives Dene First Nation, the Tlicho, North Slave Metis Alliance, Lutsel K'e Dene First Nation, Kitikmeot Inuit Association and the Government of the Northwest Territories.

The Environmental Monitoring Advisory Board has been pushing for an air quality monitoring program to be put in place and as of September 26, 2012, a proposed Air Quality Monitoring Program was provided to EMAB. Since then, EMAB receives annual reports on the Air Quality Monitoring Program.

During the 2013-2014 fiscal year, there were funds set aside for EMAB to hold a workshop on the Air Quality Monitoring Program and results. Since this was the first year of results, it was proposed that the workshop be deferred to 2015 to allow for a couple of years of data to review.

The workshop was then planned for Yellowknife on March 17 – 19th, 2015 and participants were invited from each of the EMAB Parties. EMAB staff presented the air, water and wildlife reports at this workshop and also included a presentation from the Wek'èezhìi Land and Water Board on the Water License, copies of these presentations can be found on the EMAB website at emab.ca.

WORKSHOP METHODOLOGY

The workshop began with a series of presentations to give participants background information on the following topics.

- Water License Requirements
- Aquatic Effects Monitoring Program
- Air Quality Monitoring Program
- Air Quality Standards
- Wildlife Monitoring Program
- Traditional Knowledge Panel Recommendations

These topical presentations were done using slides and were followed by opportunities to ask questions and discuss relevance to the workshop objectives.

Diavik was not invited to participate in the workshop but attended as an observer. It became apparent that their participation would be helpful and they happily agreed to contribute by providing background information and to address any questions pertaining to their operational and closure plans as well as their current activities.

Break-out sessions were used to generate participant comments and draft recommendations. These draft recommendations were directed at parties to the Environmental Agreement and organizations with mandates for environmental management of Diavik such as DFO and the WLWB. Given the time restrictions and the role of the workshop (to give feedback, not make decisions), it is important that the Environmental Monitoring Advisory Board (EMAB) review and refine these prior to submitting them as formal EMAB recommendations. In some cases, there was insufficient time to formulate draft recommendations; these discussions are set out under Follow-up and Parked Issues.

Where participant comments are set out, we have paraphrased to reduce the length of the report, these should be reviewed by participants for accuracy and corrections are welcomed. The transcripts of the workshop have been reviewed, and participants had the opportunity to approve their own quotes.

SESSION HIGHLIGHTS

Below is a summary of recommendations developed to address concerns.

Concern	Suggested Recommendation	Recipient
Equal Consideration of TK	Joint field studies designed by scientists and TK holders	Diavik
TK	Promotion of TK programs	EMAB
Caribou & Habitat	Caribou Revitalization initiative <ul style="list-style-type: none"> • Revitalization conference • Joint caribou revitalization working group • Cumulative impact basis for revitalization plan • Retrospective look at Caribou populations & trails • Herd labeling • Cumulative impact reduction policies 	GNWT
Caribou Monitoring & Mitigation	Establish a joint strategy with TK panel and scientists	Diavik
Gaps & duplication	Develop a collaborative approach to Research	GNWT
Wildlife & Habitat Health	Test for disease or abnormalities Require cleaning of haul trucks	Diavik

Contamination of water	Wash the pit walls and treat the washing water before allowing the pit to fill with water at closure. Increase water monitoring stations	Diavik
Air pollution	Exhaust purifiers should be on all vehicles, buildings and incinerators.	Diavik
Cumulative effects	Limit the number of mines operating at the same time Compare caribou research from WKSS	GNWT
Fostering good relationships	Finance EMAB to enable it to meet its mandate Review current relationships with Diavik and EMAB and make recommendations regarding any changes required to be effective. Reinstate the commitment to have three meetings of the TK Panel annually unless the Panel determines that it is unnecessary. EMAB and the TK Panel use a talking feather or stick to ensure people are not interrupted in meetings.	Diavik TK Panel Diavik EMAB & TK Panel

CONCERNS AND RECOMMENDATIONS

The discussions presented here are organized under topics with a summary of the concerns expressed that set the context for the related recommendations that follow. The party that the recommendation is directed to is suggested together with any communication regarding the topic required to other parties.

FIELD STUDIES

The experience of the participants was that there is a lot that can be learned through joint field studies between elders and scientists. This is especially true when such programs are planned jointly and where each is teaching the other about their methodologies.

Bobby Algona of Kugluktuk We need to get together as TK holders and scientists. The mines care more about what the scientists are saying instead of TK knowledge holders. We voice our opinions right away because we understand the animals right away. We know how they move around the land. We need input. Our voices need to be heard. We need to have more meetings such as this".

Care must be taken to ensure that science does not dictate the research agenda or monopolize the research conclusions. Each knowledge system has its own verification methods and must be respected. Follow up to explain results and conclusions will enhance both the research results and the ability to move forward with mutual support.

Diavik could increase opportunities such as the revised Aquatic Effects Monitoring Program carried out in 2012 where TK holders played a major and active role in designing the research and activities at the camp located near the mine site. Diavik should seek direction from the TK Panel on further opportunities for joint research or monitoring programs. Reports that include video recordings of the programs will help communities understand the research results and if shown widely, will help build trust with Diavik.

Field Study Recommendations

We recommend that Diavik create further opportunities for elders and scientists to work together in the field

Such programs should be designed jointly to ensure the integrity of both knowledge systems

EMAB should advocate for such joint programs with the GNWT and Diavik

Follow-up

Participants felt that EMAB needs to play an advocacy role in promoting joint elder/scientist projects to enhancing the quality of research and trust of research findings in the communities.

WILDLIFE MONITORING

Participants recognize that wildlife move in and out of the mine site all of the time. When they heard the EMAB presentation on wildlife, some observed that the 'zone of influence' was larger than indicated. Recent steps to increase cooperation between Diavik and Ekati (and the GNWT) were noted and appreciated, participants would like to see this increased.

Often traditional harvesters make observations off site and would like to share and compare their observations with others, including those involved with wildlife monitoring at the mines. Means for inputting their observations would increase the overall understanding of what's happening in the region and help determine what mitigation measures should be taken.

Alfred Lockhart of Lutsel K'e All the hunters know that all the animals have declined since the mines have opened. It must be what they eat. A broader study should be done for all animals, not just grizzly, bears and caribou. These need to be done at further distances as the 'zone of influence' is too small.

Specific species were identified as being of concern based on observations of harvesters, these were identified for special consideration in future monitoring. A list of species that should be harvested and examined in a laboratory was generated with the objective of determining overall health: snipes, ptarmigan, muskox, ground squirrels, hare/rabbits and fox. The results of this testing should be reported to EMAB and the TK Panel.

The people of the north depend on Caribou as a very important source of food and must take steps to protect them. To achieve this, there must be greater efforts made to work together

between the GNWT, the mining industry and Aboriginal governments and Elders. Some participants felt that working separately has contributed to a major decline in the caribou population and this has created hardships for the people who have depended on caribou for their food security for thousands of years.

Bobby Algona of Kugluktuk We all know caribou have hollow hair. Has Diavik ever sampled the caribou hair to see if there's any toxins in the hair? Of all the years I've been going to environmental meetings I've never heard of any mines studying caribou hair because it's hollow.

Gord Macdonald of Diavik Monitoring has yet to be addressed by the TK Panel. Diavik wants to know if the elders have different, non-science methods on how to monitor environmental quality. We don't only want to build off of the current science program, we want elders to suggest new Traditional Knowledge ways to measure environmental quality.

Wildlife Recommendations

Re: Caribou recommendations directed at the GNWT

We recommend that a 'Caribou revitalization' conference be held whereby each of the following parties come with major decision making authority and commitment to revitalize the caribou population: The GNWT; The three diamond mining companies who have an interest in the area; The Aboriginal governments from the impact region; Elders with strong traditional knowledge about caribou

We further recommend that this conference establish a joint working group that is mandated to establish habitat protection measures including the limiting of further mining in the area

Develop a cumulative impacts approach to planning for caribou revitalization.

A comprehensive report on caribou since the mine started should be compiled for communities in order for people to see the changes over time. This report will require collaboration between the GNWT, all of the operating diamond mines in the area and should include a review of the research carried out by the WKSS.

The GNWT with the support of all the mines should map out the caribou trails from the air so we can compare to past traditional trails from the fall through the spring over the full range.

What is the potential for a slow-down of mining activity during the migratory periods? What impacts will be there for the Caribou, the mines, the environment.

Address the problem that the GNWT identifies 'herds' differently than elders, the classification system is different between western science and traditional knowledge. Elders have a different understanding of how caribou mingle and share territory.

Recommendations for Diavik

A joint science/ Traditional Knowledge program should be developed to observe Caribou during the migratory periods – April and Aug/Sept. Include a caribou hair analysis program to determine if there are any contaminants present.

Enforce a “turning off lights policy” during the trucking season for the protection of caribou and as a measure to reduce mortalities due to encounters.

Re: Research Planning directed at the GNWT

There should be joint sessions with Diavik, EMAB, the TK panel and the Department of ENR, GNWT to effectively plan for wildlife and habitat research to avoid duplicating efforts and wasting time and resources and to create further collaboration opportunities.

Research to explain caribou, rabbit, and wolverine decline should be a focus of future collaborative research.

Should research show large wolf populations, the parties should consider culling by hunters from communities.

Re: Health of Wildlife and Habitat

Diavik should monitor health and safety of wildlife on site and take steps to keep them away from site. Pin-tails, loons, snipes, ptarmigan, hare/rabbits, ground squirrels, fox, lemmings and shrews should be trapped or killed and dissected by scientists to assess disease, sickness or any abnormalities.

Diavik should observe the pitwalls for nesting falcons and other birds and determine if there are ducks and other waterfowl going into the processed kimberlite containment (PKC) area.

Diavik should require tanker trucks be cleaned (in YK or before) & checked for fuel & hydraulic leaks. This will prevent chemicals, calcium, salt, plant seeds and other foreign material from contaminating the ice roads and new species being introduced accidentally

Follow-up

As suggested by guest **Kevin O'Reilly of the Independent Environment Monitoring Agency**, EMAB should ask the GNWT who hosts regular Great Slave Geologic Area Wildlife Workshops to advertise more effectively and take steps to ensure that elders are well represented.

WATER

The importance of water is well understood in northern communities. The challenge of dealing with upstream users was discussed and questions were raised with the Wek'èezhìi Land and Water Board about responsibility for impacts on downstream communities. Specifically, participants from Kugluktuk wanted to know if the WLWB Board

had jurisdiction to issue water licences for projects in a trans-boundary water situation. The WLWB representative committed to getting back to him on this question.

Questions about the 15-year water licence term requested by Diavik was of concern to participants as it is an unusually long term and opportunities to address issues of water impacts from the mine would be limited.

It was suggested that water monitoring should be a matter of collaboration with the other mines in the area and with the GNWT and Environment Canada in the region.

Napoleon Mackenzie of the Yellowknives Dene First Nation Water is very important, without water there will be nothing left.

Concern about run off from the PKC and the impacts of dust on Lac de Gras were expressed. Specifically, the increase in nutrient enrichment effects was noted. There should be ongoing sampling of the Coppermine River downstream from Lac de Gras to address this concern.

Overall the 'zone of impact' was seen as being too small and does not reflect the impact results (dust) that Diavik itself has found. There is also a general concern that water quality further down the Coppermine River and other streams flowing from Lac de Gras were added. This recommendation has been parked, it is suggested that EMAB complete the identification of new monitoring sites together with a recommended schedule and rationale.

The value of the traditional knowledge/science camp was acknowledged and Diavik was encouraged to continue this program and use this model to carry out other research and monitoring activities.

Water Recommendations

Diavik should wash the pit walls and treat the washing water before allowing the pit to fill with water at closure.

Diavik representatives responded positively to this recommendation during the workshop.

Follow-up

It is recommended that EMAB and the TK Panel review the 'zone of impact' currently used and make recommendations to expand it to reflect actual impacts of dust on water and vegetation. . New 'control' sites should also be recommended. The TK Panel should identify additional topics for joint science/TK field camps.

AIR

Following the EMAB presentation on Air Quality there was support expressed for their recommendations regarding dust suppression and for the establishment of Air Quality Regulations by the GNWT.

Participants were particularly concerned with the impacts of dust and the nutrients contained, on the water and vegetation in the area. Again, the 'zone of impact' currently being used was seen as too small.

Air Recommendations to Diavik

Exhaust purifiers should be on all vehicles, buildings and incinerators.

Snow core monitoring stations should be added along a western transect line from the island to account for the short period when the prevailing winds are easterly and to recognize that the dust is carried out further than the current monitoring locations.

Follow-up

There are concerns about dust and where it may be depositing. It is recommended that additional sites be identified as part of the 'zone of impact' review by EMAB and that this also be a focus of discussion for the TK Panel.

CUMULATIVE IMPACTS

The challenge of measuring and mitigating cumulative impacts continues to grow with the increased mining and exploration activity in the Lac de Gras area. The only program that is clearly focused on addressing cumulative impacts is CIMP and this is only focused on research and not mitigation or industrial management.

Bobby Algona of Kugluktuk Cumulative effects are getting stronger. People in industry have their own life insurance plans for their lives. For our people our life insurance is our land. Our life insurance is where we grew up. On a cumulative basis. How can we measure the impacts?

Wayne Langenhan of the North Slave Metis Alliance Any new mines should not be allowed to operate along the caribou's migration path or calving grounds.

Napoleon Mackenzie of the Yellowknives Dene First Nations Years ago there was lots of caribou, not anymore. Maybe it's not the mines but where did they all go? Maybe they went to Saskatchewan or Alaska?

Ed Jones of the North Slave Metis Alliance There are certain English words I can't pronounce like "cumulative effects" I think that mines like using this word because they don't want to be blamed for the impacts. I believe this is an excuse. We should be focused on the major impacts.

Recommendation to the GNWT

One mine should close before another one opens. This would limit environmental impacts, enable individual mines to take greater responsibility for their own impacts, and extend both northern employment and business opportunities over a longer period of time.

Follow-up

This recommendation should be directed to the Premier, the Minister of ENR and ITI with copy to all MLA's with a request that they engage all northerners in a discussion about

cumulative impacts of industrial development. This should be copied to Aboriginal governments.

FOSTERING HEALTHY RELATIONSHIPS

A number of concerns and issues were raised regarding working relationships. Some of these were general while others were specific.

Gord Macdonald of Diavik acknowledged the need to respond to the TK Panel recommendation for an independent chemical analysis of the PKC.

Some participants stated that there should be more Aboriginal people working in the environmental department. Others expressed concern that the Government is not meeting their inspection and monitoring obligations. People keep hearing that stuff is being buried such as tires, oily rags, containers, we must find a way to address this to prevent rumors from spreading and damaging trust.

David Wells of Diavik Regarding the suggestion that more aboriginal people should be employed by the Diavik Environment Department, five out of seven were in fact Aboriginal. He also explained that there is a 'Speak out' program as a mechanism for employees to confidentially report any environmental problems they may see. Rumors are not helpful in dealing with problems, it is important for people to address concerns directly. He also commented that the Government Inspections took up a lot of time and feels that they are doing their job.

The following recommendations were developed with the view to foster respect between all parties.

Recommendations

The parties be open, honest and conduct relations in a transparent manner. Trust between all parties will result in a better working relationship and enhanced information sharing.

That Diavik reinstate funding commitments made to EMAB through the Environmental Agreement.

That the TK Panel review their current relationships with Diavik and EMAB and make recommendations regarding any changes required to be effective.

That Diavik reinstate the commitment to finance at least three meetings of the TK Panel annually unless the Panel determines that it is unnecessary.

That EMAB and the TK Panel use a talking feather or stick to ensure people are not interrupted.

FOLLOW -UP

Make a request to the GNWT to provide EMAB with regular reports of their Inspection and monitoring activities.

CONCLUSIONS

Bringing at least some members of the Traditional Knowledge Panel together with some members of Environmental Monitoring Advisory Board provided an opportunity to build greater awareness of the work being done by each of these bodies. It became evident that there was real value to an exchange of information as the Panel has been focused on providing advice to Diavik on closure and reclamation matters from a traditional knowledge perspective but often finds itself concerned with current impacts at the mine site and beyond. This forum gave them a chance to address those broader concerns. EMAB on the other hand has largely been focused on assessing Diavik's scientific work and since giving up the administration of the TK Panel, has not been directly involved in TK work. EMAB has a mandate to consider both science and TK in fulfilling its environmental monitoring mandate, this forum gave them an opportunity to engage in discussions utilizing both knowledge systems.

Indeed, participants from both groups spoke of the value of holding more such forums in the future. A more focused agenda (not as many topics) and with more effective planning - including with Diavik, such forums should prove to of value to all parties.

PARKED ISSUES

The following activities were identified in the workshop, however time did not permit the completion of the work and should be completed by the EMAB Board.

- Complete the identification of recommended water and air monitoring sites.
- Provide rationale for new sites.
- Suggest frequency of testing and the rationale.

APPENDIX A

PARTICIPANT LIST

Ed Jones, North Slave Metis Alliance

Wayne Langenhan, North Slave Metis Alliance

Jack Kaniak, Kitimeot Inuit Association

Bobby Algona, Kitimeot Inuit Association

John Ivarluk, Kitikmeot Inuit Association

August Enzoe, Lutsel K'e Dene First Nation

Alfred Lockhart, Lutsel K'e Dene First Nation

Lawrence Goulet, Yellowknives Dene First Nation

Napoleon Mackenzie, Yellowknives Dene First Nation

Michel Louis Rabesca, Tlicho Government

James Lafferty, Tlicho Government

GUESTS

Kevin O'Reilly, Independent Environment Monitoring Agency

Gord Macdonald, Diavik

Dave Wells, Diavik

Sarah Elsaser, Wek'èezhii Land and Water Board

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