

***Independent Environmental Monitoring Agency
27th Meeting of the Board of Directors
Yellowknife, Northwest Territories
February 3rd – 7th, 2002***

Summary of Discussion

Directors

Red Pedersen	Tim Byers
Peter McCart	Bill Ross
Tony Pearse	François Messier
Bob Turner	

Staff

Zabey Nevitt	Robin Staples
--------------	---------------

February 3rd, 2002

Meeting called to order by chair at 8:30 am

Agenda reviewed and accepted.

Information Updates:

Red: began by noting that there is increased exploration near Kugluktuk, for example, Winspear and De Beers are actively staking in the area. He also discussed his ongoing commitment to be in Yellowknife for the Agency for approximately 100 days per year. Red expressed his uncertainty on the usefulness of his extra time spent in Yellowknife, as for example only one aboriginal society member really took advantage of him being in town more often.

A brief discussion followed Red's update and it was noted by the other Directors and staff of the Agency that Red's presence in Yellowknife has improved communication with BHP Billiton (BHP B), provided staff with additional support and has been looked at by society members as a positive step towards improved community consultation.

Tim: mentioned that in follow-up from the last board of Directors meeting, he will not be working for the Yellowknives Dene as a private consultant for matters relating to BHP B. This decision should eliminate any potential conflict of interest between his work with the Agency and as an independent consultant for the YK Dene.

Bob: noted that he attended a Cumulative Effects Assessment and Management Framework (CEAMF) workshop in January. The traditional knowledge (TK) session of the workshop was particularly useful as it discussed aspects of how TK can be effectively implemented by industry. Bob also attended a meeting with Zabey relating to the five-year review of the environmental agreement. The three signatories of the agreement were

present (i.e. DIAND, BHP B & GNWT) and the review process was discussed. Some aboriginal concerns were also brought up at the meeting (e.g. effective aboriginal participation during the review).

Bill: noted that he was involved, at the request of DIAND, in the January 29 -31 CEAMF workshop and steering committee meetings as a resource person for DIAND. He mentioned that Bob's participation in the workshops was instrumental in regards to having industry incorporate TK in environmental management. The Regional Monitoring Agency and its potential role in the North Slave region were also discussed at the workshop. Bill also noted that while in Calgary he discussed the MVLWB's review process of the Sable, Pigeon and Beartooth applications with John Donihee (MVLWB's lawyer). It was noted that MVLWB's review process, with its focus on information request and response loops rather than technical committees, is similar to one used by the National Energy Board (NEB). It was also noted that information requests that are very specific tend to be the most effective and more difficult to evade.

Pete: mentioned that he performed a brief review of the aquatic and special effects monitoring programs (AEMP / SEMP).

François: noted that he has reviewed both the draft and final report of the Wildlife Effects Monitoring Program (WEMP). He also reviewed the minutes from the last board of Directors meeting in addition to performing some background research on detection limits and the statistical uncertainty that can be associated with them. As the lab certificates from station 1616-30 are still outstanding, the background research on measurement errors remains preliminary. François also mentioned that as an independent wildlife biologist out of the University of Saskatchewan, he was carrying out a review of wildlife resources and potential effects (e.g. Diavik's wildlife monitoring program) for the Environmental Monitoring Advisory Board (EMAB).

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: information requests to BHP B regarding the Sable, Pigeon & Beartooth applications, Environmental Agreement review meetings, review of the AEMP, SEMP and WEMP reports, preliminary planning for the 2001 – 2002 Agency Annual report and drafting of the 7th issue of the Ekati Monitor.

Business arising from last meeting:

Directors briefly reviewed and discussed the action items arising out of the last board meeting. It was noted that the DIAND inspector had recently resigned and the Directors expressed their dissatisfaction over the continuing absence of an inspector for the mine and winter road. It was noted that this is a critical time to have a full time inspector performing thorough surveillance on these files as road construction at the mine is ongoing (Fox and Sable), and the Tibbitt to Contwoyto winter road is beginning its winter operations.

Action Item #1

Zabey to draft letter to Bob Overvold, Regional Director General of DIAND regarding the Agency's concern that inspections of the Ekati Diamond Mine™ are not being carried out on a regular basis due to the recent departure of the inspector responsible for the project.

Other action items discussed included: the establishment of a schedule for receiving traffic reports from BHP B for the Sable and Misery roads, information requests regarding the Sable, Pigeon and Beartooth development applications, and Dr. Sprague's review of water quality limits of major ions report. The previous board meeting minutes were also reviewed and approved.

General Updates

Zabey briefed the Directors on a number of mine site activities and noted the following:

General Mine site

- Winter water quality sampling has not yet taken place at the mine site due to the lack of snow and the resulting unsafe snowmobile conditions.
- Construction has begun on the underground decline and pads at the Koala North pipe.
- Dissolved oxygen workshop at the mine site will likely be held in late March 2002.

Sable, Pigeon and Beartooth

- Information requests have been sent to BHP B (through the MVLWB) and BHP B's responses have been received. Land treatment as a contingency for Sable was not accepted by the MVLWB as being part of the original application and will not be addressed in the licencing process.
- Construction of the Sable road is just past the lease boundary at this point in time.
- Aquatic baseline work for the Sable, Pigeon & Beartooth drainages and proposed changes to the AEMP has been requested of BHP B and is likely to be presented at the upcoming annual workshops.

Fox

- Fuel tanks for the Fox development have been built and hydrostatic testing completed.
- Water licence amendment and fisheries authorizations for the Nero-Nema stream crossing have been approved. Construction of the bridge has begun using an ice pad as a staging area for building.
- Dewatering plan for Fox Lake has been recently approved by the MVLWB.
- Mining aspect of the water licence amendment to include Fox pipe appears to be nearing approval although the security provisions need to be finalized.

Action Item #2

Staff to acquire the MVLWB's reasons for decision for approving Fox Lake dewatering.

Directors discussed their concerns with having the fisheries authorization approved prior to agreeing on which specific compensation measures are required. The determination of which habitat type is limiting in the Nero – Nema stream also appears to be somewhat arbitrary.

Directors also discussed the water related security requirements for Fox and determined that further information was needed on what specific activities it covers.

Misery

- An acoustic traffic monitoring system for the Misery road is in place but not yet working as designed. A similar system will be set up on the Sable road once the monitoring system has been perfected.
- Negotiations between DFO and BHP-B on Carrie and Desperation fisheries authorization are ongoing. Although the mine plan for Misery has the potential to go underground and produce less waste rock, the fisheries authorization will still include both water bodies in case the underground mine plan turns out to be unfeasible. The location of Carrie dam will also likely be moved if the mine plan changes.

Winter road

- The Tibbitt to Contwoyto winter road is to become a joint venture between BHP B, Echo Bay Mines, and Diavik. A project description has been submitted to DIAND.
- Echo Bay Mines will remain the manager of the road, BHP B will be addressing most of the regulatory and consultation requirements and Diavik has agreed to take the lead on baseline studies along the winter road route.
- De Beers and Tahara diamond mines, may become more involved in the joint venture as their projects proceed.

Subsequent to Zabey's update the Directors had a general discussion on the Tibbitt to Contwoyto winter road and the following was noted:

- The cumulative effect of the road is closely tied to other nearby activities including Ekati and Diavik diamond mines (e.g. wolverine losses).
- Vegetation and habitat mapping along the road should be compatible with other projects so that it can be compared at regional level. Using baseline information, a determination of how much and what types of habitat have been lost should be performed along the winter road.
- Traffic monitoring during operation AND following the closure of the road to haul trucks should be increased. It has been noted that public users can cause a significant number of environmental impacts along the road in the spring (e.g. rutting, sedimentation loading).
- Increased access for hunting and fishing, resulting from the winter road has lead to a need for improved waste management monitoring. The documenting and tracking on these types of land uses should be enhanced.

Action Item #3

Directors and staff to determine the MVLWB's review process for the Tibbet to Contwoyto winter road project (joint venture) and provide comments on Land use permit conditions when the application has been distributed for review.

Miscellaneous

- BHP B and Diavik will begin meeting monthly to discuss operational issues such as data compatibility and management.
- BHP B has not yet submitted a formal application for land treatment at Misery.
- The 2001 Seepage and Waste Rock Survey Report is due out in late February.

Directors had a brief discussion on DFO's No-Net Loss and fish habitat compensation policies.

Action Item #4

Staff to invite personnel from the Department of Fisheries and Oceans (DFO) to the next board of Directors meeting to give an update on the fish habitat compensation fund, discuss the future of the Panda Diversion Channel and implementation of the No-Net Loss policy at mine sites.

Preparations for environmental workshops

Wildlife monitoring report

Directors discussed the 2001 report for the WEMP and the following was noted:

- Pleased with the overall quality of data and reporting in this year's report. It is a much improved report and the best one done so far. BHP B appears to be taking a leading role in wildlife monitoring in the north.
- Executive summary very easy to read and helpful. Good attempt in this year's report to discuss problems that occurred over the monitoring period.
- Directors pleased that communication has steadily improved between the company and stakeholders. The opportunity to provide comments early on in the drafting of the WEMP proved to be very useful and led to an improved product.
- Some areas for improvement include: traffic monitoring data, documentation on community input in wildlife monitoring and an improved description of the vegetation surveys that are being performed.

Directors also had a general discussion on data compatibility between BHP B and Diavik's monitoring programs and also with data collected by RWED. It was noted that BHP B is in a position to actively participate and significantly contribute to cumulative effects monitoring and management. Diavik's monitoring program and resulting data do not appear to enable Diavik to be in same position. Watchdog groups such as the Agency, EMAB and other stakeholders have to take a leading role in the review of such monitoring programs, as government regulators do not formally approve them.

The Directors briefly discussed BHP B's proposed changes to the WEMP and the following points were noted:

- The proposed change to reduce the wolverine snow tracking survey and establish scent stations and collect DNA information was determined to be not acceptable. The recent wolverine and food management problems around Ekati and Diavik need to result in a more intensive monitoring program for wolverine in the area, rather than a reduced one. The DNA information that may be collected from the proposed scent stations could prove to be very useful and would augment information from the snow surveys. Using scent stations to collect data has not yet been proven to work for wolverine and therefore it should be done in conjunction with 2 or more track surveys until it is deemed reliable.
- All other proposed changes to the WEMP seem reasonable.

Aquatic monitoring reports

Directors discussed the 2001 reports for the Aquatic Effects Monitoring Program (AEMP) and Special Effects Monitoring Programs (SEMP) for the Panda Diversion Channel (PDC) and Kodiak Lake Sewage Study. The following points were noted:

- The water quality data collected for cadmium almost always appear to be below detection limits and therefore should not be represented in graphs as real data points.
- Dissolved oxygen data, especially the saturation levels, appear unrealistic and potentially unreliable. BHP B should take a closer look at these data.
- Very high water year with a large freshet at the mine site. This likely influenced some data (e.g. PDC fish box data).
- Nitrate levels in the Koala watershed are continuing to rise and were even seen in the Slipper – Lac de Gras stream during freshet.
- The addition of a utilized data set in this year's AEMP is a positive step by BHP B to better manage their data set. (e.g. better define what body of data makes up the aquatic baseline and what data is 'in' and what is 'out'.)

The Directors briefly discussed BHP B's proposed changes to the AEMP and SEMP (PDC & Kodiak) and the following points were noted:

- The proposed addition of under ice winter water quality sampling is a significant improvement to the AEMP.
- Reducing seasonal phytoplankton and zooplankton monitoring may be inappropriate at this time, as BHP B's own analysis indicates that seasonal patterns were not the same from year to year for most lakes.
- Some concern with the proposed change to reduce young-of-the-year (YOY) Arctic grayling sampling in 2002 in the Panda Diversion Channel (PDC). Directors noted that more monitoring appears to be required to determine if YOY in the PDC are growing large enough to compete with YOY growing in natural systems and over-wintering in Kodiak Lake. BHP B has indicated that future monitoring of YOY Arctic grayling in the PDC will be designed with input from DFO and other stakeholders, including the Agency, to address these and other concerns.
- Baseline information for some of the proposed AEMP stations in the Sable, Pigeon & Beartooth development area appears not to have been collected at this time (e.g. water quality baseline data for Logan and HWL1-4 lakes). BHP B needs to collect this information as soon as possible to provide a minimum of two years baseline information for these proposed AEMP sites.

Reclamation monitoring reports

Directors discussed the 2001 reclamation and re-vegetation research reports and the following was noted:

- Little information supplied in reports on metal uptake by vegetation (e.g. cadmium, nickel) and the potential impacts to wildlife.
- Vegetation and air quality monitoring report to be sent to the Agency shortly.

February 4th, 2002

Annual workshops - aquatic effects monitoring programs

February 5th, 2002

Annual workshops - wildlife and reclamation monitoring programs

February 6th, 2002

Meeting with BHP Billiton (John Witteman, Chris Hanks, Derek Chubb, Allison Armstrong)

John, Chris, Derek and Allison provided an update on the various developments and ongoing activities at the site.

Annual Workshops:

- The recent annual workshops on the AEMP, WEMP, TK and reclamation programs were very useful and the discussions positive.
- As aboriginal participation was notably reduced this year, BHP B personnel asked for any advice that the Agency could provide to increase participation in the future.

Agency Directors and BHP B personnel discussed aboriginal participation at the annual environmental workshops and at community meetings and the following was noted:

- A great deal of technical language at the environmental workshops makes it difficult for some aboriginal participants to effectively get involved in the discussions.
- More pictures and diagrams may help explain programs and findings.
- Community meetings need to be approached differently for every community.
- Environmental meetings in the community need to be scheduled on their own and separate from socio-economic meetings.
- BHP B's stance on not providing honoraria for aboriginal participants may need to be reviewed to increase participation. BHP B and aboriginal communities appear to have different views on how impact benefit agreements play a role in this issue.

Main camp / development:

- During the workshops it was noted that Kodiak and Little Lakes have higher than expected nitrate concentrations. One potential explanation by BHPB is that ammonia nitrate may have leaked from the storage area, which is located in close proximity to the affected lakes. This potential cause requires further examination. A leak from the ammonia nitrate storage area will require immediate mitigation (e.g. berm around lined area, bigger storage building). Monitoring for seepage from the airstrip may also be required, as de-icing agents may be a potential cause for higher nitrate levels.
- Another accommodation wing is being brought up to site this winter.
- 80 million litres of fuel will be coming up the winter road this winter, to be split between Koala, Fox and Misery operations.
- Loads on winter road are approaching full weight (75% of weight).
- A dust suppressant that was approved by the DIAND inspector will be used in the summer months along heavily used roads around main camp.
- At any one time there are approximately 500 people at main camp and approximately 130 at Misery.

- Thermistors have been placed in the centre of the Panda waste rock pile and in the Panda toe berm.
- The helicopter pad is being moved just south of Buster Lake.
- A helicopter is going to be used for winter water quality and dissolved oxygen sampling as the snow pack is still too low for safe snowmobile use.
- Old camp is to be reclaimed this summer (including buildings and fuel tanks).
- An extra metre of filter material has been added to dyke C, and tailings are currently being discharged into Cell C. BHP B is still planning on using Cell A.
- Tailings field characterization study is ongoing and should be completed some time this year.
- As noted in the workshops, the landfill relocation issue will be discussed further at follow-up meetings with all the stakeholders including the Agency. It will be relocated to an area where it will be able to be covered on a regular basis. The existing landfill will likely be covered in April.

Directors requested that BHP B circulate the proposed plan for relocating the landfill prior to the meetings.

Koala North:

- Koala North underground development will begin following the stripping of one more bench. It is expected that mining of kimberlite ore will take approximately another one and one-half (1.5) years.
- For underground mining, a saline solution is required to get through the permafrost. The brine (salt sludge) that is a by-product of this process will be placed in the Panda-Koala waste rock pile.
- Additional buildings will be constructed around the Koala North development (e.g. waste management, offices, truck warming shed).
- A gravel pad will be placed between Koala and Koala North developments. During reclamation of these pits, this gravel pad will potentially provide fish spawning and foraging habitat.
- As more explosive magazines are required for Koala North, the existing road near Panda will need to be widened in order to bring in a Sea Can to store extra magazines.

Fox:

- Construction of the bridge at the Nero-Nema stream crossing has begun using an ice pad as a staging area for building.
- The fisheries authorization for the Nero-Nema stream crossing has been approved. As part of the habitat compensation plan under this authorization, spawning habitat near the stream crossing will need to be created (e.g. infilling with fine substrate).
- Spawning habitat was determined to be the limiting habitat in the stream according to the microhabitat assessment performed by Dillon consulting.
- The approved dewatering plan for Fox Lake will commence in mid February.
- The fuel storage area was placed in a location that was set back from water bodies and in a place that would not be covered by waste rock.
- Fox portal road will be reclaimed in this upcoming summer.

- As detailed in the mine plan, a great deal of pre-stripping is required for Fox before any mining can take place (i.e. actual mining of Fox a few years away).

Misery:

- Schist and granite waste rock is being segregated (e.g. layers of five metres granite and ten metres of schist).
- The traffic monitoring system along the Misery road is in place but not yet working as designed. It is located south of the turnoff to the airport and old camp.

General discussion on seepage monitoring at Misery and the following was noted:

- Potential for seepage at the kimberlite ore and waste kimberlite stockpiles.
- Kimberlite ore stockpile situated on permafrost granite pad.
- Coarse rejects pile at main camp also showing interesting seepage results and BHP B would like to focus their monitoring on these locations. Coarse rejects are not situated on permafrost granite pad.

Sable, Pigeon & Beartooth:

- Sable road construction will continue to at least the Pigeon stream this winter in order to have the culvert placed in the winter.
- Caribou ramps will be constructed along the road where possible.
- BHP B has responded to the information requests submitted by numerous stakeholders (including the Agency) on the Sable, Pigeon & Beartooth land use permit and water licence application. BHP B is concerned with the process and timing set out by the MVLWB, but will continue following this process. BHP B felt that the third round of requests appeared to be quite large and several of the questions have been answered previously.

Following BHP B's update for Sable, Pigeon and Beartooth the Directors noted that the information requests submitted by the Agency were for new information that had not yet been addressed. The Directors also noted that BHP B has committed to building low profile roads around the site and expected this to be followed through for the access and short haul roads around Sable, Pigeon and Beartooth.

Miscellaneous:

- BHP B will submit a proposed process for the five-year review of Environmental Agreement to the other signatories shortly. The minutes from last Environmental Agreement review meeting will be distributed to those who attended.
- In response to a question regarding flocculant and coagulant toxicity testing BHP B personnel noted that the only testing that takes place for the Long Lake tailings facility is the acute toxicity testing on Cell E water once a year.
- An environment committee at the site made up of a wide range of interested mine staff has been created. Members participate on a voluntary basis and there are three committee groups (i.e. one for each shift of workers) that meet approximately four times a year. The committee recommended that the Agency and other stakeholders in the project give a short presentation on who they are and what their role is in respect to the mine.

Agency Directors agreed that giving a short presentation to the committee would be a good idea and would try and tie this into the next site visit.

Meeting with Environment Canada (Anne Wilson)

Anne gave an update on the proposal to study residual and chronic effects of flocculants and coagulants in aquatic systems. The following points were noted:

- An application for funding has been submitted and Environment Canada, DFO, DIAND Water Resources, GNWT, University of Saskatchewan and BHP B have all offered support (financial or logistical).
- DFO will fund the literature and industry data review that is to be completed by March 31, 2002.
- Analytical work to determine methodology for testing field samples will be the next phase of the study. Syncrude, as well as the University of Saskatchewan toxicology centre, have done some work in this area.
- A laboratory and testing-based evaluation of the fate and persistence of coagulant polymers in the aquatic environment is the final phase of the study.
- This issue is a broad one and has implications for soil and water treatment. Some research has been performed to look at the breakdown of these polymers in soils, but to date very little research has been performed on residual concentrations or breakdown by-products in aquatic environments. This study is a priority for Environment Canada.
- There is potential for these polymer residuals to pass through the dikes in the Long Lake tailings facility and enter downstream water bodies. Currently acute toxicity testing (96 hr LC 50) takes place for Cell E effluent, but no chronic toxicity testing is occurring, which is where residuals from the polymers would have a notable effect. To date, no acute toxicity tests for Cell E effluent have failed.

Following Anne's update, Agency Directors expressed their strong support for the research proposal. They also noted that Leslie Lake might be a place where these effects would be first noted in the receiving environment and should therefore be added to the AEMP.

Agency Directors and Anne then had a general discussion regarding detection and quantitative limits (e.g. reliability of data immediately above detection limits). It was noted that such analytical limitations make interpreting the data more difficult and perhaps better QA/QC can be used at BHP B for some metals. An independent lab could also be used to confirm values on occasion.

Meeting with John B. Sprague (conference call)

Agency Directors and John Sprague discussed his review of the AMEC paper regarding proposed water quality limits for major ions in wastewater of mines in the NWT. The following was noted:

- Task of developing such water quality guidelines for major ions is very difficult for a number of reasons including: limited research on major ion toxicity, incomplete sets of water quality criteria for major ions and inappropriate standard methods for determining their toxicity.

- Normal analytical procedures do not work well when modeling the toxic effects of major ions as they have low acute toxicity. It was noted that a new method for modeling major ion toxicity effects has recently been developed in the United States and should be reviewed further.
- Interactions between ions are often not considered when determining their toxic effect and more research appears to be required in this area.
- The most troublesome result of major ion discharge increases would be a biological community change due to increased salinity and water hardness. Very sensitive, and specialized species, that are adapted to this very oligotrophic and soft water environment, may be lost when the aquatic system is disrupted by these discharges or when the lakes return to their original salinity following mine closure. Toxicity limits or guidelines will not address this particular problem and in order to avoid ecological disruption, limnologists and / or ecologists need to design appropriate water quality limits.
- BHP B's reevaluation of the AEMP and five year data synthesis may give some indication if biological community changes have resulted from project activities.

Action Item #5

Staff to distribute the final version of John B. Sprague report entitled "Comments on Proposed Water Quality Limits for Major Ions in Wastewater from Mines in the NWT" to the MVLWB

Action Item #6

Staff to acquire literature reference on osmotic stress to fish from John B. Sprague.

Action Item #7

Robin to graph average Total Dissolved Solids (TDS) concentrations in AEMP lakes for the 2001 open water season to observe downstream effects from mining operations.

Follow-up to Annual Environmental Workshops

Directors discussed the two-day workshop on re-vegetation studies and the aquatic and wildlife monitoring programs. The following was noted:

General:

- Aboriginal participation was lower this year than in the past at the workshops. The technical nature of the workshops and limited capacity in the communities were noted as potential reasons for reduced aboriginal attendance.

Wildlife:

- BHP B's proposed repositioning of the landfill is a significant issue and one that is related to both wildlife and waste management. François will be attending a meeting with Allison Armstrong of BHP B in late February and information will be circulated when it becomes available.
- The landfill should be covered on a frequent basis and be placed in a centralized area away from the tundra to reduce the probability that wildlife will be drawn to the site.

- Proposed change to the wolverine monitoring program are also a concern and additional follow-up meetings with BHP B, RWED and others has been recommended to discuss and improve the wolverine monitoring program. The proposal to use scent stations could lead to a collection of useful DNA information that would augment information from the existing snow surveys. A better sense of population size and wolverine movements may result from using this innovative but unproven technique. Overlapping the two methods at this time is the only way of ensuring that some useful information will be collected.
- The analysis on caribou survey data (e.g. migration) needs to be refined to determine if the mine is having an effect on caribou distribution during either migration period. Currently the data from the two migration periods is lumped together and this may be masking a possible effect.
- Residence (e.g. exposure time) of caribou to any given mine or mining activity is still unknown. This residence time could potentially be determined using more frequent GPS feedback, but is not something that BHP B could really take the lead on. It would be more of a GNWT initiative.
- Data and data analysis in this year's BHP B wildlife monitoring report is closer to what RWED has been asking for in regards to having the data feed into a cumulative effects or regional model (e.g. energetics model).

Traditional Knowledge:

- BHP B should attempt to organize joint site tours to the mine for community representatives to discuss TK and how it can be incorporated in environmental management at the mine. Having all the community groups visit the site at the same time may be a logistical challenge, but would likely result in more active participation and useful dialogue.

Aquatics:

- Removing Little Lake from the AEMP may be premature considering the reason for elevated nitrates in the lake are still unknown at this time.
- The suggestion to add Leslie Lake to the AEMP was not discussed at the workshops.
- Addition of winter water quality sampling and stakeholder involvement in the 5-year synthesis and reevaluation of the AEMP seen to be a positive step by BHP B. This synthesis should consider the concerns regarding changes to biological communities in aquatic systems.
- Appear to be numerous complications regarding the long term maintenance of the Panda Diversion channel and refilling of the pits in the koala drainage.

Action Item #8

Directors to provide comments on the Aquatic, Wildlife and Reclamation reports and workshops to staff who will then draft a letter to BHP Billiton.

Cost Variance update

Zabey gave a brief update to the Directors on the status of the cost variance report and meeting and noted the following:

- The purpose of the cost variance report is to review ongoing reclamation progress and the liability cost estimate. The next meeting, which is scheduled for February 15th, will review the liability cost estimate models submitted by Komex (BHP B's consultant) and John Brodie (DIAND's consultant).
- Neither cost estimate model calculated a liability estimate for 2003, which was one topic to be discussed at the upcoming February 15th meeting.
- Neither model has been verified for remote northern site restoration, although there is potential to run both models on the old camp reclamation taking place this summer.
- The difference between the two liability estimates is largely due to the fact that progressive reclamation is incorporated in Komex's model but not in John Brodie's. This should not significantly impact the amount of security required as long as the liability estimates are frequently reviewed and the present liability compared.
- Land component of the security deposit can be placed on a number of regulatory instruments such as land leases, land use permits or Environmental Agreements.
- Success of progressive reclamation has to be evaluated carefully to determine if reclamation objectives have been met (e.g. credit based on performance). Therefore, reclamation criteria are required to determine when reclamation is considered complete.
- Approved Abandonment and Restoration plan determines the reclamation objectives.

Long Lake Water Quality Data update

Robin gave a brief update to the Directors on the available data set for Long Lake and Directors discussed how the data should be analyzed.

Action Item #9

Robin to acquire the lab certificates for SNP station 1616 –30 and review copper & other metal data for this station (e.g. comparisons with what has been reported in the past). Yearly trend graphs and a comparison of SNP data and data from other Long Lake studies (e.g. Environment Canada tailings facility study) will also be performed.

Directors had a brief discussion on detection and quantification limits for water quality parameters and it was noted that data might be unreliable immediately above detection limits (e.g. copper, cadmium). The effect of frequently changing detection limits is also unknown, but tends to make data interpretation impossible.

Upcoming Seepage Report update

Zabey briefed the Directors on the fall seepage survey report and noted the following:

- 2001 seepage and waste rock report will be submitted to the MVLWB on February 15th (*moved to March 6th at the time these minutes were written*) and it will be reviewed during the annual seepage meeting on May 2nd.
- A great deal of information has been collected on seepage to date and many questions have been addressed, but long term seepage concerns remain outstanding.

Action Item #10

Zabey to contact Kevin Morin (Minesite Drainage Assessment Group) to review 2001 seepage survey reports. A preliminary report is desired before the next board of Directors meeting.

Sable, Pigeon & Beartooth update

Zabey briefed the Directors on the Sable, Pigeon and Beartooth land use permit and water licence review and noted the following:

- BHP B has responded to the submitted information requests and the MVLWB has requested that reviewers examine the responses to determine if they are adequate.
- Public hearing date is currently set for March 6th – 7th, 2002; however this date has not yet been confirmed by the MVLWB (*Dates moved to April 4th and 5th at the time this minutes were written*). Intervention deadline will be at least two weeks prior to the hearing date (*March 13 at the time this minutes were written*).

Action Item #11

Directors and Staff to review BHP Billiton's response to the Agency's information requests on the Sable, Pigeon and Beartooth land use permit and water licence applications for completeness.

Action Item #12

Staff to follow-up with Laurie Cordell (MVLWB) on the intervention and hearing dates for the Sable, Pigeon and Beartooth development

Five-year review of Environmental Agreement

Zabey gave an update to the Directors on the five-year review of BHP B's Environmental Agreement and noted the following:

- Chris Hanks and David Searle will represent BHP B during the review process.
- Review process currently being discussed by BHP B, DIAND and GNWT. BHP B proposed at the recent meeting that the review process hadn't started until one of the parties (three signatories) initiated the process. BHP B will initiate the process with a letter to the other signatories.
- A number of aboriginal groups sent letters of concern regarding the review process and possible amendments to the agreement. The signatories appeared split during the meeting as to how aboriginal members would be consulted.
- BHP B proposes that the three signatories meet to discuss the proposed changes and then consult with the Agency at a later date. If the Agency doesn't agree unanimously with the resulting changes then the aboriginal members would be further consulted. DIAND and GNWT were potentially interested in more consultation with aboriginal members than that proposed by BHP B.
- BHP B interested in knowing the specific costs and benefits of being involved with a regional monitoring board.

Action Item #13

Staff to ensure that the Agency is actively involved in the Environmental Agreement review process.

Thursday February 7th

Regional Initiatives

Directors discussed a number of regional initiatives and noted the following:

Kennett's review of project specific Environmental Agreements:

- Found review fair and interesting. Conclusions appear to accurately reflect concerns raised by those who were interviewed.
- One of the main conclusions coming from the report seem to indicate a continuing need for project specific Environmental Agreements at this time, but most interviewees agreed that they shouldn't be used for ever.
- Selected interviewees represented a diverse group of individuals.

Cumulative Effects Assessment and Management Framework (CEAMF):

- The regional monitoring Agency and its potential role in the North slave region was discussed at the workshop, although in written framework the Agency and EMAB not discussed within regional action plans.
- Implementation of regional action plans closely tied to land claim settlements.
- Communication and cooperation initiatives associated with CEAMF are vital steps to ensure that the framework is successful.

Treasurer's update:

François, the secretary treasurer, reported that for the financial period of April 1st to December 31st, 2001 approximately 60% of the budget has been spent. This expenditure pattern is consistent with what was predicted. The budget forecast to the end of the fiscal year (i.e. March 31st, 2002) shows that approximately 94% of the budget will be spent. This forecasted figure includes the 2001 – 2002 Agency annual report, a March board of Directors meeting and outside contracts (e.g. Kevin Morin's review of the 2001 seepage report).

Directors and staff discussed and approved end of year expenditures including: a new desktop computer, office furniture (including new desks for staff) and boardroom tables.

Annual General Meeting (AGM) timing

Directors and staff discussed the proposal to hold this year's AGM at a later date (e.g. October instead of June). The following was noted:

- AGM participation from aboriginal society members may increase, as they would more likely be available for meetings in October.
- More timing flexibility for a mine site visit, as a board meeting and site visit will not have to be tied to a June AGM.
- Groups would have more time to review the Agency's annual report before the AGM.
- More time would be available to draft the annual report and hopefully improve the end product (e.g. more time to comment on BHP B's annual report). August would likely be the release date for the 2001 – 2002 annual report.

- Reporting period for the 2001 – 2002 annual report would still be the same as previous year's (i.e. April 1st, 2001 – March 31st, 2002).

Directors had a general discussion on other aspects of the AGM and noted the following:

- A workshop could potentially be tied to the AGM.
- A detailed mine site update should be offered to the society members during the AGM.
- Potential to pay honoraria to aboriginal society members for their time participating in the AGM.

Motion: *Honoraria (same daily rate as offered by EMAB), meals, and travel to be covered for two (2) individuals from each aboriginal society member to attend the AGM.*

Motion moved by François and seconded by Tony on the 7th day of February 2002.

Action Item #14

Zabey to draft letter to the society members of the Agency that 2002 Annual General Meeting (AGM) will take place in October.

2001 – 2002 Agency annual report planning

Zabey briefed the Directors on the proposed change to this year's annual report (i.e. a technical report accompanied by a brief glossier plain-english summary). The drafting timeline and production costs were also discussed and the following was noted:

- The two distinct yet linked documents would likely be better received by the Agency's diverse reading audience (e.g. technical vs. community / public audience).
- A glossy executive plain english summary, containing plenty of pictures would be more appealing to the general public and communities.
- The technical report would provide an opportunity for the Directors and staff to go into more detail on important environmental management issues and would be aimed at audiences with a technical background (e.g. government, regulators, and BHP B).

Action Item #15

Staff to proceed with the planning of the 2001 – 2002 annual report following the new format (i.e. plain English summary in addition to more technical report).

Any other Business

Improved communication with communities:

In an effort to improve communication with aboriginal society members the following was proposed:

- i) Although the Agency's original offer to provide technical advice to communities on subjects related to BHP B received limited response, it is proposed that a second follow-up letter be sent to aboriginal society members reminding them of this opportunity. A summary biography of each Director should also be attached to this

letter describing the skills each Director could potentially offer. Technical expertise in fisheries, wildlife and cumulative effects may be of particular interest to communities.

- ii) Staff to visit Kugluktuk sometime in the spring for a few days and be introduced to that particular community and their regional offices (e.g. Kitikmeot Inuit Association local office).

Directors offered their unanimous support for both proposals and noted that staff should also attend community visits with Directors and be the contact for future follow-up questions and / or meetings.

Action Item #16

Directors to write a short bio or information briefing on what technical expertise they could offer our aboriginal society members.

Action Item #17

Zabey to draft letter to aboriginal society members (with Directors bios attached –see action item #16) reminding them that Agency representatives are available to meet with them at a time which is convenient for the communities.

Agency mine site visit:

Directors discussed what date would be the most appropriate for an Agency multi-day mine site visit and it was determined that early June would be a good time. Staff will check with BHP B to determine if the proposed date is possible.

Action Item #18

Staff to contact BHP Billiton and determine which days in early June would be most appropriate to have an overnight minesite visit.

Date of next board of directors meeting March 24 – 26, 2002

Meeting adjourned at 11:30.

Minutes Approved by

- Original Approved By -

Red Pedersen, Chair