

***Independent Environmental Monitoring Agency
58th Meeting of the Board of Directors
Yellowknife, NWT
February 4th – 6th, 2008
Summary of Discussion***

Revised: February 25, 2008

Directors

Tim Byers	Jaida Ohokannoak	Tony Pearse (by teleconference)
Sheryl Grieve	Kim Poole	
Laura Johnston	Bill Ross	

Staff

Sean Kollee
Kevin O'Reilly

Addition to the Agenda – A meeting with DIAND regulatory improvement analyst (Neil McCrank).

Information updates (In addition to routine review of Agency communications and correspondence)

Bill – met with the mediator on December 22nd and again February 4th. He was interviewed by a consultant on tiered thresholds and made it clear he was responding as a Professor but used Ekati examples in making his favourable perspective known.

Kim – reviewed some ICRP and wildlife material.

Tim – was present at a meeting with the mediator, participated via conference call in a meeting about AEMP guidelines development, engaged in community consultation efforts related to Lutsel K'e (was introduced to Iris Catholique) and contacted the Yellowknives Dene First Nation regarding an elders meeting for Bill. Tim was advised that a meeting with the Yellowknives Dene First Nation elders should be put on hold until some internal matters are sorted out.

Laura – reviewed ICRP material.

Jaida – reviewed ICRP and assisted with Agency financial material.

Sheryl – reviewed ICRP material but remarked that 2.5 days was not enough for her to conduct a meaningful analysis of the material. She met with the NSMA and topics discussed were general questions of Agency and Ekati business. These included actions to be taken with caribou. Comments on odour and caribou were discussed and the NSMA would like further information on use of DL10 to control dust and use of remote sensing in dust monitoring.

Kevin – listed follow up activities from the last board meeting such as the distribution of summaries from the last Board Meeting, the Agency environmental workshop, a letter to the WLWB on ICRP section 3 and an update to EMAB and SLEMA was provided (a question about ducks found in the contaminated snow facility was noted). He attended a meeting on AEMP guidelines in the NWT and prepared a financial update.

AGENCY INTERNAL MEETING

FINANCIAL REPORT

Variance Report - A variance report (an update report on Agency finances) was presented to the Directors along with projections of expenditure during the remainder of 2007-8. The decision to delay a board meeting in Lutsel K'e to later in 2008 (due to the schedule of the community and Director availability) led to a discussion of use of the funds allocated for that trip.

Funding of staff for attendance at IEMA meeting – The Agency's community consultation policy states that "Honoraria will be provided: To participants who do not receive a salary from another source...". The Directors reaffirmed this Agency policy with regard to an invoice received from NSMA for its participation in the environmental workshop and Annual General Meeting.

Invoice from Lutsel K'e – Directors agreed to pay a portion of an invoice for a Director visit to Lutsel K'e.

AQUATIC EFFECTS MONITORING PROGRAMS AND TRADITIONAL KNOWLEDGE

Tim Byers reported on a meeting that he participated on via teleconference regarding guidelines for aquatic effects monitoring programs. DIAND's contractor for developing AEMP guidelines provided an update of discussions and interviews that took place in 2006 and the discussion paper that was distributed earlier. Tim commented on how TK could be brought forward into AEMPs. The idea of regular collaborative reviews was a message well received by the group. Adaptive management was brought up by Barry Zajdlik who suggested that an AEMP without incorporation of adaptive management is not adequate. Integrity of data such as the appropriateness of removal of outliers (a protocol exists) will be referenced in the AEMP guidelines. On the topic of contradictory TK and science, Tim cautioned the meeting participants against discarding TK that appears to be contradictory and to explore why there may be differing views or interpretation as this may provide additional useful information. The importance of reporting of management responses to monitoring program reports was also mentioned at the meeting. The importance of engaging communities in any proposed changes was also raised at the meeting by the Agency. Draft guidelines will be distributed in spring with finalization in fall 2008.

AIR QUALITY MONITORING PROGRAM MEETING

An *air quality monitoring program (AQMP)* technical meeting was held January 15th involving BHPB, SENES, EC, GNWT and the Agency. Proposed monitoring sites for snow and lichen sampling were suggested. Kevin put together a summary for the Directors following the meeting. SENES attended at the invitation of BHPB along with the sub-contracted lichen specialist. Graham Veale and Dave Fox attended for the governments. BHPB acknowledged problems with the past *AQMP* and that it could have been more collaborative in developing it. Snow sampling in April was considered as a priority for the meeting and BHPB wants to get clarification on how to carry that out more properly (sampling locations added). The independent consultants pushed for more of a grid pattern rather than transects to get a better understanding of dispersion. Methods improvements such as using sample blanks and using a different lab for some samples were discussed. BHPB has committed to getting back to those in attendance with some decisions on issues raised at the meeting. There remains no coordination of the *AQMP* between BHPB and Diavik.

BHPB agreed at the meeting to discuss air quality monitoring with the communities. The NSMA would like the Agency to review the research licence for the *AQMP* before it has to comment on it. The Directors agreed that it appears that progress is being made on bettering the *AQMP*.

NSMA LETTER TO THE MONITORING AGENCIES ON RESEARCH PERMITS

Other monitoring agencies – EMAB plans to decline the request to review research permit applications as it reviews the program results and does not feel the need to review the application of programs where it will eventually see the results. SLEMA has yet to formally respond on this issue.

Action Item #1 – Staff to gather further information on the research application review process for the Agency to access and review scientific research licences by BHPB for work at Ekati.

WASTE ROCK AND ORE STORAGE MANAGEMENT PLAN

The Directors noted that the Wek'eezhii Land and Water Board approved the expansion of the footprint of the waste rock pile and included a comment supporting the Agency's concern about the possible use of this material in future construction and closure.

WATERSHED ADAPTIVE MANAGEMENT PLAN

The Wek'eezhii Land and Water Board has not yet begun the review of the *Watershed Adaptive Management Plan (WAMP)* as part of a regulatory process. Bill and Tim sent in reviews of the document. It was noted that the WLWB also received an *AMP* from Diavik and a workshop sponsored by DFO, DIAND and the WLWB is set to take place in one week's time on the topic of adaptive management. BHPB expects to be able to

release the results of the Tier II molybdenum risk assessment shortly. The *WAMP* also brings up predictive models of water quality in the LLCF, reinforcing the need to see the modeling work.

PROPOSED CHLORIDE DISCHARGE CRITERIA

BHPB has asked for clarification of the DIAND and WLWB consultant comments. There has been a suggestion that a technical workshop take place to discuss the issues related to chloride and the point of compliance. The Agency is not being asked to do anything at this point pending further information.

INVITATION TO CUMULATIVE EFFECTS ON CARIBOU WORKSHOP

The main components of the workshop were discussed. There are to be presentations on various approaches to modeling and work on cumulative effects as carried out for other caribou herds.

It was agreed that Kim should go to the workshop, and one or both staff may also attend.

CUMULATIVE EFFECTS ASSESSMENT FRAMEWORK

For the upcoming CEAMF workshop, it was decided to send staff for any specific discussion of the Slave Geological Province, or other discussions where the Agency may have an interest. It was decided that it was not necessary to send a Director to this meeting.

VEGETATION MONITORING AND REMOTE SENSING PROPOSAL

Upon review of an unsolicited vegetation study proposal, the Directors wondered if GNWT or DIAND might have data and or be engaged in similar analysis. The Directors decided to check with the consultant and seek his permission to send the proposal to others who may be able to review or fund it, or suggest that he circulate it to others. The clear message should be that the Agency does not have the internal funding to carry out the work but that there may be some merit in the work. It was noted that the work would not cover lichen changes but only 'green' biomass.

Action Item #2 – Staff to contact Gary Borstad and discuss whether proposal can be circulated to others for comment and possible support.

AGENCY ANNUAL REPORT DISCUSSION

The Directors considered the schedule for development of the Agency's 2007-8 annual report. There was a preliminary discussion of issues that might be covered and meeting locations where the report would be written. It was observed that there would be further opportunities to discuss the Agency annual report at the March meeting. It was decided to hold the meeting April 23-25.

Action Item #3 – Staff to investigate Nelson as a meeting location for the 2007-8 Agency Annual Report writing meeting.

MEETINGS WITH OTHERS

EMAB – John McCullum

John provided an update on activities at EMAB and Diavik including the following:

- *AMP* - Diavik has released an adaptive management plan
- *Irregular inspections at Diavik* – this has resulted in another letter to DIAND from EMAB requesting progress be made in making sure there are regular site inspections.
- *AEMP* – Diavik has not submitted AEMP analysis but has submitted data. Federal departments have been slow in looking at data so EMAB did a review with its consultant and no significant results were identified. Diavik issued a lessons learned paper about the problems involved in running the AEMP. It is proposing to reduce July and September sampling permanently.
- *Fish habitat compensation for the M Lakes* – fish habitat loss offsets are required through habitat compensation to improve three small lakes on the mainland for the loss of small lakes on the island near the mine site. EMAB does not want to see natural lakes disturbed even by enhancement activities. At this point the project to improve the M lakes is anticipated but details are not yet available.
- *Wolverine DNA monitoring* – EMAB supports the initiative to get the DNA program report made available and for the monitoring program to be run every two years. Diavik is not planning to conduct wolverine DNA work in 2008, which is 2 years after the 2006 program.
- *Aboriginal involvement workshop* – a report and recommendations will go to educational organizations, governments and others to see if interest exists to hold a meeting between those who deliver and those who fund environmental training.
- *Open house* – a Christmas open house by the three monitoring agencies was well-attended.
- *Air quality monitoring* - Progress has been slow as an Environment Manager is not present on site.

Action Item #4 – Staff to work with EMAB Executive Director to draft a joint letter on improving air quality monitoring at both mine sites through consistent protocols and analysis.

MEETING WITH DIAND INSPECTOR – Jason Brennan

Jason provided some key highlights on his last three inspection reports. His most recent was a January 8th, 2008 tour of the underground mine. No issues related to water licence compliance were identified. His next inspection will be related to winter drilling (keeping ice clean of hydrocarbons is a key focus). Exploration targets include various

sites south of Jay pipe and Cardinal pipe and a new target south of Lynx Lake on Lac de Gras.

He plans to collect an annual pre-discharge water from the LLCF under ice (BHPB is looking for approval to collect this each year – BHPB believes it could be a worst case scenario due to stratification of LLCF lake water and lack of precipitation inflow). This will enable the company to discharge for an extra month. Jason has asked DIAND water resources to consider if under ice discharge is an appropriate indicator for water quality at discharge. Jason is considering making the sampling event the purpose of a site inspection and he may take his own sample and submit it to a different laboratory than the company currently uses.

Training will occupy much of his February (including water analytics) plus a course in law enforcement (level 1 and 2).

Other suggestions to BHPB – He suggested BHPB look into the availability of a mobile vacuum system that can be used at remote sites to assist with spill cleanup and the use of biodegradable oil in underground equipment that is prone to spills. BHPB was said to have questioned whether the oil will work due to the pressure and temperature found in its equipment.

Incinerator fluid – the concern about the potentially toxic nature of the incinerator scrubber fluid that is currently sent to cell B of the LLCF was discussed. BHPB suggests that the material burnt in the incinerator is food waste only and that analysis of the fluid suggests it is not an impact to water quality. It also keeps pH in check using soda ash. Jason will likely ask to see BHPB's test results on the toxicity of the incinerator fluid to double check on this issue.

ICRP process – Jason noted that closure criteria in the ICRP have been an area where agreement has been difficult to reach, in particular revegetation criteria. In his view some issues may not be able to have a number put on them and will then have to rely on judgement and consultation.

MEETING WITH THE WLWB – Zabey Nevitt and Ryan Frequet

Zabey stated that the WLWB is fully staffed due to Kathy Racher joining the WLWB from DIAND on a two-year placement. She and Ryan will be on the diamond mine files. The WLWB believes that this approach to staffing with shared responsibilities will build stronger capacity. Adaptive management plans are required for both diamond mines which provides opportunities for synergies in managing the projects.

ICRP Review – some parties submitted comments but were not at the Working Group meeting. BHPB has been offered an opportunity to respond to the section three verification comments of the reviewers. The intent remains to hold a public hearing following the Working Group process although it is hoped that many of the issues can be resolved through the Working Group process. BHPB will update research tables by the

end of February and the section four review can follow in April (in mid to late April a Working Group meeting is expected to take place).

Sable, Pigeon and Beartooth Licence Renewal – the WLWB is aware that a renewal application is pending from BHPB. Licence related IACT discussion may take place but the WLWB will not participate in those meetings.

Tundra Soil Study – this was required under the Sable, Pigeon and Beartooth licence but the WLWB was not provided with an opportunity to approve the Terms of Reference of the study. The paper describing seep 19 metal uptake was submitted to fulfill the requirements. However, in light of lack of a ToR, BHPB was invited to explain how the submission relates to the licence terms. The Agency view is that there appears to be a better understanding of what is happening in seeps.

LLCF Water Quality Study – the study is likely to arrive in February and was agreed to be a key document to inform closure planning and water management.

Watershed Adaptive Management Plan – The WLWB noted that a workshop would be taking place next week hosted by DFO and sponsored by various government departments. Bill mentioned his paper on environmental adaptive management (done largely by students) and agreed to provide a copy to Zabey and Ryan.

Chloride Discharge Criterion – WLWB expert contractors Hutchinson and Hart conducted a technical review and sent this to BHPB. The company response requested some clarification of the consultant review and on some of the comments provided by DIAND. The responses to BHPB are finished and BHPB has completed test work on chloride toxicity and hardness. Later in March a workshop may take place on this topic.

Participant Funding – Directors suggested that this could make the regulatory process more efficient. Zabey replied that the WLWB has observed that groups cannot participate in ICRP process due to insufficient capacity and lack of funding and the WLWB notes that cooperation is needed with DIAND and involves issues such as suspended funding listings. DIAND has found ways of dealing with WLWB funding requirements that are outside the Tlicho Agreement implementation plan. The WLWB has suggested that land use planning for both Crown and Tlicho lands should assist in providing a stronger context for reviewing land and water use applications.

MVLWB – the MVLWB has issued a directive to the regional boards to look at developing consistent policies and procedures up and down the Mackenzie Valley. Engagement, review process of management plans, effluent guidelines, terms and conditions, data sharing, GIS and application processes are key themes and working groups of staff from the various boards are beginning discussions. Opportunities for consistencies will be examined such as how an AEMP is developed for individual projects. The MVLWB has the authority to set policy direction within the Mackenzie Valley as defined in the *Mackenzie Valley Resource Management Act*.

MEETING WITH BHPB - Charity Clarkin and Eric Denholm

A general update presentation was made by BHPB and the file is available upon request from the Agency. An organizational chart was presented and included information that Dave Abernethy is now acting environmental operations manager (oversees environmental monitoring programs at site).

BHPB stated that environmental monitoring program reports would be available shortly (by the end of March for most reports such as *AEMP*, *AEMP Lake Variability Study*, *WEMP*, *Archaeology*, *PDC*, *Nero-Nema Habitat Compensation*, *Environmental Annual Report*, an updated *Waste Rock and Ore Storage Management Plan*). Ekati highlights included advanced underground mine development and completion of the cell B road. Upcoming activities include the use of a new processed kimberlite pipeline to cell B, the winter road is on schedule, mine concept studies are underway as are health, safety and environment audits. On the topic of road dust and use of DL-10 BHPB replied that it is uncertain if DL-10 would be needed in 2008 (Misery ore hauling is complete).

Special programs include Environment Canada sediment sampling for dioxins and furans (to occur in April) and adjustments to air quality monitoring. New additions to the air quality monitoring program were discussed such as the focus on snow and lichen, new methods and locations for sampling, and review of laboratory and shipping techniques. BHPB will be conducting snow sampling in April and lichen sampling in August. A second technical meeting is set to take place in March 2008 and focus on the continuous ambient air monitoring programs, hi-vol samplers and dust fall.

Traditional Knowledge– BHPB is considering a multi-year TK strategy in addition to continuing the existing projects (NTKP, caribou and roads, resolve old phase two TK projects). In 2008 BHPB plans community idea-generating sessions where it hopes to identify and involve a community liaison to assist in initiating new TK projects.

Regulatory Initiatives – BHPB has a meeting scheduled with Neil McCrank and is aware of the Environment Canada DMER process (new diamond mine effluent regulations under the *Fisheries Act*). Other regulatory initiatives include a DIAND water quality standards discussion paper (review of draft) and hosting of Northern board member training session on mining for non-miners.

Upcoming Environment Issues – Due to increasing nitrate in LLCF discharges, BHPB will be considering management options. Results from fish sampling in Leslie Lake show hydrocarbon metabolites and BHPB intends to further study this issue. Chloride management options include treatment and possible use of Beartooth pit for storage of water not meeting discharge limits or from underground mining operations.

MEETING WITH Neil McCrank and Rick Upton

The Directors invited Neil McCrank to discuss his mandate. He replied that he was asked by the DIAND Minister to look at the northern regulatory system to identify

opportunities for improvements to efficiency and effectiveness, with a focus on the NWT. He will also consider the concept of a major projects management office to see if this could be a benefit to the NWT. He is consulting with stakeholders, Aboriginal governments, individual Board staff and members, the Board Forum, GNWT departments and ministers, the NWT Premier, INAC divisions and negotiators. He met with oil and gas and other industry groups such as the NWT and Nunavut Chamber of Mines and hopes to complete consultation by end of February. He is planning a round table discussion in March at the Explorer Hotel, which will be facilitated and organized (a series of questions of what should be addressed so issues can be debated by all parties will be formulated).

Efficiency means to him having the information at the table so decisions can be made. Following the round table he hopes to have a report to the Minister by mid-April. He intends to produce a report that does not repeat those comments already made that have not been implemented, such as in the NWT Environmental Audit. His focus is on the system; is it working or not and what can be done to improve areas that are not working well.

Bill described the mandate of the agency and its activities and history of establishment. The Agency also put forth four points regarding the regulatory system:

1. A greater capacity for communities to be heard in the regulatory process. Participant funding is needed. Several processes today do not have means or opportunity to provide funding and suffer due to that lack of participation by interested parties. The Agency is concerned that diminished participation is creating a barrier to effective regulation and environmental management.
2. Air quality in the NWT lacks enforceable regulation. Discussions have taken place with governments and BHPB and the voluntary program in place is improving slowly but regulation would provide more certainty and guidance.
3. The WLWB is responsible for licencing for Ekati and the Agency has commented favourably upon its technical capacity and work, as it appears to be well organized and staffed. The Agency wants to ensure the Board continues to have access to resources to enable it to get the technical expertise it needs. The agreed funding for the WLWB is inadequate because at its time of establishment. The intent was for it to manage only smaller projects. Now, the two large diamond mines have been delegated to it. DIAND has had to provide outside funding so that the WLWB can hire consultants to provide expertise. It would be preferable if the Board had its own secure core funding and was not reliant on other special requests for funding to meet its current mandate.
4. The Agency believes that independent environmental oversight is sound as it creates reassurance that Ekati is being protective of the environment. This is due to the independence factor. There has been some progress in creating a Multi-Project Environmental Monitoring

Agency and the Agency has supported this since 2000. Cooperation and coordination happens now with the existing environmental monitoring agencies.

Follow up discussion – The Directors mentioned that the Agency is not a decision-making body (it makes recommendations and offers advice). Some of the best successes have come through collaboration such as annual environmental workshops. Issues covered in the Environmental Agreement are not addressed in the current regulatory regime, particularly requirements for air and wildlife monitoring. Commitments made by the company during the environmental assessment are also covered. The Environmental Agreement was also partly the results of some mistrust of government by Aboriginal and environmental groups in particular. The differences between EMAB and IEMA were discussed. IEMA has the mandate and practice of technical oversight but when EMAB was created there was a stronger emphasis on community involvement. Over time, EMAB's technical capability has improved and the Agency now spends more time and effort on communications and consultation. SLEMA was meant to combine both board models.

The need for intervener funding was discussed in terms of how eligibility can be determined. Neil McCrank indicated that, in Alberta, it costs about one million dollars a year for environmental reviews of energy projects and this is charged back to the applicants. On the utilities side the costs are rolled into rate base and it costs about \$20 million each year.

Air quality monitoring and regulation was discussed in greater detail. Air quality regulation and enforcement are seen as a regulatory 'vacuum' in the NWT. There are guidelines for the NWT but these are generally applied to Commissioner's Lands (mostly roads and around communities). Federal air quality regulations are not available and. Environment Canada has not been prepared to fill the regulatory gap in the north because air quality remains provincial responsibility in the south.

Funding of the WLWB was discussed. It was noted that the WLWB receives funding from DIAND. Neil McCranck asked whether there could be a user pay option. The Agency indicated that there are some provisions in the *Canadian Environmental Assessment Act* for cost recovery but none elsewhere in the existing NWT environmental management regime. For the WLWB there is an implementation plan that sets out funding levels based on predictions at the time that the Tlicho Agreement was negotiated. A resource development boom was not predicted and it was not anticipated that WLWB would have responsibility for the diamond mines. The Agency suggested that more flexible funding mechanisms for Boards might be considered.

On the topic of community relations, the Directors mentioned that the communities often comment on the value of the Agency and its technical focus on Ekati. Small Aboriginal government environment departments deal with other development pressures in communities so they are often unable to keep up. At times the Agency is doing work 'on

behalf’ of communities in their view, although the Agency can never represent community interests.

Neil asked the Directors if regulatory bodies had adequate capacity and funding, and there were appropriate enforcement responsibilities and resources, would there be a need for Agency? The Directors replied that if people trusted governments and governments continued to carefully oversee the project then there would be a diminished need for an oversight agency.

Neil completed the discussion of the planned roundtable workshop scheduled for March with a key question: ‘Assuming there is a need or want for resource development in the north, is the current system working to enable responsible resource development and if not, are there structural changes or details that could be suggested?’ The Agency was invited to consider this question.

MEETING WITH DIAND – David Livingstone

The Directors requested David provide an update on the following topics:

Multi-Project Environmental Monitoring Agency (MPEMA) – GNWT has informed DIAND that it would be unable to contribute funds in the first two years of the establishment of MPEMA. A Revised ToR and the GNWT letter are planned for circulation in the next few weeks to be followed by another steering committee meeting in June where this will be finalized. This draft will be forwarded to the parties for consideration. It is now clear that the industry is not as interested in MPEMA and would rather focus on individual Environmental Agreements. David indicated that BHPB has sent a letter indicating that it is no longer interested in pursuing MPEMA.

AGM follow up – David has not had contact with Lutsel K’e since the AGM. The role of DIAND in building capacity requires more than simple provision of funding. The community has to be able to use the money in an effective way.

Environmental Agreement Five-Year Review – DIAND is aware that two organizations have made suggestions about changing the EA and a joint letter from DIAND and GNWT with a focus on MPEMA as a way forward, has been distributed. The Directors mentioned that the Agency’s proposed change to the Environmental Agreement (to set firm delivery dates for the annual monitoring program reports by the company) is minor and easily done. DIAND replied that a meeting option remains possible though the intent of the letter was to notify parties about the review. The Agency indicated that it would likely respond to the joint letter.

Other – DIAND has a project underway on standard monitoring protocols and has commissioned Barry Zajdlik to undertake a project on freshwater monitoring.

Action Item #5 – Staff develop a letter in response to the DIAND comments on the EA Five-Year Review requesting consideration of the Agency’s recommendation.

DIRECTOR WORK PLANNING

Report/Activity	Director Assigned
Caribou and Roads	Kim, Tim, Jaida, Sheryl
LLCF Water Quality Prediction Model	Laura (lead), All
Wildlife Effects Monitoring Program	Kim, Jaida
PDC and Nero-Nema Fish Habitat Compensation	Tim, Bill
Annual Report	All
Waste Rock and Ore Storage Management Plan	Tony, Laura
Environmental Agreement 5 Year Review	All + possible trip to Yellowknife for Bill
Interim Closure and Reclamation Plan section 4	All
Watershed Adaptive Management Plan	Tim, Bill, Laura, Jaida, Tony
Risk Assessments (molybdenum and copper)	Tim, Laura
Aquatic Effects Monitoring Program studies	Laura, Tim, Tony
QA/QC studies	Laura
Sable, Pigeon and Beartooth Licence Application	All
Adaptive Management Workshop	Tim, Bill
Caribou Workshop	Kim

SCHEDULE PLANNING

Next Board Meeting – March 4-5, 2008

Lutsel K'e Director Visit – March 6-7, 2008

Annual Report writing workshop – April 23– 25, 2008 – Nelson B.C.

Meeting was adjourned

Summary of Discussion Approved by

-ORIGINAL SIGNED BY-

Jaida Ohokannoak, Treasurer.