

# Traditional Knowledge

Under the *Environmental Agreement*, BHPB, GNWT and Canada agreed to fully consider both Traditional Knowledge (TK) and other scientific information when dealing with environmental matters at Ekati.

## BHPB's Activities in 2004

In 2004 BHPB continued to support the Inuit Naonaiyaotit TK Study (NTKS) and the Lutsel K'e Wildlife, Lands and Environment Committee geographic information system (GIS) databases. The NTKS project was initiated in 1996 to record TK of the Inuit within the western Kitikmeot region. A place names atlas was released in 2004. The completion of the project and the turnover of the database to the Kitikmeot Inuit Association are expected to take place in the spring of 2005.

The Lutsel K'e Wildlife, Lands and Environment Committee GIS has been designed to provide management support for the committee during environmental screenings.

In 2004 as part of the 'Caribou and Roads Project' the company continued to work with elders from Kugluktuk who provided instructions on how to build inuksuit along

the Pigeon Stream, at Fox Pit and at the airstrip to divert caribou away from the active mining during caribou migration. In 2005 these structures will be monitored to see how effective they have been and to possibly extend the inuksuit further.

## Agency's Assessment

Achieving the effective use of TK in environmental management of the mine continues to be a challenge. Neither BHPB nor the regulators have made much progress in incorporating TK effectively with western science in the environmental monitoring, management and regulation of Ekati. This is a serious, on-going issue that we continue to highlight. We frequently hear strong concerns from our Aboriginal members that there is a need for better dialogue amongst TK holders, wildlife researchers and environmental managers.

During the environmental workshop hosted by the Agency, community members expressed that they would like to see a stronger role for communities and the use of TK in the design and fieldwork for environmental monitoring at Ekati. For example, the elders believe that there is something wrong with the caribou and that

more monitoring will not fix the problem. They have suggested that different studies be done, for example on the caribou food sources such as lichens.

The agency has also heard remarks from our Aboriginal members regarding site visits to Ekati. While the company provides opportunities for community members, especially elders, to visit the mine site each year, some of our members have indicated that, while these trips have been informative, they do not consider the current form of site visits to be constructive.

BHPB declines to provide documentation of advice or concerns it receives during site visits by community members. We think documentation is necessary for BHPB to demonstrate it is serious about incorporating TK at Ekati and the company should discuss with the Aboriginal organizations how to improve the effectiveness of site visits.

## Other TK Initiatives

The Agency commends the Mackenzie Valley Environmental Impact Review Board (MVEIRB) for its initiative in developing guidelines for the use of traditional ecological knowledge. This document will help raise the profile of TK in environmental impact assessment and will give better formal direction to developers in incorporating TK into baseline studies and environmental impact statements that can then be used by regulators for inspections, monitoring and other follow-up.

## Recommendation

4. BHPB should enable greater participation of Aboriginal Peoples in the design and delivery of monitoring programs at Ekati.



# Communications and Consultation

Two important elements of the *Environmental Agreement* concern BHPB's communication of environmental monitoring results and consultation with regulators and communities on monitoring programs and studies.

## BHPB's Activities in 2004

The Agency commends BHPB for its attempts to involve the Aboriginal communities in the company's review of the Long Lake Containment Facility (see chapter on *Tailings and Wastewater Management*).

There is a requirement in the *Environmental Agreement* for BHPB to arrange for public meetings to review and discuss its annual report. BHPB's Annual Report 2004 provides no indication that such meetings were held last year although BHPB environmental staff visited the community of Kugluktuk in May, but the results of

the annual environmental report were not discussed. In our view, BHPB has failed to fulfill its responsibility in this regard. This is particularly important now that BHPB has cancelled its annual environmental workshop (to which representatives from all communities attended) on the grounds that it is more effective for the company to report directly to each community.

Community members and regulators were provided opportunities to visit the mine on various occasions throughout the year.

## Community Concerns

Part of the Agency's mandate is to assist in the facilitation of effective participation of Aboriginal Peoples in the environmental management of Ekati. In 2004 BHPB received both praise and criticism from Aboriginal members on its consultation activities.

On a positive note, the company has been thanked for the type of process used for evaluating the operation of the Long Lake Containment Facility (LLCF). Indeed,



The Agency open house in Kugluktuk



Agency visit to Kugluktuk school





## Comments Made at the 2004 IEMA Annual General Meeting

**Monica Krieger (Lutsel K'e)**—Thanked the Agency for its assistance throughout the past year. Especially helpful was the Agency technical review related to the Ekati water licence renewal. Monica noted that technical review is key because each community cannot hire experts to review the large volume of consultant reports.

**Chris Hanks (BHPB)**—Noted that the Agency was created knowing that providing individual communities the necessary technical resources was not possible. The comments of the Aboriginal members at the annual general meeting show the company that the Agency is functioning as it should.



Aboriginal representatives have encouraged BHPB to adopt a similar approach on mine closure planning.

The Agency and our Aboriginal members believe that the environmental workshops had been one of BHPB's most successful consultative efforts as it included representatives from Aboriginal communities, regulatory agencies, the Agency and BHPB and it provided a forum

for collective, interactive review and feedback to BHPB about past results and recommended changes for the following year. BHPB publicly committed to holding community visits to replace the workshop yet we do not see much evidence that this is happening.

BHPB's decision to cancel the workshops and to instead visit communities individually to present the information and

gather input has received criticism from our Aboriginal members. They have expressed disappointment in that very little if any emphasis was given to the environmental monitoring programs and results as was intended for these community visits. BHPB did not bring its consultants and did not wish to have the Agency participate, even upon request by the community. The timing of the one community meeting in 2004 was also inappropriate for meaningful



Elders at the reclamation and closure workshop

community participation, and it was held too late to change monitoring programs for the summer even if input was given.

Aboriginal Society members continue to express a need for a much stronger role for Aboriginal Peoples in monitoring environmental effects at the mine. They feel the company involved the communities and incorporated traditional and local knowledge into the programs for the first couple of years of mine operations but this has not continued.

### Report Timelines

BHPB delivered its 2004 annual environmental monitoring reports even later than in previous years. The late delivery of BHPB 2004 monitoring program reports has hampered efforts at achieving effective and adaptive environmental management of Ekati. Late reports make it impossible for reviewer input to be incorporated into the monitoring programs for the next season.

The company has indicated reasons for the delay in reports were shortage of environmental staff at the company, and preoccupation of the company in dealing with the licence renewal priority. In our view, these are not acceptable excuses for delaying production of the annual monitoring reports, and BHPB should take measures to ensure that the reports are delivered in a timely fashion—early enough in the spring to allow proper review and input from communities and regulators. This is an element critical to the effectiveness of BHPB's adaptive environmental management approach.

### Agency's Activities in 2004

The Agency increased its communication and consultation activities within the communities in 2004. We continued our visits to communities and our correspondence with our Aboriginal members.

In August 2004 we held a board meeting, an evening presentation with an open house and made a presentation at the high school in Kugluktuk to discuss environmental management issues and monitoring programs over the past year. All were well attended.

Individual directors also visited communities when invited to present information related to Ekati. The Agency also hosted two workshops, a reclamation and closure workshop in early February and an environmental workshop in March. Details on these workshops are found in other sections of this annual report.

### Agency's Assessment

Effective communications and consultation is a challenging but essential activity. There is a need for better dialogue amongst Traditional Knowledge (TK) holders, wildlife researchers and environmental managers.

The Agency encourages our Aboriginal Society members to let BHPB know their expectations on how they want consultation to be conducted. We encourage BHPB to respect the consultation requests it receives, and to enter into more direct and timely dialogue with contacts designated by the community.



The Agency open house in Kugluktuk



Engaging the elders at the reclamation and closure workshop

## Recommendation

5. BHPB should adopt a more collaborative approach to the review and design of reports, programs, projects and risk assessments.





# Regional Monitoring and Cumulative Effects

There have been two significant developments dealing with regional monitoring and *cumulative effects* in the last two years. The first is the work being done toward creating what is now called the Multi-Project Environmental Monitoring Agency. The second, and perhaps the more significant is the likely identification of impacts on caribou beyond the immediate vicinity of the individual developments in the region used by the Bathurst Caribou.

With the Snap Lake *Environmental Agreement* requiring the evolution of (some) monitoring agencies into some form of Multi-Project

Environmental Monitoring Agency within two years, an important step toward rationalizing such agencies has taken place. The Independent Environmental Monitoring Agency has supported such an initiative in principle for the last five years and has taken steps to assist in developing an effective multi-project agency.

The Snap Lake Environmental Monitoring Agency is now in place and we have offered to meet with that Agency to discuss how best to collaborate to improve our mutual effectiveness, just as we continue to do with the Environmental Monitoring Advisory

Board (EMAB) for the Diavik Mine. Until the creation of an effective regional monitoring agency, it is important, we believe, for the existing bodies and agencies to collaborate on making monitoring useful to deal with cumulative or regional effects. For example, the Coppermine River *cumulative effects* monitoring program is important to the people of Kugluktuk and we urge DIAND to continue this initiative.

In the past few years, there is mounting evidence for regional impacts of development on caribou. A study carried out by researchers at the University of



Bathurst Caribou herd

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Northern British Columbia (UNBC) was published in 2004 (*A quantitative approach for regional environmental assessment: Application of a habitat-based population viability analysis to wildlife of the Canadian central Arctic*) by Chris Johnson (UNBC) and Mark Boyce (University of Alberta)). In addition, a study contracted by RWED (*Assessment of Bathurst Caribou Movements And Distribution In The Slave Geological Province*, by John Boulanger (Integrated Wildlife Research), Kim Poole (Aurora Wildlife Research), Bonnie Fournier (Fauna Boreali), Jack Wierzbowski (Geomar Consulting), Tom Gaines (deceased), and Anne Gunn (RWED)) was presented in 2004.

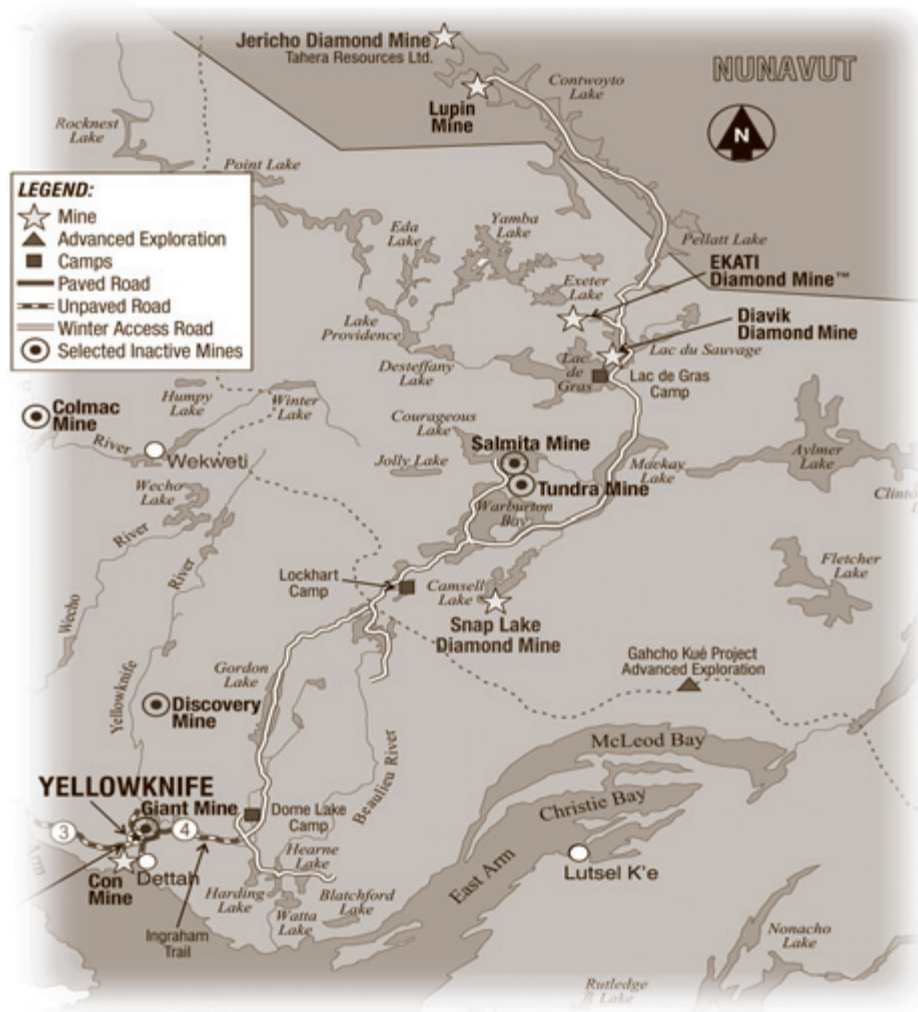
These studies identified subtle but statistically valid differences in caribou behaviour or access to good habitat near diamond mines in the region. The Agency finds this surprising given the lack of effects detected in the (good quality) studies carried out near the Ekati Mine. While the studies are quite recent, we find them to be convincing evidence that the developments in the region (including Ekati) are having some larger scale effect on the Bathurst Caribou herd than previously believed.

In addition to these studies, other observations concerning the Bathurst herd are relevant. First, there has been a significant decline in the herd's population recently (as noted in our annual report for last year) and, while we do not have reason to associate this decline with regional developments, the size of the herd and its importance for Aboriginal Peoples in the region makes it more important to pay special attention to the caribou impacts. Moreover, we have heard

from our Aboriginal members who have expressed concern about caribou fitness and the lichen on which the caribou feed. For us, this additional evidence from the communities is also a very important indicator of the importance of paying attention to the herd.

This year, together with EMAB, we sent a recommendation to the Governments of Canada, Northwest Territories and Nunavut to hold a joint workshop regarding *cumulative effects* on wildlife in the Slave Geological Province. This follows on our recommendation from last year's annual report: "BHPB, DIAND, RWED and others should initiate discussions on how to monitor the regional cumulative impacts on the Bathurst caribou."

We have concluded that there is a need for enhanced caribou monitoring that can determine regional or *cumulative effects* of development and that BHPB should be involved in such monitoring because there are indications Ekati is contributing to such effects. Indeed, there is clearly a need for caribou monitoring in the area to be carried out more broadly than just on individual mineral claims blocks. Accordingly, we have concluded BHPB should participate in an appropriate form of regional monitoring, reflecting the mounting evidence that Ekati is having impacts beyond the mineral claims block and the company has an obligation (albeit a joint obligation with others) to determine what this impact is and, following the principle of adaptive environmental management, what to do to manage this impact.



Development in the Slave Geological Province

## Recommendation

6. DIAND, GNWT, GNU and BHPB should be involved in regional caribou monitoring of the Bathurst Caribou herd.





# Assessment of Regulators

## The Regulators and Our Mandate

The Agency serves as a public watchdog of BHPB's environmental performance at Ekati, the regulatory process for the mine and the implementation of the *Environmental Agreement*. This mandate includes monitoring the performance of the federal and territorial government agencies and the other organizations set up to provide regulatory oversight.

## Agency's Assessment of the Regulators

Agencies that have a role in the conduct of environmental management at Ekati include:

- Department of Fisheries and Oceans (DFO);
- Department of Indian Affairs and Northern Development (DIAND);
- Environment Canada (EC);
- Government of the Northwest Territories, Department of Environment and Natural Resources (ENR) (formerly Resources, Wildlife and Economic Development or RWED); and
- Mackenzie Valley Land and Water Board (MVLWB).

In 2004-5 these agencies collectively contributed to effective environmental management at Ekati. Below are general comments related to the performance of specific regulators.

### Department of Fisheries and Oceans (DFO)

DFO participated in the Agency third-party review of BHPB's Aquatic Effects Monitoring Program (AEMP), Inter-Agency Coordinating Team (IACT) and intervened in the water licensing. The Agency also recognizes the work of DFO staff during the Bearclaw water draw down that resulted in a warning letter to the company. DFO has also worked with BHPB on the fish habitat enhancement near the Misery Pit and Panda Diversion Channel fish monitoring program.

### Department of Indian Affairs and Northern Development (DIAND)

DIAND provided additional funding to the Agency for the *reclamation* and closure workshop (February 2005), the environmental workshop (March 2005), and for the Chair to participate in a meeting on financial arrangements under *environmental agreements* (March 2005). The



The reclamation and closure workshop



Agency appreciates this support as it allows the Agency to more effectively collaborate with our Aboriginal Society members and others to provide more comprehensive and balanced feedback on environmental performance at the mine.

DIAND chairs IACT, an information-sharing forum (not regulatory) for those government agencies and bodies that have a regulatory, inspection or research role with regard to the Ekati Mine, including representatives of BHPB. Agency staff serve as observers and also provide secretarial support. It is the Agency's view that this is an important function and should be encouraged. We note that IACT did not meet regularly over the last year given the sensitivities around the water licence proceeding. We would respectfully suggest there should be more frequent meetings of IACT and that such meetings need not compromise regulatory proceedings.

DIAND did not formally intervene in the water licensing process although it presented a submission at the public hearing. We had hoped that there would have been stronger participation. We would encourage DIAND to maintain and build its research and technical capacity, particularly on water and *reclamation* issues.

The Agency supports the efforts by DIAND to provide greater regulatory certainty and direction on mine *reclamation* and closure. The guidelines in preparation are a good start but long overdue. We also recognize the continuing workshops on the issue of mine closure over the next several months and support these efforts to bring together parties to learn more about this important field.

The Agency continues to enjoy a good rapport with the DIAND inspector for the Ekati Mine. We appreciate the level of detail provided in the inspection reports and place them on our public registry. We did note that the frequency of inspections declined this year and look forward to more inspections over the next year, particularly as the mine changes.

Over the last year and a half, the Agency operated with six directors. A timely replacement for one of our directors appointed jointly by the federal and territorial governments and BHPB (in consultation with the Aboriginal Peoples) was not forthcoming. Dr. Anne Naeth has accepted and we look forward to a year with a full roster and additional expertise in the area of mine *reclamation*. We would request that future directors be appointed in a more timely fashion.

### Environment Canada (EC)

EC participated in IACT and several Agency initiatives including the *reclamation* and environmental workshops and the third-party review of the AEMP. EC also participated in the water licensing process with helpful



The Colomac Mine closure presentation

interventions and technical reviews. EC accepted an Agency request to conduct a peer review of BHPB's *nitrate toxicity* study using EC's in-house technical expertise. We look forward to the results of this review.

### Government of the Northwest Territories—Environment and Natural Resources (ENR)

ENR continued to participate in IACT meetings and regulatory proceedings. ENR also assisted with the review of air quality models and results from BHPB and persisted in moving forward a revised wolverine-monitoring program that will involve coordination with mining operations in the Slave Geological Province, including Ekati. The work of ENR in analyzing regional caribou monitoring data for the purposes of better understanding *cumulative effects* is particularly important in light of increasing concerns over the health of the Bathurst Caribou herd as expressed by our Aboriginal Society members. The Agency recognizes these initiatives by ENR on caribou including a leadership role in developing a draft management plan for the Bathurst Caribou herd, and we encourage it to continue on with these and regional caribou monitoring activities. The Agency has noted the need for more timely appointments of new directors.

We look forward to a continued good working relationship with ENR next year.

### Mackenzie Valley Land and Water Board (MVLWB)

The MVLWB participated in IACT and the Agency's *reclamation* and environmental workshops. The major activity over the last year for the MVLWB in relation to the Ekati Mine was the water licence process. This was a very significant item for the MVLWB in terms of its internal capacity and workload.

The MVLWB, along with BHPB and other interveners, has recognized that the water licensing process was less than ideal. The process was far too long, particularly after the closure of the public hearing. For additional details see the water licence section of our report contained in the Aquatic Effects Monitoring Program chapter. It appeared to the Agency that timely decision-making suffered from a prolonged attempt to reach complete consensus rather than making a decision based on available information. It is our view that there is need for the board to provide better direction to staff in order that the board can make more effective and timely decisions.

## Recommendation

7. There is a need for greater clarity on the issue of water quality and the definition of receiving environment that could take the form of guidelines from the MVLWB. Building of internal technical capacity may assist with this initiative.





# Assessment of BHPB



Environmental performance at Ekati this past year continues to be good. No major impacts have been identified, although there were problems at the mine. These problems were generally well managed and it appears that the lessons learned have been incorporated into the company's environmental management system. This system had its valued "ISO 14001" certification renewed this year.

BHPB, as noted elsewhere in this report, conducted a review of the operation of its *tailings* pond, the Long Lake Containment Facility (LLCF). This review was open to affected stakeholders and was very well done. BHPB also initiated studies, such as those related to the future of the Panda Diversion Channel, *nitrate toxicity*, and to the accidental water drawdown of Bearclaw Lake. These studies are the sort that help to get information necessary for the future operation of the mine and its closure and BHPB is to be commended for carrying out these studies. BHPB also circulated draft terms of reference for a very important study (required under the water licence) to look at options for dealing with the pits at closure.

During the year, BHPB discovered unexpected increases in non-regulated water quality variables at the release point of the LLCF. The values do not exceed levels of concern but the reasons for the increases are not known. To the company's credit, in spite of being in the midst of a licence renewal, it released this information and is currently undertaking studies to find the cause. This openness is valuable in that it enables others

to see that the company is attempting to manage the mine in an environmentally sound manner.

BHPB also responded quickly and positively to the request made pursuant to our environmental workshop in March 2005 to adopt a new approach to wolverine monitoring. This should result in better understanding of wolverine populations around the mine. This may help the company because it appears that there is again a problem with wolverine having to be killed or relocated around the mine site. This year, the reason for the problem is not at all clear. Waste management is reported to be good. It will be important for BHPB to work with the GNWT Department and Environment and Natural Resources (ENR – formerly RWED) to determine how best to deal with the wolverine problems.

During the same year as these considerable successes were achieved, there were some problems that are disturbing to the Agency. These are inter-related and include consistently having too few staff to do the job (many environmental positions being unfilled for extended periods of time), delivering many reports so late as to reduce their value for effective decision making, submitting a *reclamation* and closure plan (Interim Abandonment and *Reclamation* Plan) that was not accepted, and the accidental drawdown at Bearclaw Lake. Coupled with the company's continued difficulties in communicating with our Aboriginal Society members, we are somewhat concerned that this could be

indicative of a company with declining interests in good environmental performance in spite of the good performance to date and the several commendable achievements during the last year. We know BHPB can do better.

To do so and to gain the capacity to continue its good environmental performance into the future, we believe it is important for BHPB to focus on the following issues. First, *reclamation* and closure should be the primary focus. This will enable the company to plan the mine operations in such a manner as to allow it to proceed with fewer subsequent problems. As key parts of this, we include determining how best to manage the pits, the LLCF, the Panda Diversion Channel and the roads. All of these issues and more will need to be fleshed out in a *reclamation* and closure plan (and the related *reclamation* research plan).

Second, revising LLCF management is a high priority for environmentally problem-free operation and closure. This will require a better-detailed understanding of exactly how the LLCF works (water chemistry, *tailings* behaviour, etc.) Third, developing an understanding of what is causing changes in *zooplankton* downstream of the LLCF may well be important in managing aquatic effects of the mine. Fourth, more effective engagement with Aboriginal communities is strongly advised because, in the North, not only are regulatory licences required, but a "social licence to operate" is necessary. That is, it is essential to have the approval and consent of those affected by the mine.

