

**Independent Environmental Monitoring Agency
81st Meeting of the Board of Directors
Yellowknife, NT
March 18-19, 2013
Summary of Discussion**

Directors

Bill Ross
Tim Byers
Jaida Ohokannoak
Tony Pearse (on teleconference for part of the meeting)
Kim Poole
Laura Johnston
Arnold Enge

Staff

Kevin O'Reilly, Executive Director

March 18, 2013

Meeting commenced at 1:30 p.m.

AGENCY BUSINESS

➤ **Information Updates**

Bill – Reviewed the Agency's closing argument for the water licence renewal, the Aquatic Effects Monitoring Program (AEMP) Re-evaluation report, and the ICRP (Interim Closure and Reclamation Plan) Annual Progress Report. Participated in the interviews held to date for a new Communications and Environmental Specialist with the Agency.

Laura – Primary activities around the water licence renewal including the public hearing and closing argument. Reviewed the AEMP Re-evaluation report and the snow sampling section of the SENES review of BHPB's 2011 Air Quality Monitoring Program (AQMP) report.

Tim – Attended the February 2013 Environmental Agreement implementation meeting where BHPB indicated that its current consultants will be retained, at least over the short term, when Ekati is sold. Participated in the Agency intervention on the water licence renewal including the public hearing. Reviewed the materials circulated regarding the development of diamond mining effluent regulations by Environment Canada. Participated in the interviews for the recruitment of a new Communications and Environmental Specialist

Jaida – Participated in the interviews for the recruitment of a new Communications and Environmental Specialist. Reviewed the SENES comments on the 2011 AQMP report and parts of the 2012 EIR. Helped review communications projects. Monitored the Agency's finances including the draft 2013-15 Agency budget and work plan. Conducted some research into a harassment policy for the Agency.

Kim – Reviewed the ICRP Progress Report letter and participated in the March 2013 wildlife monitoring program workshops on wolverines, grizzly bears and caribou. It would be a good idea for the Agency to consider how all the monitoring program reports might be linked or posted to the website.

Arnold – Reviewed general Agency correspondence. Otherwise, very busy as he is now the Acting Chair of the Environmental Monitoring Advisory Board (EMAB) on the Diavik mine.

Kevin – Water licence renewal activities including the pre-hearing conference, public hearing, Agency intervention and closing argument. Compiled the Agency comments on the AEMP Re-evaluation. Coordinated the recruitment process for the new Communications and Environmental Specialist, completed performance evaluations for the Agency staff, participated in the IACT (Inter-Agency Coordinating Team) meeting held in February 2013, the Environmental Agreement implementation meeting of March 2013, contracted with SENES for the review of the 2011 AQMP report, drafted the follow-up letter from the Agency's What visit and dealt with the Agency's website hosting service provider.

➤ **Financial Report**

Jaida and Kevin reviewed the 2011-12 Year-to-Date Expenditures and Variance Report. The Agency has under-expended on Board meetings this year. The water licence application review process likely will lead to the full expenditure of the Separate Fund. The Agency expects to run a small surplus for 2012-13.

The proposed 2013-15 Agency budget and work plan was reviewed. Some small adjustments were made and it was approved.

Moved by Laura Johnston. Seconded by Arnold Enge. Carried unanimously.

➤ **Risk Management Policy**

The Agency's Risk Management Policy and progress on outstanding risks were reviewed by the Directors. Some adjustments were made and the amended Policy was approved.

Moved by Jaida Ohokannoak. Seconded by Kim Poole. Carried unanimously.

FOLLOW-UP ITEMS

➤ **Water Licence Renewal Application**

Laura reported on the highlights from the public hearing held in Behchoko on February 12-13, 2013. She led the Agency intervention accompanied by Tim and Kevin. BHPB very much focused on a use-protection approach to water management. The Agency took a more balanced approach with equal emphasis on waste minimization. BHPB promised to do a special study on nitrate reduction rather than a full Response Plan as recommended by the Agency. BHPB did not agree with the Agency recommendation for a Chloride Response Plan. The WLWB recently issued a directive to BHPB to submit a reclamation liability estimate for March 22, 2013.

Tim mentioned that there was some discussion of what an appropriate benchmark might be for selenium and whether it should be measured in fish tissue or the water.

The Agency provided its closing comments on the water licence renewal in written form as requested by the WLWB. Given the complexity of the issues, written comments were a good idea. While the Agency detected some movement by BHPB during the public hearing, the Agency would like to ensure that nitrate and chloride become regulated EQCs and that there is a response plan for each as these variables are an issue now downstream of the mine. There was a shift in the discussion about nitrate from its toxicity to its impacts as a nutrient. The WLWB will provide a draft water licence for comment by the intervenors

and then BHPB will have an opportunity to respond before it is finalized. The Agency will review the draft licence and provide comments as appropriate.

➤ **2009-11 Air Quality Monitoring Program Report**

The Agency received the 2011 AQMP in June 2012. Jaida and Kim conducted a preliminary review for the Agency. SENES Consultants, who reviewed the last two AQMP reports for the Agency, were contracted to review the 2011 report. The Directors reviewed and discussed the SENES report. It raised many of the same concerns as those identified by the Agency and had some helpful recommendations for improvement particularly around better staff training and methodological problems. The Agency will reserve any comments on the SENES report or recommendations to BHPB to our 2012-13 Annual Report. In the meantime, it was agreed that the Agency will send the SENES review to BHPB and others, with a request that BHPB respond to the recommendations made by SENES.

Action Item # 1: Kevin to send the SENES review of the 2011 AQMP to Society members and request that BHPB respond to the recommendations.

➤ **Interim Closure and Reclamation Plan Progress Report**

The Agency sent a letter to BHPB with comments on the 2012 Progress Report on the Interim Closure and Reclamation Plan for Ekati. The Agency is concerned about slippage of most of the research by a year or more and the lack of progress on the Old Camp and Phase I Tailings Containment Area. Although BHPB had indicated an interest in discussing the Progress Report, nothing has happened since the comments were sent in on February 5. The WLWB sent out the progress report but has not solicited comments, as was done for the Diavik Progress Report.

➤ **GNWT Carnivore and Caribou Workshops**

Kim and Kevin attended workshops organized by GNWT on March 5 (wolverines), 6 (grizzly bears) and 7-8 (caribou and cumulative effects). Kim provided a report on the workshops. The June 2010 diamond mine wildlife monitoring program objectives were reviewed and in some cases modified. The wolverine coverage by BHPB in 2011 was not done well and has adversely affected the ability to draw conclusions for the overall program. The next monitoring cycle is scheduled to begin in 2014. The 5 km by 5 km cell size used at High Lake and Izok has proven adequate and could be applied to the programs conducted by the existing diamond mines or any new developments. Summaries of the workshops should be available soon and the Agency may wish to make further recommendations to BHPB for the 2014 program.

For the grizzly bear workshop, it was unfortunate that data from the 2012 Ekati-Diavik hair snagging program were not available to allow for a comparison of the 10 km X 10 km versus 12 km X 12 km cell size, and 4 versus 6-session design. DeBeers is starting its program in the southern half of the study area this summer with a 12 km X 12 km size cell; the Ekati-Diavik program will continue with year 2 this summer as well. The Ekati-Diavik program cost the companies \$600k for the first season's work in 2012. The Agency compliments BHPB for its leadership on the grizzly bear program. The current monitoring results seem to indicate that current grizzly bear densities are much higher than those predicted or calculated in the 1980s. This may be due to better data from the hair snagging program compared to collaring or other factors such as reduced community harvest and/or reduced removal of nuisance bears (i.e. better waste management practices).

At the caribou workshop the clear message was that the diamond mines, including BHPB, are willing to contribute towards regional population studies. It is not clear that everyone is working together and to what end--management plans and/or cumulative effects management. The Agency may wish to consider this further in our Annual Report and offer some further advice to BHPB and GNWT.

➤ **Aquatic Effects Monitoring Program Re-evaluation**

The Agency submitted comments on this document but arranged with BHPB ahead of the comment deadline that its comments would still be responded to if submitted after the WLWB deadline. This was due to the work load on the water licence renewal and other priorities. The Agency's comments were largely related to retention of a number of contaminants as evaluated variables and the need for further work to examine whether downstream effects extend into fish populations.

➤ **AANDC Inspection Capacity**

The Agency recently learned that AANDC inspector Jason Brennan will be moving to other employment in BC. The Agency commends Jason for his excellent work in inspecting Ekati and communicating results to all interested parties. It is not clear when AANDC will have a replacement for Ekati inspections.

➤ **2012-13 Agency Annual Report**

The Directors reviewed a table prepared by the Executive Director with some preliminary thoughts on issues and assignments. Several suggestions were made and the table is to be revised and redistributed before the Annual Report writing session scheduled for May 7-9, 2013 in Cranbrook.

Action Item # 2: Kevin to revise and redistribute the table with preliminary ideas for the Agency's 2012-13 Annual Report before the writing session.

BRIEFINGS BY VISITORS

➤ **Snap Lake Environmental Monitoring Agency (SLEMA) and Environmental Monitoring Advisory Board (EMAB)**

Dave White, SLEMA Executive Director, provided an update. His main points were as follows:

- SLEMA hired Barry Zajdlik to review the AEMP Re-evaluation by DeBeers where the company proposed reduced sampling;
- Production at Snap Lake has increased over the last few months to close to capacity, possibly due to better commodity prices;
- The water treatment plant is almost at capacity due to increased production and water inflows;
- Total Dissolved Solids continue to increase in Snap Lake and will likely reach the water licence limit of 350 ppm by 2018-19 and the CCME guideline for chloride may be exceeded as early as next year;
- Underground spills at Snap Lake appear to be much higher than at Diavik or Ekati, which may reflect a difference in equipment and/or practices;
- AANDC has a new inspector for Snap Lake;
- SLEMA Board and staff visited Lutsel K'e in February 2013 and are now looking to do a school visit in N'dilo;
- The backlog of Snap Lake Annual Reports from DeBeers (the 2010-11 and 2011-12 reports) was finally delivered in 2013, SLEMA is now reviewing them;

- SLEMA is working on a number of other issues including plume characterization, Acid Rock Drainage plan, rainbow trout toxicity testing, and air entrainment in the diffuser which reduces dilution; and
- There are no definitive plans for oversight at the proposed Gacho K'ue diamond mine.

Mark Fenwick, EMAB Executive Director, provided an update to the Directors as follows:

- There has been no developments on the A21 pipe as it appears that Diavik is waiting for a new owner to make any further decisions;
- An Air Quality Monitoring Program plan was submitted in June 2012 and is being implemented although there is no ambient air quality monitoring;
- The EMAB budget disagreement has been sent to the AANDC Minister who is to decide between budgets submitted by EMAB and Diavik;
- Financial security for Diavik was recently lowered from \$160 million to \$120 million by the WLWB as A21 work has not begun, and the Environmental Agreement security was recently reduced to \$40 million;
- EMAB is awaiting the 2012 monitoring program reports;
- The wind generators at Diavik came on line in October 2012 and will save the company 10% of its diesel generation costs, although there is an outstanding concern over potential for bird mortalities;
- Incinerator stack testing took place at Diavik in October 2012 and the results are expected in March 2013;
- Diavik is now reporting its underground spills;
- EMAB's Traditional Knowledge (TK) Panel recently held its fourth meeting where further work was done on the ICRP including waste rock pile reclamation; and
- The TK Panel has indicated that its reports should be sent to other parties including other diamond mines. The Panel works with SENES Consultant Deb Simmons, Natasha Thorpe and Joanne Barnaby (retained for the most recent meeting).

Kevin noted that BHPB has been informed of the EMAB TK Panel and its work on reclamation. It may be able to serve as a model or TK panel for BHPB too.

➤ **BHP Billiton Staff**

Eric Denholm, Erin Forester, Charles Klengenberg and Nicole Spencer provided an update to the Directors as follows:

- The transfer of Ekati Mine to the new owner is almost complete. AANDC is handling most of the assignments but an Order-In-Council is required for the land leases;
- Financial and operational capacity assessments have been completed by GNWT and AANDC;
- The Environmental Agreement will be the last arrangement to be assigned and is expected to take place in the second week of April;
- The new owner has indicated that it will revisit the Life of Mine Plan with a view to extending the life of the operation;
- The WLWB is due to issue a draft water licence renewal for Ekati tomorrow with comments due by April 10 and then BHPB will have another week to respond;
- BHPB thought the hearing on the water licence renewal went well and useful information was exchanged;
- BHPB originally did not see the point of written closing statements but that approach did prove useful due to the technical issues involved;
- Financial security estimate is now due March 22 and BHPB would like to see the Stratos report being done for AANDC; and
- There was a problem with the laboratory that did some of the analysis for the 2012 AEMP fish contaminants sampling of trout.

Bill mentioned that the Agency would be interested in a site visit September 16-17, 2013. Eric indicated that this would likely be possible. BHPB is willing to meet with the Agency on the ICRP Progress Report and that having the meeting open to other interested parties would be helpful. Eric also offered to set up a conference call on the wildlife camera study to help clarify objectives and use of the data, after the 2012 report is released and reviewed by the Agency.

There was a discussion of the effectiveness of the 2011 wolverine hair sampling program where much of the study area was not covered and this affected the analysis. BHPB staff wondered about the significance of wolverine. Bill reminded BHPB that the impacts on wolverine from poor waste management practices and lack of building skirting was one of the few impacts from Ekati that was ever considered to be significant.

Tim asked whether the lab results from the endocrine disrupting compound study at Ekati could be made available. Eric thought the results would likely be found in the forthcoming 2012 AEMP report, but if not, to ask him again.

There was a discussion of dust suppression and air quality monitoring at the site. Kim asked whether there were any quantitative studies on the effectiveness of DL-10 or EK-35 as used at Ekati. This is important in terms of improving mitigation and as a possible driver for the recorded zone of influence for caribou. Eric thought there may have been some work done on the effectiveness of these dust suppressants. Kevin mentioned that GNWT provides real-time Total Suspended Particulate monitoring results on the internet for the four stations it runs. Stack testing of the incinerators has been complicated by the need to make substantive changes to piping and the location of the sampling port.

Eric also mentioned that the Pigeon pipe waste rock is more complex than anticipated as the meta-sediments and granite are mixed without a clear contact. The waste rock dump will need to be redesigned or other options considered including use of the Panda/Koala/Beartooth waste rock pile. Any changes will be brought forward to the WLWB for review as part of a revised Waste Rock and Ore Storage Management Plan. Mining is not expected to start until the winter of 2013-14.

Eric said that the Pigeon Stream Diversion has not been tied in yet with 70 m upstream and 20 m downstream still to be completed. It will be allowed to flush again this year and then tied in next year.

Charles Klengenber provided an update on TK projects. All five Aboriginal governments now have TK projects funded by BHPB. Diavik is also assisting with the Lutsel K'e Phase III TK database project. Jaida asked whether the TK visits to the mine site are being documented as in 2011. Charles indicated that reports from the 2012 visits have not been produced but BHPB continues to listen to what the visitors say. He said that BHPB will do better in 2013 with caribou as the major focus and possibly extended stays. Jaida suggested that it would be important to learn more about caribou behaviour and to apply this to what may be coming out of the camera study. As part of habitat replacement for the loss of the Carrie-Desperation stream, BHPB is looking at a project at the Stagg River where a culvert has prevented fish passage. A bridge may eliminate the problem.

Action Item # 3: Kevin to send a request to Eric for a site visit September 16-17, 2013.

OTHER BUSINESS

➤ Future Meetings

Future meeting dates were discussed. The date of future Agency Board meetings and other activities were agreed upon as follows:

- May 7-9, 2013 – Annual Report writing workshop in Cranbrook

- Week of June 24-28, 2013 – Board meeting and possible community visit (N'dilo?)

Action Item # 4: Tim and Kevin to work with Yellowknives Dene First Nation about a possible community visit to N'dilo.

Meeting adjourned at 5 p.m. on March 20, 2013.



**Summary of Discussion Approved by
Jaida Ohokannoak, Secretary Treasurer.**