

***Independent Environmental Monitoring Agency
22nd Meeting of the Board of Directors
Yellowknife, Northwest Territories
February 3rd – 4th & 7th, 2001***

Summary of Discussion

Directors

Red Pederson	Marc Stevenson
Peter McCart	Bill Ross
Tony Pearse	François Messier

Staff

Zabey Nevitt	Robin Staples
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Saturday February 3rd, 2001

Meeting called to order by Chair at 8:30 am

Agenda reviewed and accepted.

Information updates

Chair: Red noted that he is now residing in Yellowknife for part of the year and has purchased a computer. He has been visiting the office regularly and meeting with a number of people (e.g. President of the Kitikmeot Inuit Association (KIA)). He also met with Scott Williams of BHP, to discuss the upcoming years workplan and budget. Red mentioned that during the meeting, Scott said he liked the improvements being made to the resource library and the overall office set up. Red also mentioned that he is quite happy with the new office location and noted that he would like the society members to feel free to use our facilities. Red briefly noted that Gerry Atatahak from BHP and KIA has been awarded an honorable mention for the BHP environment & community award for his work on the Inuit project and others. In addition, Red mentioned that he and the manager would be available for more meetings with communities and / or their respective land & environment committees, regulatory agencies and BHP.

Bill: Has reviewed meeting minutes in addition to the other agency materials that have been sent to him. In addition, outside his duties as a board member, Bill organized a meeting to discuss the formation of a NWT section of the Western & Northern Branch of the International Association for Impact Assessment and met with the new person in charge of the Arctic Institute out of the University of Calgary who indicated her interest in the incorporation of traditional knowledge into environmental management at Ekati.

François: Reviewed the Operating Environmental Management Plan (OEMP) and other agency documents. He also participated in the Bathurst Caribou Management Planning Committee public workshop. He mentioned that all the political leaders present at the workshop endorsed the Bathurst Caribou Management Plan and noted that there was good representation from aboriginal groups and industry members. There was also strong participation from elders. François then described the concerns arising from the workshop briefly and noted that tailings from old and new mines was often raised as a threat to caribou in addition to the effects of outfitters on the male caribou population.

Following François's update, there was a brief discussion on the Agency's recommendation regarding cumulative effects on caribou. It was determined that progress is slowly occurring and monitoring is the next step following co-management. The mining companies' role in this regional monitoring of caribou was also discussed.

Tony: Noted that he has been reviewing seepage survey data in addition to other Agency documents sent to him.

Pete: Reviewed the OEMP and Aquatic Effects Monitoring Program (AEMP) documents and briefly discussed the article that John Witteman of BHP sent him regarding reclamation of fish habitat using fertilizers.

Marc: Noted that he has been reviewing the OEMP and Sable, Pigeon & Beartooth pipe documents to determine where traditional knowledge could best be integrated. He also mentioned that he has met with Chris Hanks recently to discuss traditional knowledge work that BHP is involved in. Marc also briefly discussed a paper written by an aboriginal consortium for the Canadian Environmental Assessment Agency (CEAA).

Staff Update

Zabey: Briefly summarized the detailed staff activity report that was provided to the Directors, which described the activities of the staff since the last board meeting. Zabey went into further detail on some of the items on the report including: action items arising from last meeting, the Fox amendment, website training, relocation of the office, BHP – DFO court proceedings, the Cumulative Effects Assessment and Management Framework (CEAMF) workshop, and changes to the resource library.

Conference call with Tim Byers (Environmental Consultant - Yellowknives Dene Representative)

Following introductions, Tim noted that he has had communication problems with BHP regarding an information request on the Sable, Pigeon, & Beartooth pipe development. He made the information request after the Mackenzie Environmental Impact Review

Board (MVEIRB) public registry was closed and has been unsuccessful in resolving the problem.

A general discussion on the above issue then took place and the following points were made:

- There has been no subsequent correspondence between Tim and BHP since the November 11th letter to Tim from BHP.
- Tim on behalf of the Yellowknives, expressed concerns about the review process and noted that there appears to be some room for improvement regarding the structure and timing of the public hearing process.
- There will be a second chance to have any outstanding questions answered by BHP during the public hearing for a Type “A” water licence.
- Tim’s intentions of submitting the information request to the MVEIRB after the registry was closed was in an effort to address the issues before the Mackenzie Valley Land and Water Board begins their review of BHP’s Type ‘A’ water licence application for the proposed development.

The Directors noted that they would bring this issue up with BHP personnel and hopefully this could lead to a meeting between representatives from BHP & the Yellowknives Dene.

Action Item #1

Bill to discuss (at the upcoming workshops) with Chris Hanks of BHP the concerns of Tim Byers (consultant with the YK Dene).

The Directors also noted that they would meet with MVEIRB personnel to discuss concerns regarding the public hearing process expressed on behalf of the Yellowknives.

Action Item #2

Zabey to invite a representative from the MVEIRB to the next board meeting.

Administration

Minute Preparation Process:

- General discussion regarding the issue of letting other participants edit the sections of the minutes that they were present for.
- The Directors approved sending technical sections of the minutes to meeting participants for clarification, after the Directors have had the first review.

Signing authority:

- Red noted that he would like to pass on signing authority of more routine office business to the staff manager.
- The Directors approved this change with the consideration that decisions by the board and policy type decisions would still be under the Chairs name.
- It was determined that the Chair & manager will further address the specifics of this change in signing authority.

Website:

- A brief discussion took place regarding the Agency's web access difficulties, including problems with the domain name and compatibility with the Netscape browser.

Action Item #3

Robin to continue working on updating the website and addressing the problems discussed above.

Treasurer's report

Directors reviewed expenditures and budget projections.

François noted that as of February 1st it is projected that approximately 65% of the budget has been spent and that the spending pattern this year fairly closely matches that of last year.

A general discussion then took place regarding proposals for needed expenditures. A projection device (for video/power point presentations), lap top computer and professional development (i.e. training) for staff were discussed among other proposals as potential needs.

Staffing (In camera)

Staffing (Out of In Camera)

Directors noted that they are happy with the work of the manager and indicated areas for improvement.

Motion: to lift probationary period for manager and offer of permanent employment as per conditions of communication dated July 19th, 2000, response dated July 20th, 2000, communication dated July 21st, 2000 and response dated July 30th, 2000.

Motion moved, seconded and passed this 3rd day of February 2001.

Annual report planning

General discussion and brief follow-up on last years annual report recommendations.

- No official response from BHP on Agency recommendations, but some appear to be partially accepted through the company's actions (e.g. implementation of geochemistry work as per recommendation #15). This initiated a brief discussion regarding geochemistry work in Panda and Misery pits and in the OEMP.
- Discussion on BHP's annual report and how it should address Agency recommendations.

- Discussed and noted that Agency recommendations #6 and #10 have not yet been formally addressed by BHP and thus, in accordance with the Environmental Agreement, they must have been accepted.

Workplan & schedule for drafting 2000-2001 annual report:

- Zabey introduced the draft work plan and it was discussed.
- Directors noted that the level of staff input proposed was significantly greater than in past years.
- Directors noted that they would like to be responsible for more of the first draft of specific areas involving technical expertise, and for the staff to coordinate the overall layout and writing of the report.
- Content & structure from this year to last should be fairly similar to allow readers to easily track and compare changes.
- Discussion on balancing the technical and plain language content of the report while considering the length of the report.
- Discussion on the topic of revegetation and reclamation and it was noted that it should be represented more heavily in the 2000-2001 annual report.
- Brief discussion on table of contents and what other topics should be included (e.g. fish habitat compensation fund, CEAMF)

Action Item #4

Zabey to determine the status of the various Fish Habitat Compensation Fund projects, and DFO analysis of previous fish outs.

The Directors held off delegating annual report topics to specific individuals until Wednesday when Zabey will provide them with a revised workplan and schedule.

Improved communication with Agency Society Members

Red noted that a letter was sent to all society member communities on January 12th, 2001 regarding the Agency visiting their communities on request.

General discussion regarding community consultation. It was agreed that the Agency would leave it up to individual communities to decide when it is most convenient for them to meet with the Agency.

***Motion:** In recognition of the time required for the Chair to be involved in community consultation, office based activities and meetings with the manager and principles of the members of the Agency; the following allowances will be made for the Chair's time. Up to eight days per month at a standard rate of \$150 per day for room accommodation, and this allowance may be backdated to December 1st, 2000.*

Motion moved, seconded and passed this 3rd day of February 2001.

Workplan & Budget Negotiation Update

Red reported on his workplan & budget meeting with Scott Williams and noted that Scott found the workplan & budget to be reasonable aside from the addition of a third staff member. Red also passed on Scott's special mention on the quality of the workplan and budget and his appreciation for the work done by François.

Further discussion then took place on the budget, the contingency fund and the changes that would be made to the workplan & budget before it was resubmitted.

Action Item #5

Zabey to make necessary changes to workplan & budget and send revised version to Scott Williams.

Beartooth, Pigeon & Sable Extension EA Update

Zabey noted that there is little to report as the MVEIRB is still considering its decision.

General discussion on whether the recommendations from MVEIRB have to be considered by the Mackenzie Valley Land and Water Board (MVLWB) under the Mackenzie Valley Resource Management Act.

CEAMF workshop

Zabey noted that this initial workshop focused on information sharing systems (i.e., sharing data). Day one included a number of presentations on various research programs and day two was largely a discussion on how this data could be integrated into management frameworks. The conclusion from the workshop was that a "champion" agency is needed to carry this initiative forward.

General discussion by the Directors regarding the integration and compatibility of the data from the various research and monitoring programs. The Directors also noted the need for a stronger action plan to be developed by this group and expressed concern about the apparent lack of funding for the initiative after March 31.

Zabey noted that more information on the initiative might be available at the next CEAMF workshop that is scheduled for Thursday February 8th.

Diavik Monitoring Board Update

The Directors reviewed the status report on the Environmental Monitoring Advisory Board that was provided by Hal Mills, a consultant who is facilitating the establishment of the Advisory Board.

General discussion on the status of the Advisory Board including the representative structure, its mandate and how the Independent Environmental Monitoring Agency and

the Environmental Monitoring Advisory Board could potentially coordinate its efforts (e.g., standardized monitoring requirements).

The Directors noted that the formation of the working group should be followed closely and that our Agency should express to the Advisory board its desire to cooperate and meet.

Action Item #6

Zabey to send a meeting invitation to representatives from the Diavik Monitoring Advisory Board.

Meeting adjourned for the day.

Sunday February 4th, 2001

Meeting began at 8:30am

Traditional Knowledge (TK) Meetings & Follow-up

Marc reviewed the following steps that he proposed for the development of a process to enhance the contributions of Traditional Knowledge to BHP's operations, management and planning.

Proposed Steps:

1. Independent analysis & identification of potential and relevant contributions of TK to BHP's operations, management and planning.
2. Consideration of Aboriginal communities recommendations and insights in incorporating TK into BHP activities.
3. Table respective lists to respective organizations for approval & refinement.
4. Meet with BHP to negotiate & discuss priorities and develop a list of common areas and issues to be taken to communities.
5. Take list to communities for feedback & input and revise accordingly.
6. Establishment of TK working group and development of programs & plans for incorporating TK on specific issues identified.
7. Program implementation.

The Directors discussed the proposed steps and had the following comments:

- There was some concern that aboriginal members may not be involved as much as they should be at the start of this process and thus early meetings should be set up to meet with community leaders and TK working research teams.
- As projects often diverge, it is essential that BHP and a TK working group cooperate to work on something that it is mutually beneficial to the company & communities alike.
- It would be useful to document how TK is being implemented at Ekati™ and what TK studies would be valuable in the future (e.g. knowledge regarding the sable road). Wolverine monitoring is a prime example of where aboriginal

people have had a significant lead role with respect to implementation of TK at Ekati™.

- There is a need for continuity of elders who participate in workshops and site visits. As the available pool of elders may be limited, other community members who have valuable knowledge of the land should be asked to participate (e.g. experienced hunters).
- The Agency could act as a facilitator for the TK working group, but implementation of TK would be outside the role and mandate of the Agency.
- The problems with funding of TK projects needs to be addressed.

Overall the Directors were in general agreement with the steps proposed.

Seepage Survey 2000

Tony led a discussion on seepage & the Enhanced Monitoring and Confirmation Plan. He focused on the June – September results.

- Significant differences between reference lakes and seepage stations (018 & 022) were noted when pH & conductivity as well as pH & sulphate levels were compared.
- Increasing metals were also noted in seeps.

These results supported the interpretation that sulphide oxidation is the source of the acidic drainage and may also be causing increasing metal levels.

Tony also noted that Darren Unrau, the DIAND inspector, mentioned to him that Jim Millard of BHP is intending to hold a one-day seepage workshop following the release of all the Seepage reports.

Action Item #7

Directors to review upcoming seepage reports and determine if Kevin Morin should be contracted to analyze the data and/or attend a seepage workshop.

Independent Monitoring Agency Paper

The Directors reviewed the latest draft of the paper and continued a discussion from last meeting regarding the major principles, mandate, funding and structure for a monitoring agency that could effectively deal with both specific development effects and cumulative effects. The Diavik Monitoring Advisory Board model was also discussed. The following points are those raised during the discussion regarding the proposed new “Agency”.

- It should have a large role in giving advice on environmental management (e.g. monitoring programs) to proponents throughout the development life; this should include the early stages, e.g. for mining developments, the exploration phase.
- It should be independent and have adequate funding.
- It should also play a public watchdog role.

- It should have a large role in regards to cumulative effects management and monitoring (i.e. monitor numerous projects).
- It should have accessible independent technical support.
- The individuals that make up this new “Agency” should be non-representative appointees that are not employees of the proponents or government.
- There should be a cooperation and collaboration (e.g. information sharing) with members and other agencies.
- Concept of resource (valued ecosystem component) monitoring verses project specific monitoring still needs to be addressed in the paper.

The Directors decided to continue this discussion on Wednesday after Bill and Tony have had an opportunity to revise the existing draft.

BHP Reports

General discussion by the Directors on the overall reporting quality of the Aquatic and Wildlife reports for 2000.

- Noted that there are inconsistencies between what is going on in the field and what are in the environmental management plans.
- Desire to see updated and detailed workplans & reports that include more of an emphasis on problem identification and mitigation.
- The move towards including less hard data in the reports is a concern. A greater level of technical content is desired.
- Inappropriate trend analysis. Analytical analysis has not been fully utilized considering the quantity of data.
- Data is not being integrated well between the AEMP, WEMP, Kodiak and other special projects.
- Appear to be problems with reporting consistency (e.g. baseline data changing from year to year).

Wildlife Effects Monitoring Program (WEMP)

François led a discussion on the major issues & concerns that the Directors may want to discuss at the workshop regarding the 2000 WEMP.

- Waste management is a concern (e.g. grizzly cub kill at Misery Landfill).
- Report generally better written than last year although there are still some questions regarding the level of analysis and the downplaying of problems and impacts.
- The issue of nursery groups potentially staying further away from the mine was not adequately addressed.
- Some concern regarding the level of habitat revegetation and reclamation.
- Monitoring changes to examine cumulative effects not adequate.

In respect to the proposed changes to the WEMP there were a number of concerns that were expressed by the Directors.

- The move to monitor traffic internally as part of the safety program rather than as part of the WEMP is of concern due to the potential loss of information from the

WEMP. Traffic volumes as well as speed violations should be reported in the WEMP to determine impacts on Caribou and other wildlife.

- There may be consequences of moving to a focal study (i.e. less monitoring in other areas).

Aquatic Effects Monitoring Program (AEMP)

Pete led a discussion on the major issues & concerns that the Directors may want to discuss at the workshop regarding the 2000 AEMP.

- There appears to be a lack of information on metals for Kodiak Lake. If these data were collected they weren't reported. It is recommended that these data be collected for next year and reported if it was collected this year.
- There is a need for more winter data and monitoring as metals increase in concentration during the winter months.
- The reduced abundance of zooplankton in Kodiak Lake is a major concern and the 2000 reports offer no explanation for the population crash. It appears that a biological response is occurring in Kodiak Lake, and possibly downstream.
- It was noted that as Kodiak Lake is immediately downstream of the existing project, it is an important lake to study aggressively as it is an exaggerated example of what impacts may occur as a result of the project.
- Concern with sampling and monitoring coordination between BHP and Diavik.
- There are data problems in the AEMP (e.g. changes in baseline figures, zinc data).
- There are toxicity concerns in Long Lake and it appears that copper levels are not responsible.

Action Item #8

Robin to acquire Simone Crocquet de Rosemond's Masters Thesis regarding Toxicity of Processed Kimberlite Effluent from Ekati™ on Freshwater Zooplankton.

General discussion on the proposed changes to the AEMP.

Directors noted their willingness to drop the M1 station at Misery ***IF*** a suitable control station could be determined to replace it. The use of DIAVIK's controls may be appropriate. However, coordination between the companies would be required to ensure data could be cross-referenced.

Wednesday February 7, 2001

Meeting began at 8:30am

Bill reported on his meeting with Chris Hanks and noted that BHP will not be responding further to Tim Byers (environmental consultant for the Yelloknives Dene) but is very willing to communicate with the aboriginal groups directly regarding their concerns. Staff agreed to pass this message on to Tim Byers.

Feedback on the BHP Environmental Workshops

Wildlife:

- Directors and others at the workshops felt that the report was not balanced as it downplayed the problems with the WEMP and impacts on wildlife that are occurring (e.g. wolverines, grizzly).
- Due to length limitations for the report, certain topics and data were not fully presented.
- The participation by elders in the wildlife portion of the workshop was positive.
- There is a need to standardize data collection, as it appears that there is a lack of compatible data collection between industry & government.
- Problems with waste management at the mine site, especially in the satellite camps, must be resolved immediately.
- Interest in having industry and regulators collaborate to deal with cumulative impacts (e.g. wolverine impacts at both BHP & Diavik) was a positive aspect of the workshop.
- BHP and the department of Resources Wildlife and Economic Development (RWED) should be praised for some monitoring improvements noted in the WEMP.

The Directors and staff also discussed the recommendations that BHP personnel agreed to during the wildlife section of the workshops.

- BHP will report traffic volumes along Misery & Sable haul roads.
- BHP will report compliance of speed limits along the Misery haul road.
- BHP will address problems with waste management by increasing the number of landfill inspections, especially at the satellite camps. BHP will also keep reports on wildlife habitation.
- Vegetation survey data will be collected along the Misery haul road and baseline data will be collected along the Sable road.
- Wildlife personnel will collect data on the encounter rate of caribou with trucks and the road along the Misery road.

General discussion by the board on the caribou found dead in King Pond and the reporting process of wildlife mortalities.

It was noted that a number of aboriginal groups at the workshop appeared concerned over the death of caribou at King Pond and that RWED is responsible for investigating wildlife mortality at the mine site.

Action Item #9

Zabey to invite representatives from RWED to next Board Meeting and ensure we receive a copy of letter from RWED to BHP regarding carnivore problems at Misery.

The Directors noted that in order to complete their review of the 2000 monitoring studies and workshops the following information is required.

- Traffic Volume for the Misery road from April 15th to October 15th, 2000.

- Details of caribou observations (1999) during aerial surveys along the proposed route of the Sable haul road.
- Indications (for example tracks and faeces) of carnivores (including grizzly, wolves and wolverine) at the landfill site.

Action Item #10

Zabey to send workshop follow-up information requests to Scott Williams.

Aquatics:

- Problems were noted with data management and it was recommended that BHP review its database (e.g. complete data sets, precision, detection limits).
- Quality and suitability of historical data were questionable in some portions of the reports (e.g. Kodiak Lake Monitoring Program).
- Inappropriate trend analysis for the Panda Diversion Channel project (e.g. substrates). Data from every year should be presented and compared appropriately.
- Some baseline data (e.g., phosphorous for Kodiak) are not appropriate as they are not necessarily pre-development data. Baseline data for several variables may need to be reviewed as development was occurring or had occurred at the site when baseline tests were being carried out.
- Objective and quantitative method for trend analysis in the AEMP is required (e.g., regressions).

The Directors and staff then discussed the recommendations that BHP personnel agreed to during the aquatics section of the workshops.

- Metal data for Kodiak Lake will be provided.
- Water quality data for Grizzly Lake will be provided.
- A snow survey report will be completed shortly and the data will be available before the report is released if desired.
- The period of contamination in Kodiak Lake will be specified.
- Data quality will be assessed and detection limits will be reviewed.

Other issues and general comments:

- BHP and its consultants were not forthcoming in addressing problems and environmental impacts that have been observed at the mine site, but rather focused only on the optimistic positive results.
- Very little discussion of cumulative effects.
- Aboriginal peoples' requests were not as well received from BHP, as were requests from Agency Directors or other regulators who may have more influence on the environmental management of the mine.
- As the length of the workshops was shortened, there was significantly less time for aboriginal and elder dialogue.
- There appears to be a need for a clear communication protocol at the workshops to allow all participants, including aboriginals, to effectively express their concerns.

- Aboriginal groups should be more integrally involved in environmental monitoring programs at the site.
- A change is required in regards to the focus of the workshops. Preliminary technical discussions prior to workshops may free up time and allow for more discussion on community concerns and broader environmental issues.

The Directors briefly discussed some initial comments that should be included in the letter to BHP regarding the monitoring studies and workshops.

- Much of the analysis and conclusions reached in the reports were optimistic and did not necessarily represent the true environmental condition at Ekati™.
- Workshop went fairly well and BHP personnel did appear receptive to incorporate many of the recommendations.
- BHP's willingness to work with other agencies and industry in order to share data and address some cumulative effects issues is a positive step.
- Inconsistencies in historical data and data management for both wildlife and aquatic reports are a concern.
- There were not enough opportunities to discuss all the relevant issues and concerns at the workshops.
- There is a need for more aboriginal people to be involved in monitoring at the site in order to more effectively apply TK to environmental management planning.
- The Agency is willing to meet BHP and offer recommendations to address the shortcomings of the monitoring studies and the workshop process.

Action Item #11

Zabey to draft Letter to BHP regarding Agency's feedback & comments on the workshops after receipt of specific comments from BHP.

Red noted that during the BHP environmental workshops, Brenda Parlee (Lands & Environment Manager with the Lutsel K'e Dene band) mentioned that the Wildlife, Lands and Environment committee would like to meet with the Agency in March.

Action Item #12

Zabey to organize details for meeting with the Lutsel K'e Wildlife, Lands and Environment Committee in March.

Fox Pipe Amendment

The Directors discussed the Fox Pipe amendment and land treatment package submitted to the MVLWB.

- Brief discussion on metal uptake (e.g., cadmium) in vegetation due to land treatment and what criteria should be used to determine satisfactory metal levels.
- BHP personnel strongly noted in the workshops that the only difference from the initial application was the method for water treatment (i.e. land treatment).
- Concern regarding waste rock impacts and seepage. No new information on this topic was given in the amendment or at the workshops.

- Modifications to the monitoring program were discussed (e.g. changes to the Surveillance Network program).
- Suggested that the company do basic monitoring of the land treatment process at Misery to help predict impacts and to allow for improvements at Fox.
- Reference monitoring of metals in plants should be carried out and additional literature should be researched.

Action Item #13

Directors and staff to review Fox Amendment information package and determine if letter to MVLWB is warranted.

Independent Monitoring Agency Paper

The Directors discussed the two versions drafted by Bill & Tony and focused the conversation on the major principles that were to be expressed and how much detail the paper would contain.

Action Item #14

Directors and Zabey to continue drafting and editing the Independent Monitoring Agency Paper based on the agreed to principles.

Marc's Paper on Traditional Knowledge

Marc briefly outlined his short paper on Traditional Knowledge and noted a number of the major issues and concerns that it addressed:

- The current process of incorporating TK into operations at BHP has created a number of systematic barriers and clearly an alternative approach is required.
- The process of effectively incorporating TK into BHP operations should be the focus of study rather than products that result from TK studies.
- There is a definite need for the establishment of a Traditional knowledge working group to address concerns of aboriginal people in respect to TK.

There was a general discussion between directors on whether to release Marc's Traditional Knowledge paper or not. Directors also commented on how TK was received and used at the workshops and in general at Ekati™ in addition to discussing the various methods of starting up a TK working group again.

Action Item #15

Marc to meet with Aboriginal groups & Chris Hanks of BHP to discuss Agency annual report recommendation #6 and the reforming of the TK working group or a similar body.

Annual Report Planning

The Directors reviewed and approved the revised annual report workplan and table of contents. Specific portions of the annual report was then delegated to individual Directors and staff members depending on their area of expertise.

Action Item #16

Directors and staff to proceed with revised annual report work-plan as approved by Directors.

Next Board of Directors meeting: March 30th – April 1st, 2001

Board meeting adjourned.

Approved by

Red Pedersen, Chair