

**Independent Environmental Monitoring Agency
70th Meeting of the Board of Directors
Yellowknife and Ekati Mine Site, NWT
September 14-16, 2010
Summary of Discussion**

Revised: October 26, 2010

Directors

Bill Ross
Tim Byers
Laura Johnston
Jaida Ohokannoak
Audrey Enge
Tony Pearce (by phone)

Guests

Gavin Fitch, McLennan Ross LLP (by phone)

John McCullum, Environmental Monitoring
Advisory Board (EMAB)

Nathan Richea, Indian and Northern Canada
(INAC)

Robert Jenkins, Indian and
Northern Affairs Canada (INAC)

Bruce Hanna, Department of Fisheries and Oceans
(DFO)

Staff

Kevin O'Reilly, Executive Director
Monica Krieger, Communications and Environmental Specialist

SEPTEMBER 14TH

Meeting commenced at 9:00am.

AGENCY BUSINESS

➤ **Information Updates**

Bill – Participated in June Environmental Agreement (EA) Implementation meeting, and work related to Interim Closure and Reclamation Plan (ICRP) and Annual Report.

Audrey – Appointed to Diavik Communities Advisory Board (DCAB) for socio-economic monitoring. Received email from Sheryl Grieve (NSMA) requesting all Agency meeting agendas, binder materials, and any other Board correspondence.

Jaida – Worked on financial report with auditors and Kevin throughout June, reviewed Annual Report chapters including Plain Language, communications with Kugluktuk regarding a possible date for an Agency community meeting, and general correspondence including ICRP matters.

Laura – Annual Report preparation, ICRP related matters, and participated in conference call on the Action Plan to Review Northern Regulatory Regimes.

Tim – Read Bill Tonn’s review of the 10-year Panda Diversion Channel (PDC) report, sent comments and provided more information from annual PDC reports. Notified of Lutsel K’e request for funding to attend conference, worked with Monica to respond regarding the Agency’s mandate.

Tony – Mainly ICRP work in preparation for the hearing, including comments on BHPB’s response to interventions.

Kevin – Completed audit with Jaida, participated in June EA Implementation meeting, Annual Report preparation, and attended June 27 diamond mine wildlife monitoring program review meeting with Kim. Attended meeting and conference call on Air Quality Monitoring Program (AQMP) review, BHPB and Rescan are preparing a formal reply for the next monitoring cycle starting April 2011. Also managed Bill Tonn’s PDC review, attended one day of Wek’eezhii Renewable Resources Board (WRRB) hearing on caribou management joint proposal, and ICRP matters including July 9 pre-hearing conference and preparing Agency intervention and presentation.

Monica – Helped coordinate Annual Report review and production. Worked on various communications tools (update later on agenda), attended WRRB caribou hearing with Kevin, helped coordinate board meeting and site visit, and reviewed ICRP correspondence.

➤ **Financial Report**

Jaida reviewed the 2009-10 audited statements, noting a deficit this year due to:

1) Contributed services (office rent, cleaning, photocopier lease) are currently paid directly by BHPB and the Agency is unaware of what the actual costs are until the final audit reconciliation. This year the amounts were higher than previous years and a late invoice for office cleaning from 2008-09 was also included. To ensure we have budgeted correctly for these expenses the Agency has suggested that it take over these services and pay for them directly. Kevin noted it took three requests before BHPB provided the proper accounting information, which meant more reconciliations and an extra \$4000 in audit fees.

2) The timeline website project was paid for in 2008-09 but due to staff turnover has not been amortized yet because the site has not been completed or made available to the public (auditing rules require this treatment). The Auditor has suggested two options on how to handle this expense, one of which is to ask BHPB to allow or cover the entire expense in the current (2010-11) fiscal year.

3) The Agency overspent on the Separate Fund due to the ICRP legal disputes, and should, perhaps, have asked BHPB for more funding for that purpose.

The Board of Directors move that the Agency take over contributed services for better tracking and control of expenses, and request that BHPB cover the entire expense of the timeline project.

Moved by Audrey Enge. Seconded by Laura Johnston. Carried without objection.

Action Item #1 Kevin and Jaida to speak with Eric Denholm (BHPB) regarding the above financial matters.

Action Item #2 Staff to work to get the timeline project on-line for presentation at the Annual General Meeting of the Agency.

Jaida reviewed the 2010-11 year-to-date expenses and variance report. Expenses are on track, although the Separate Fund budget does not include BHPB pursuing another judicial review on the ICRP. Additional money will need to be requested if this happens.

The Directors discussed current Agency honoraria rates that were originally set in 1997 and have not been adjusted since.

The Board of Directors direct staff to research honoraria rates for other monitoring agencies and options for CPI (consumer price index) increases.

Moved by Tony Pearse. Seconded by Tim Byers. Carried without objection.

Action Item #3 Kevin to prepare information on honoraria and CPI for the November board meeting.

➤ **2009-10 Agency Annual Report**

Annual Reports and summary brochures will be mailed out next week, and are on the website for download. Charlotte Babicki assisted again with the plain language chapters, and everyone was pleased with the speed and quality of her work.

Directors discussed Figure 2 from the Aquatic Effects Monitoring Program (AEMP) chapter, which shows downstream chemistry changes of the Ekati mine in Koala and King-Cujo watersheds. The Agency table shows “levels elevated above baseline” and “levels elevated to or above CCME guidelines”. The BHPB tables (Figures 3-1 and 4-1 of the 2009 AEMP Summary Report) show parameters “increased over time in comparison to reference lakes/streams or different from a constant”. The difference between how we present the information and how BHPB presents the information is confusing.

Tim explained this table was designed to answer a critical question from Aboriginal communities regarding whether there has been any changes to downstream water quality as a result of the mine. It also served as a visual way to display technical information.

BHPB started using it in its reports the following year. The table in our Annual Report is meant to show how water chemistry changes from baseline, not necessarily compared to a control.

For future Agency Annual Reports, the BHPB tables will form the basis for the Agency tables. An additional symbol will be added to indicate any water chemistry change the Agency believes is significant (e.g. values above CCME Guidelines, other variables not identified in BHPB AEMP results).

➤ **Agency Communications Update**

Monica presented the work she has completed since starting full-time in July. A new glossary of terms and acronym list was compiled from all previous Agency annual reports.

Several major improvements have been made to the Agency website: updated home page, 2009-10 Annual Report available for download, notice that we are making changes, and repaired “Agency Documents and Reports” pages which had numerous missing links. The files on the server and old computer are now organized. Website changes are easy to do but time-consuming. More pictures and maps need to be added, as well as improving the remaining pages.

Action Item #4 Monica to update the website as much as possible by the November AGM, so it can be demonstrated and promoted to Society Members.

Monica discussed the Ekati timeline project, to be accessed via a link from the main Agency website. This web-based resource will present historical documents and descriptions of significant project-related, regulatory and environmental events. Data provided by Kevin have been added, but the timeline project still needs more entries plus relevant documents and pictures. BHPB could be approached for more photos and video footage (particularly of early operational events). Changes are easy but time-consuming, and there are some minor limitations (e.g. no formatting options, specific dates required). Amount of information will continue to increase over the years, and depending on the website capacity at some point may need to be archived.

Monica presented some initial ideas for an Agency newsletter, including the previous *Ekati Monitor* newsletter (used by the Agency during 1998-2001) and examples from other organizations. Directors agreed the newsletter should be about two pages (with the option to add more if needed), prepared twice per year. The *Ekati Monitor* name should be kept and newsletters should be sent to all post office boxes as unaddressed ad mail, posted on the website, and emailed to our distribution list. Content should include contact information, “About the Agency” section, and updates on key activities. Monica should prepare the newsletters using Publisher (take short training course if necessary), and send out for black and white copying. Review by staff is sufficient, although could be reviewed by Directors if staff thought it necessary.

Action Item #5 Monica to prepare the first newsletter for distribution at the November AGM.

Monica presented an initial outline for the Agency Communications Strategy, as well as a draft implementation schedule and table of activities. Directors were satisfied with the outline. A Media Strategy will not likely be necessary, and Bill suggested the section on Target Audiences should have the list prioritized (with communications with Society Members at the top). Monica noted that different communications tools will target different audiences.

Action Item #6 Directors to provide any comments to Monica. Monica to continue work on the Communications Strategy, with a completed final draft ready for presentation at the November AGM.

Staff will be ordering new business cards, and Audrey requested that Directors should also be provided with cards. She also suggested the Agency look into purchasing jackets with logos, for greater visibility when visiting communities.

Action Item #7 Staff to obtain new Agency business cards (including for any Directors who request them), and research costs for various types of jackets.

Monica mentioned future projects she will be working on (e.g. organizing all Agency photos including scanning old negatives and slides, reorganizing the library, and updating the Agency poster with possible creation of audio/video segments in Aboriginal languages).

Kevin presented the draft Agency Photo Use Agreement, a recommendation from the risk management plan. It provides control of how photos are used, and ensures the Agency receives credit for the photo and a copy of the end product. There was a brief discussion with some suggested changes. Due to time constraints, it was agreed to revisit this item at the next Board meeting.

Action Item #8 Agency Photo Use Agreement to be added to next Board meeting agenda.

➤ **ICRP Public Hearing September 28-29, 2010**

The Directors and staff had an *in-camera* teleconference with the Agency legal counsel to plan for the upcoming Wek'eezhii Land and Water Board (WLWB) public hearing on the ICRP.

MEETING WITH JOHN McCULLUM, ENVIRONMENTAL MONITORING ADVISORY BOARD (EMAB)

EMAB commissioned a technical review of Diavik Diamond Mines Inc. (DDMI)'s draft closure plan by Randy Knapp (SENES), and reviewed compliance with the

Comprehensive Study Report (CSR). There is no revegetation plan, and rock piles will be kept steep rather than sloped for freeze back reasons. EMAB recommended a more thorough analysis of climate change impacts for structures which rely on permafrost for stability, and more information is needed on meromixis and the potential for a dead zone at the bottom of the reclaimed pit bay.

CSR commitments included returning the site as close as possible to its original state (almost the entire site will be covered in rock piles), not burying any infrastructure in the pits (plan includes burying demolition materials on the island), and community engagement on the plan.

The Processed Kimberlite Containment (PKC) facility leaks have been repaired, but more information is needed on how it will be covered at closure and whether there will be wildlife access. The PKC will be drained as part of progressive reclamation, and there is a pipeline from the North Inlet to the process plant.

The Reclamation Research Plans currently lack detail in EMAB's view. The WLWB issued 150 recommendations on the closure plan, and DDMI has until December to submit a revised plan. The first revegetation studies have been completed but not reported yet. Shrubs were not very successful, and sedges and grasses did better but not without addition of fertilizers.

The AEMP report (reviewed by North-South Consultants) showed results similar to last year. Nutrient enrichment is continuing, although the lake area containing elevated chlorophyll *a* is greater than last year and phosphorous is less. WLWB has not responded yet to the recommendations from EMAB.

Mercury is still an issue, according to the AEMP. The fish palatability study samples show levels below Health Canada guidelines, but about 70% of samples are above "subsistence" guidelines developed by GNWT. Last year's tests showed elevated mercury in sculpin near the discharge and nowhere else with more tests planned for this year. There are problems with the baseline data, as DDMI did a composite sample instead of correlating the data with fish ages, which can be a very important variable in determining mercury levels. Some mercury was found in sediments but not near the discharge. This could be related to nutrient enrichment or climate change, and DFO is doing further sediment studies.

Diavik's WEMP shows that the caribou zone of influence is clearly larger than predicted. No grizzly bear surveys were done last year due to safety issues, and sightings data is not very useful as it is unclear whether it is the same or different individuals.

DDMI still has no Air Quality Monitoring Program, only dust and lichen sampling. The company is supposed to develop a proper AQMP by May 2011 as a result of increased pressure from GNWT and Environment Canada. Revised lichen studies have more sample sites, and a methodology is being developed to model predicted uptake (e.g. by caribou) vs. just studying lichen health. The Agency noted that BHPB did some uptake

modelling but the results are questionable (Kim Poole and Anne Gunn could provide more details). Jaida had noted previously that geese were candidates for uptake as well.

EMAB submitted a TK proposal to DDMI which was rejected. Proposals from communities are forthcoming, including Brenda Parlee with Lutsel K'e and Allice Legat with the Tlicho Government. EMAB has suggested DDMI get TK expertise on staff rather than having biologists attempt the work, and undertake a literature review of TK work to date for the Lac de Gras area (e.g. studies completed under WKSS). There was a May workshop to review the Environmental Agreement (review conducted by SENES). Parties are generally satisfied with DDMI and EMAB's role, and TK was the main issue of dissatisfaction.

Michele LeTourneau has resigned as Communications Coordinator, and several new Board members were recently appointed: Ted Blondin (Tlicho Government), Charlie Catholique (Lutsel K'e), Steve Ellis (GNWT), and Charlene Beanish (Government of Nunavut).

DIAND and GNWT initiated mediation in late July over the EMAB-DDMI budget dispute, and binding arbitration will follow if not resolved by October 3, 2010.

DDMI's proposed alternate mining method for A21 kimberlite pipe (building a rock ring covered or lined with silt curtains and hanging a cutter off a barge, summer-only operation) is on hold while DDMI compiles more information. Numerous concerns were expressed, especially with regard to keeping sediment out of Lac de Gras and downstream effects.

MEETING WITH ROBERT JENKINS AND NATHAN RICHEA, DEPARTMENT OF INDIAN AFFAIRS AND NORTHERN DEVELOPMENT (DIAND) and BRUCE HANNA, DEPARTMENT OF FISHERIES AND OCEANS (DFO)

Representatives from DIAND and DFO were invited to discuss issues related to the upcoming ICRP hearing.

DIAND's suggestion for an annual workshop on Reclamation Research Plans hopes to create a less adversarial process, to allow more frequent interaction (i.e. not have to wait until the three-year review period is over), and opportunities for results to shift the focus of programs.

DFO does not have any residual issues with the ICRP other than the fish habitat question. BHPB seems to have addressed all the others (e.g. PDC slumping area). Fish barriers left in place longer could help establish vegetation and benthic invertebrate populations but would only be needed if the pits were reconnected and the water quality was poor, depending on the timing of reconnection. DFO suggested in their intervention that BHPB could remove the barriers as its last task if everyone agrees.

There are safety issues related to water monitoring as pits are filling (e.g. wind channels could be dangerous for helicopters, and driving down ramps would depend on rock wall stability).

PK could be placed in the pits rather than the LLCF if meromictic conditions were assured and the pit walls were stable. Many questions remain about shallow zone construction will need to be stable to be a good closure option. BHPB has stated pit berms would only be temporary while pump flooding to address safety concerns of equipment going over the edge, and would be breached once flooding is complete.

Habitat enhancement and adding diversity to stream connections was discussed. Pools, riffles, deeper channels and meanders in natural streams make them better able to withstand fluctuations and annual variations in flow (i.e. more stable). INAC's closure guidelines clearly state stability is an important issue.

It was agreed that the revised reclamation liability estimate should be based on an approved ICRP, and that BHPB needs to move forward quickly on the reclamation research.

Meeting concluded at 5:30 pm.

SEPTEMBER 15-16

EKATI SITE VISIT

Directors and staff had an Ekati mine site visit and met with BHPB staff (Eric Denholm, Helen Butler, Karl Schubert, John Bartlett). Keith McLean was introduced as the new Superintendent of Environment Operations (replacing Dave Abernethy).

Areas visited included the north end of Cell B where the processed kimberlite spill took place, Pigeon test pit, Beartooth pit and pipeline, Panda Diversion Channel canyon reach where slump occurred in July 2010, the revegetation study site on Panda Waste Rock Storage Area, Nero-Nema bridge where a dust suppressant spill into the water occurred in July of this year, and Fox pit with Wirtgen surface miners in operation. The new airport fencing was in place, and it was noted that caribou were still around Contwoyto Lake according to satellite collar data.

BHPB staff presented various options under consideration for the expansion of the Misery waste rock pile as a result of the proposed pit pushback. These are conceptual only and would require an amendment to the Waste Rock and Ore Storage Management Plan.

Eric also mentioned recent discussions with Jason Brennan (INAC Inspector) re: pumping from King Pond to Cujo Lake. Jason interprets the water licence as saying BHPB cannot pump Misery pit water into King Pond at the same time as pumping from

King Pond to Cujo Lake (receiving environment). BHPB disagrees, and the WLWB will be asked to provide clarification.

Sampling times could be an issue as there is a licence requirement for monitoring of King Pond discharge only once a week during discharge. The Agency suggested that the key consideration ought to be that water being pumped to the receiving environment meets discharge criteria.

FOLLOW-UP ITEMS

The following items were discussed by the Directors and Agency staff in the afternoon and evening of September 15.

➤ **Diamond Mine Wildlife Monitoring Program Review**

Kim Poole sent notes on the June 28th technical workshop that he and Kevin attended. Joe Handley prepared a final report, but there has been no response to date from any of the companies. Community members were invited to a site visit (Diavik and Ekati) in August, which was postponed to September 16-17. There will be a community workshop in Yellowknife October 5-6 which Kim, Audrey, and staff will attend.

➤ **Wastewater and Processed Kimberlite Management Plan (WPKMP)**

The WLWB Staff Report (June 2010) on BHPB's revised WPKMP was discussed, including a table of responses to reviewer comments. It appears that some of the Agency recommendations (approved by the WLWB) do not appear in the revised plan. Laura and Tony will conduct a more detailed review that will be discussed at the next Board meeting. It was noted that the WLWB has committed to prepare some guidance on the level of detail expected in management plans. Directors agreed that WLWB staff should be invited to discuss these issues at the next Board meeting.

Action Item #9 Laura and/or Tony to review WPKMP, and WLWB staff to be invited to November Board meeting.

➤ **Principles to guide release of Agency meeting binders to Society Members**

Following a request from NSMA staff, there was a discussion on access to information. Board meetings are open to Society Members, except for *in-camera* sessions, and summaries of discussion are distributed to all Society Members and are available on the website. For meeting binders, some documents would not be released to Society Members (e.g. peer reviews or other reports not made public yet, financial variance reports, draft policies or other draft materials).

Action Item #10 Kevin to draft a policy on access to Agency information based on this discussion of principles.

➤ **2008 Air Quality Monitoring Program (AQMP) Peer Review**

Directors, staff, and Eric Denholm (BHPB) discussed the SENES review of the 2008 AQMP. The Agency commissioned this review and wants to release it to the public. Eric suggested waiting until early October, so a BHPB response could be prepared and attached to the review. Directors agreed this was both acceptable and desirable.

Action Item #11 Kevin to draft a covering letter for the release of the SENES AQMP review.
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Jaida suggested the November environmental workshop could focus on air quality, including current program design and Agency critiques. She noted that a true workshop involves more than just technical experts, and would allow contributions to the program design itself and program components. When BHPB staff were asked at site about availability to make a presentation at the workshop, a positive response was received.

➤ **10-Year Panda Diversion Channel (PDC) Report Peer Review**

Directors and staff discussed Bill Tonn's review. Tonn does not agree with the design of the PDC monitoring program, and has numerous other criticisms and suggestions for improvement. The 10-year summary report by BHPB is not a stand-alone document, and data had to be pulled from individual annual PDC reports. The fat content of neonates suggests they could survive, but this is not certain until fin-clipped fish return.

There was a discussion about whether the Agency should have a standard practice for peer reviews. It was agreed that consultants should be encouraged to engage BHPB and Rescan during the peer review to resolve factual matters before a report is finalized. Any errors in peer reviews would fall more to the consultants, but the Agency is accountable for the money spent.

Some monitoring programs do not involve a regulatory body (e.g. AQMP has no regulator although GNWT and EC have some expertise). Other Society Members may have an interest in participating in technical program reviews, but are not always invited or have the capacity to participate.

For the Tonn review, Directors agreed that it should be sent to BHPB with an opportunity to respond within a given period of time. Both the report and response will be released together, unless the deadline is not met (in which case the report will be released on its own).

Action Item #12 BHPB to be provided a copy of Bill Tonn's review and a request to respond within a reasonable amount of time, prior to public release.
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Action Item #13 Kevin to prepare various options for a process to release peer reviews, including pros and cons, for the November Agency Board meeting.

➤ **Review of BHPB 2009 Environmental Agreement and Water Licence Annual Report**

WLWB is requesting comments on this report by October 4, 2010. The Agency typically looks at whether BHPB is reporting on all the required elements as per the Environmental Agreement, and consistency between the technical and plain language versions.

Action Item #14 Directors to comment on the 2009 EA and WL Report by September 24. Kevin to distribute last year's comments as a guideline.

➤ **Nitrate Interim Protection Standards (IPS)**

The Agency sent a letter to BHPB May 17th raising concerns with the adoption of nitrate IPS for discharges downstream of the Long Lake Containment Facility (LLCF). To date there has been no BHPB response. The item was raised with BHPB staff during the site visit and a response will be forthcoming.

➤ **Follow-up letter from DIAND re: 2009 Environmental Impact Report (EIR)**

The Agency sent a letter to DIAND on April 28th about the 2009 EIR and proposed process for 2012. No response has been received to date.

Action Item #15 Kevin to determine if any follow-up letter was written issuing a final approval of the 2009 EIR.

OTHER BUSINESS

➤ **Future Board Meetings**

The dates of future Agency Board meetings were reviewed and approved as follows:

November 16-18, 2010

➤ **Annual General Meeting and Environmental Workshop**

The Agency AGM will be held November 18, 2010. A notice and invitation will be sent out next week, with the addition of a communications update to the agenda and an extended time (9:00am-2:00pm for the AGM, 2:00pm-4:00pm for meeting with Aboriginal Society Members).

The afternoon of November 17 will be an Environmental Workshop, focusing on Air Quality.

Action Item #16 Agency to invite BHPB to the November environmental workshop to present information on the AQMP and respond to the SENES review.

A possible Board meeting in Kugluktuk will be discussed with Kitikmeot Inuit Association representatives that attend the Agency's Annual General Meeting.

A handwritten signature in black ink, appearing to read 'Jaida Ohokannoak', with a long horizontal stroke extending to the right.

Summary of Discussion Approved by
Jaida Ohokannoak, Secretary Treasurer.