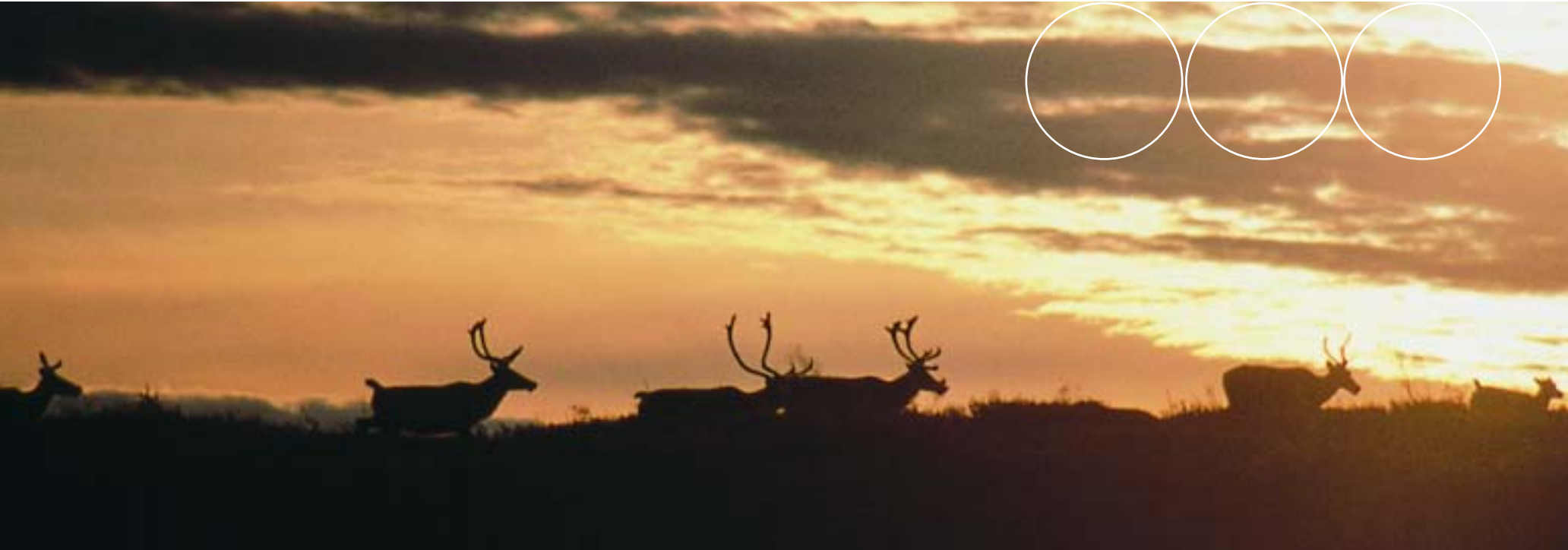


A PUBLIC WATCHDOG FOR ENVIRONMENTAL MANAGEMENT AT EKATI DIAMOND MINE™



Annual Report Summary 2001-2002



Independent Environmental
Monitoring Agency



Chairperson's Message

I am pleased to present the 2001-2002 Annual Report of the Independent Environmental Monitoring Agency. Our report this year comes in two versions. The first, the section you are currently reading, is our plain English summary of last year's events. This report explains, in non-technical language, the Agency's watchdog activities of environmental management and monitoring at BHP Billiton's Ekati Diamond Mine™. The second report provides more detailed technical discussion of the issues raised. We hope that you find the new format useful.

In the last year we have been very busy dealing with BHPB's applications to mine the Fox, Sable, Beartooth and Pigeon pipes. We also continue to review BHPB's existing operations.

As you will see in the section "Listening to Our Members", we have had several chances to meet with the communities this year. We continue to pass concerns we hear to BHPB.

This year also saw the beginning of the five-year review of the Environmental Agreement. We are very pleased to hear that both governments and BHPB support moving towards a regional monitoring



Left to right: Ernie Camsell, Red Pedersen, Beatrice Bernhardt and Joe Allen. AGENCY

agency to keep an eye on the larger fish and wildlife issues presented by diamond mining in the Bathurst caribou range. We continue to push for such a body, and hope to see it formed in the near future.

Please feel free to pass on to us your comments on what you read in these reports, or any comments on the format.

Respectfully,

Red Pedersen
Chair
March 31st, 2002

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About the Agency

The Independent Environmental Monitoring Agency (the Agency) is a public watchdog for environmental management at BHPB's Ekati Diamond Mine™. We review BHPB's environmental plans and reports, and government activities related to the mine, visit the Ekati site, and listen to concerns from communities. We then make recommendations to the company and regulators about what they should do at the site to best protect the environment.

The society members of the Agency appoint our board of seven directors. The society members are the Akaitcho Treaty 8, BHP Billiton, Dogrib Treaty 11 Council, Department of Indian Affairs and Northern Development, Government of the Northwest Territories, Kitikmeot Inuit Association and the North Slave Metis Alliance. The board of directors sit as independent members. They do not represent the organization that appoints them, but work together to protect the environment at Ekati.

The Agency was set up under the *Environmental Agreement* signed by BHPB, the Governments of Canada and the Northwest Territories. The Agreement was negotiated in 1996 by the three parties mentioned above and aboriginal organizations.

The Agency staff carry out its day to day operations.





Mining at Ekati Diamond Mine™

BHPB is mining diamonds on its claim block north of Lac de Gras in the barrenlands of the Northwest Territories (for location see map on previous page). The diamonds are contained in large carrot-shaped rock formations, called kimberlite pipes, extending over 300 metres below the ground. Most of the pipes BHPB is mining are located beneath lakes.

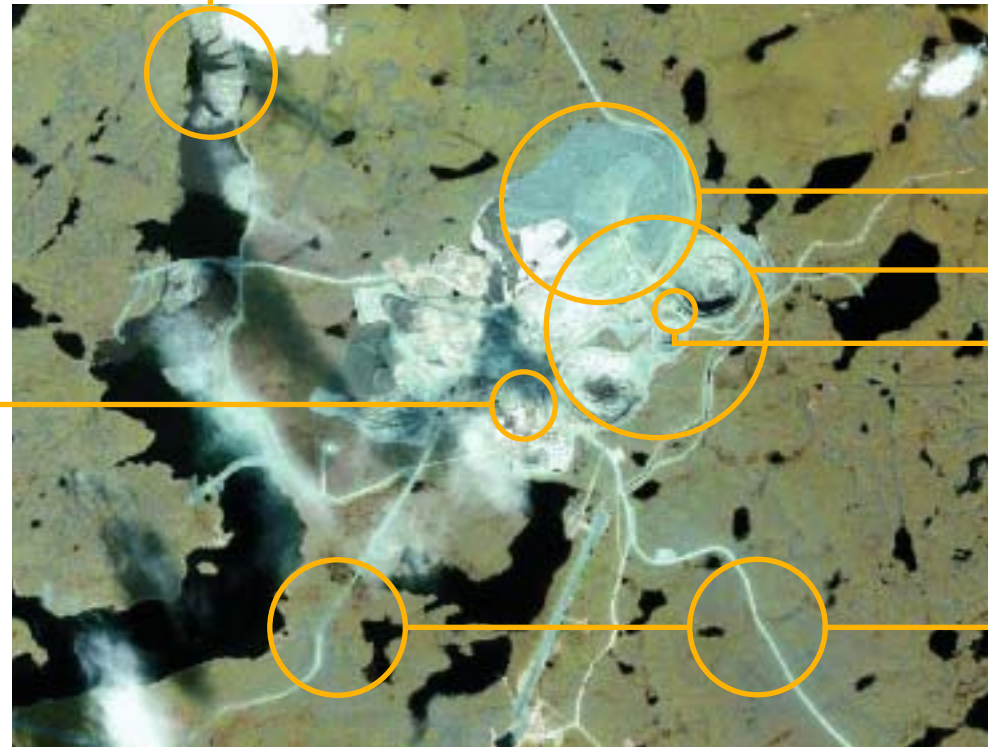
Main Camp BHPB has built accommodation buildings, a truck shop and process plant. These buildings are some of the biggest in the Northwest Territories. The process plant washes and grinds the kimberlite rock, and separates out the diamonds.

Photos at right: Above: Ekati™ main camp complex; Below: Inside process plant JIRI HERMANN/BHP BILLITON DIAMONDS INC.



Tailings Pond The Tailings pond or Long Lake containment facility is where a mix of very fine ground kimberlite and water, sewage sludge and mine water is deposited. The facility (formally lakes) has been split into four sections or cells. As water passes downstream, through each cell, the quality improves as the tailings settle. By the time it leaves the last cell of the facility, all water must meet requirements set in the water license.

Photo, left: Cell B of the Long Lake containment facility AGENCY



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Waste Rock Piles Waste rock, rock that does not contain diamonds, is placed in waste rock piles. These piles will grow up to 50 metres tall and cover large areas of the tundra. The waste rock piles are built close to each pit.

Photo: Panda/Koala Waste Rock Pile (June 2002)
AGENCY



Open Pits Diamonds are mined using open pits. The pits will be up to 300 metres deep and 800 metres across. As most of the pits were originally lakes, these lakes had to be drained.

Panda Diversion Channel This is a man-made channel that diverts water around the pits and is intended to replace streams lost through development.

Photo: Panda diversion channel (in front) Koala pit, Koala North Pit and Panda Pit (Panda/Koala waste rock pile behind) June 2002 AGENCY



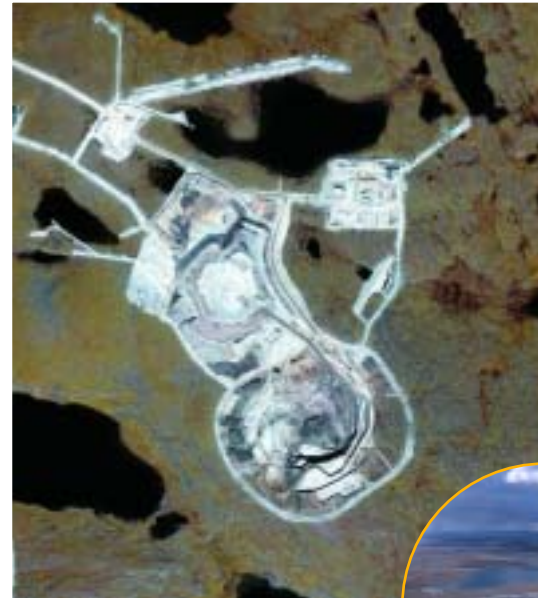
Underground Mining BHPB will also underground mine beneath some of the pits. This involves digging tunnels beneath the ground to reach the kimberlite—the rock diamonds are found in.

Photo: Koala North Underground Decline AGENCY



Haul Roads Roads made of waste rock and quarried rock connect all parts of the mine, including the Misery site, the future Fox site, and the Sable, Pigeon and Beartooth development. Haul roads may cause problems for migrating wildlife because of steep edges, traffic on the road, or dust.

Photo: Haul trucks on Misery Road causing dust.
AGENCY



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Misery Site The Misery site is about 30 km south-east of the main site. Here a pit is being mined, and waste rock piled. This development often has to be looked at carefully as it is a long way from the main camp, and can have its own set of environmental issues.

Photo: Misery development JIRI HERMANN/BHP BILLITON DIAMONDS INC.



Listening to Our Members

Throughout the year we meet with the communities and members of the society. We participate in monthly meetings of an informal group of government agencies and the company to discuss and coordinate our various activities and roles in regard to environmental management at the mine.

These meetings are a chance for all parties involved (governments, regulators, the company and the Agency) to keep a track on each other's activities. Summaries from these meetings are available from our office or on our website.

Whenever possible we meet with communities, to explain some activity at the mine, or to listen to a community's concern. Below is a selected list of meetings we have attended.

April 2001

- The Agency met with government, the MVLWB and BHPB to talk about seepage from the waste rock piles and wildlife monitoring.

May 2001

- The Agency attended a public hearing about the Fox pipe licensing.
- Agency staff met with DFO and the aboriginal screening group to talk about BHPB's "Lake Habitat Compensation Fund."

June 2001

- Agency annual general meeting, attended by the Agency's Society members.
- Agency board meeting.
- The Agency directors and staff visited Ekati.

July 2001

- Agency staff visited Ekati.

August 2001

- The Manager attended the Dogrib Treaty 11 Council annual general meeting in Wekweti (Snare Lake).
- Director Red Pedersen met with members of the Kitikmeot Inuit Association in Kugluktuk.

September 2001

- Director Tim Byers met with members of both the Yellowknives Dene and Lutsel K'e Dene First Nations.
- Agency board meeting. We met with members of the Environmental Monitoring Advisory Board (EMAB), BHPB, DIAND and the GNWT.

October 2001

- Directors Red Pedersen, François Messier and the Manager went to the caribou monitoring workshop hosted by EMAB.

November 2001

- Agency staff visited Ekati.
- The Manager went to a workshop about research and monitoring in the Slave- Geological Province.

December 2001

- Director Peter McCart met with members from Lutsel K'e to talk about the Stark Lake project.

- Director Bob Turner discussed the review of BHPB's Environmental Agreement with the North Slave Metis Alliance.
- Agency board meeting. We met with BHPB, DIAND and the GNWT.

January 2002

- The Manager met with Lutsel K'e Dene First Nation members to discuss the five-year Environmental Agreement review.
- Environmental Agreement review meeting with BHPB, DIAND and the GNWT.

February 2002

- BHPB's annual aquatics and wildlife workshops.
- Agency board meeting. We met with BHPB and Environment Canada.
- Meeting to discuss mine reclamation.
- Peter McCart and François Messier, and Agency staff participated in the fish and caribou workshop hosted by EMAB.

March 2002

- Directors Tim Byers, François Messier, Peter McCart, and staff from the Agency and EMAB met with the Lutsel K'e Dene First Nation Wildlife, Lands and Environment Committee to discuss the Ekati and Diavik mines.
- Agency board meeting. We met with BHPB, DFO and DIAND.
- Directors Tony Pearce and the Manager met with members of the Dogrib Treaty 11 council to discuss the Sable, Pigeon and Beartooth expansion at Ekati.
- Director Peter McCart and the Manager met with the Dogrib Traditional Knowledge Team to talk about fish.



Traditional Knowledge

The Environmental Agreement says that BHPB must consider and include traditional knowledge when designing its environmental plans and programs. BHPB has funded traditional knowledge projects, some of which have been completed. The company takes community members to the mine site each year to look at the mine site, and seasonally employs a number of aboriginal people in the archaeological program, and wildlife monitoring programs.

Traditional knowledge studies funded by the company include the Dogrib Treaty 11 Council's "A Tlicho Perspective on Biodiversity", and the Yellowknives Dene First Nation's report; "Weledeh Yellowknives Dene a traditional knowledge study of Ek'ati". The company is now funding or providing technical support to mapping work by the Lutsel K'e Dene First Nation, Kitikmeot Inuit Association and North Slave Metis Alliance.

In 2001 members of the aboriginal groups visited Ekati to watch the spring caribou migration. Dogrib and Yellowknives Dene members also worked with BHPB's archaeologist.



Lutsel K'e Elders intervening at MVLWB public hearings for licencing of Sable, Pigeon and Beartooth. AGENCY

What the Agency Thinks....

Finding a way to include traditional knowledge that is acceptable to both the company and the aboriginal groups is a challenge. Communities have often told us that they feel the mine is not using their knowledge. Last year we recommended that aboriginal groups meet together to talk about where their knowledge can best improve BHPB's environmental management and monitoring programs. Unfortunately this meeting did not happen. This year, we are planning to jointly host a traditional knowledge workshop with the Environmental Monitoring Advisory Board for the Diavik project.

Although we have not reviewed the work, we like BHPB's support of community mapping projects, for they should be useful to the communities in future land use decision-making. However, the link between these projects and the use of traditional knowledge in the environmental management of BHPB's diamond projects is not clear. BHPB should continue working with aboriginal communities to develop traditional knowledge projects that can be used in environmental management at the site.

The site visits run by BHPB appear to have provided a good chance for community members to visit and comment on the mine. However, BHPB is not reporting issues raised by participants, nor on how the company responds to these. BHPB needs to find a way of reporting concerns raised by aboriginal communities, and what the company is doing to address these concerns. BHPB must do more than just state that aboriginal community members visited the site during the year.

BHPB is testing a new approach this year by bringing Lutsel K'e Dene and Kitikmeot Inuit representatives on site to look at how caribou react to the Misery road. We repeat the importance of BHPB properly documenting the concerns raised, and how they will be addressed.



Wildlife

Wildlife monitoring at Ekati looks for changes in the way birds and animals act when they are near the mine. BHPB also watches to make sure, that while mining, it does not kill or injure wildlife. Monitoring of all species is carried out within the "Wildlife Study Area".

BHPB has monitored wildlife from before the mine opened and every year since then. Monitoring in 2001 showed that most wildlife have not been affected by mining. However some impacts were seen:

Although no caribou have been killed or injured from mining, there were fewer cows and calves seen feeding close to the mine than farther away. This suggests that mining activity is affecting the behaviour of some caribou. Some of our community members were also concerned about limping caribou in 2001. The limping is caused by foot-rot, which usually occurs after the animal gets cuts on its legs. Increased levels of foot-rot may have been an effect of the very wet spring and summer in 2001. Community members are worried that the edges of haul roads may have injured caribou which made it easier to get foot-rot.

Last year we talked about how BHPB's food waste was attracting wolverine to camps. Wolverines often had to be killed or moved. This year BHPB has done a much better job at looking after its waste, and stopped attracting wolverine into camps.

Wildlife Monitoring

- Caribou
- Grizzly bears
- Wolves
- Wolverine
- Upland breeding birds
- Loons
- Raptors

What the Agency Thinks...

BHPB's wildlife monitoring and management is improving. Its annual wildlife report is also greatly improved, and the Plain English summary helps community members better understand the results of monitoring.

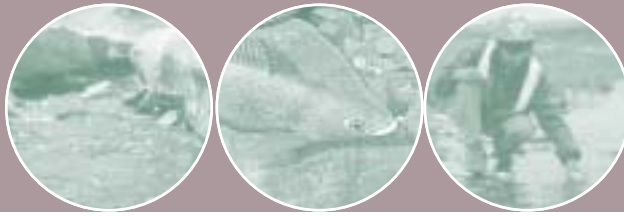
We would like BHPB to carry out additional wolverine monitoring. BHPB looks for wolverine tracks in the snow two times each year. We feel that four or five surveys per year would give more information to see how wolverine may be affected by the project. BHPB is also planning a new kind of monitoring for wolverine this year - collecting hair at scent stations, and testing it to see how many different wolverine are in the area.

Counting traffic on the Sable and Misery haul roads is important. We have advised BHPB that this is important to see what kind of impact traffic may have on caribou behaviour. BHPB also needs to work with communities to look at the effects of roads on caribou.

We are pleased to hear that BHPB is working with Diavik on their wildlife surveys to increase the area covered.



Caribou within view of BHPB's main camp complex. JIRI HERMANN/BHP BILLITON DIAMONDS INC.



Aquatics

BHPB monitors lakes and streams to find out if the project is having any negative changes on the health of the environment (including fish). BHPB is also required by DFO to conduct special studies to find out the effect of mining on water and aquatic life in Kodiak Lake and the Panda diversion channel (the channel built to divert water around the Panda and Koala Lakes before they were dewatered and mined).

What BHPB looked at in 2001...

In 2001 BHPB took water samples from lakes and streams in four different watersheds including Koala, King-Cujo, Horseshoe, and Pigeon. The company also looked at Lac De Gras, Lac du Sauvage and two reference lakes outside of these watersheds. Lake sediments and lake fish communities were not monitored for all lakes in 2001, but will be in 2002. Kodiak Lake and the Panda Diversion channel were looked at in more detail (e.g. sediment quality and Fish) because they are special studies.

Effects of Mining on the Lakes and Streams Studied

Mining activities at Ekati have caused downstream changes in water quality and aquatic environments in the Koala and King-Cujo watersheds. The effects include changes to water quality (more nutrients and some metals), lower winter oxygen levels (which is critical for fish survival in winter), and changes to the amount of phytoplankton.

Kodiak Lake has also been affected by mining activities, especially when treated sewage was added to the lake a few years ago. In 2001 oxygen levels in Kodiak Lake have mostly recovered from the effects of past sewage additions. However, the lake is still being affected by mining activities (e.g., dust).

Monitoring of the Panda diversion channel has shown that it is now providing a healthy home for some fish types at different times of their life. It is also keeping Kodiak Lake and North Panda Lake connected and allowing fish to move between the two lakes in the summer.

What the Agency Thinks...

In general, aquatic monitoring at Ekati continues to improve. However, we are worried that dust from mining activities may be affecting lakes and streams especially reference lakes. Reference lakes are important as they can show if any changes are natural or being caused by mining. The Agency is also concerned with the increasing levels of nutrients, metals and saltiness of the water being released from Long Lake into downstream lakes and streams. Adding dissolved salts to the naturally salt-poor waters of the area may lead to a change and possible loss of easily damaged plant and animal communities.

Monitoring by BHPB has shown that the Ekati project is having environmental effects on a number of lakes and streams near the mine. These effects may reach Lac de Gras sometime in the future as mining continues. Overall, the effects seen are not yet serious, but they do provide useful signs and information for future monitoring programs and for good running of the mine.

The Panda diversion channel continues to be used by spawning grayling as well as other fish. However, concerns about the channel's ability to make food for fish and the growth of young grayling continue. The Agency is also concerned with the long-term future of the channel, as it requires annual snow removal to prevent flooding during spring runoff. This means the channel cannot work as it is supposed to without human help and BHPB is not putting back a stream home for fish forever like the ones it has taken away.



BHPB's Environmental department taking a water sample.

JRI HERMANN/BHP BILLITON DIAMONDS INC.



Waste Rock

Mined rock that does not contain diamonds, is called "waste rock". There are different types of waste rock at Ekati. This rock is placed on the land in "waste rock piles". The piles are close to the pits, and will be up to 50 metres high, covering large areas of land. Kimberlite that has passed through the mill has a portion that is like sand. This material is also placed in a pile, called the coarse kimberlite rejects pile.



Misery waste rock pile AGENCY

BHPB tries to build the waste rock piles in a way that will reduce environmental problems. For example, at the Misery pit there is a lot of biotite schist. This is a type of rock that can produce acid when water runs over it. BHPB places the schist between layers of other waste rock (granite) which has little chance of producing acid drainage. By layering these two rock types, BHPB believes the pile will quickly freeze, and stop the formation of any acidic water. At other rock piles, BHPB is building dams of frozen sand, gravel and rock (toe-berms) along the edges of the piles. These toe-berms are designed to hold frozen water inside the pile.

BHPB tests rock before it is placed on the pile to see if it will produce acid or leach metals. Seeps (water flowing out of the waste rock piles) are also tested for acid, metals and other possible contaminants. BHPB also monitors the temperature inside the piles.

Effects from the Waste Rock Piles

In 2001 seeps were sampled at the Panda pile, the coarse rejects pile, and the Misery waste rock pile. To find out what the quality of water naturally flowing over the tundra was like, BHPB also collected and tested water at reference sites; areas far away from the waste rock piles or other mining activities.

Many of the seeps from the waste rock piles showed normal levels of acidity, metals and other contaminants. However, at the Panda pile, some seeps showed high levels of sulphate, a chemical that indicates that acid generation may be happening. Ammonia, a chemical that attaches to the rocks during blasting, and some metals also had high levels in some seeps. The temperature monitoring showed that the inside of the piles were being "super-cooled" i.e., they were cooling very fast and to very cold temperatures.

At Misery, levels of ammonia were so high at one point, BHPB had to pump the seep to a special pond designed for collecting poor quality water.

At the coarse rejects pile, the quality of water in many seeps was very poor.



This is not a major problem right now, as seeps from this pile drain into Long Lake. Long Lake is designed to hold poor quality water. BHPB has said it will look carefully at this pile next year to try and work out where this poor quality water is coming from, as BHPB did not originally think that poor quality water would drain from this pile.

What the Agency Thinks...

We are pleased with the monitoring and analysis carried out this year around the waste rock piles. BHPB is learning and understanding more about what is happening inside the waste rock piles.



Director Tony Pearse at kimberlite ore stock pile AGENCY

We are concerned about some issues. When BHPB tests water, it can take several weeks for the results to return to the company. Last year, for example, at Misery poor quality water seeped into Desperation pond for several weeks while the company was waiting for water quality results. Only after the results went to the company did they start pumping water to King Pond. BHPB needs to find a way to test water faster. And so make sure poor quality water does not reach the environment.

At the Panda pile, BHPB should pay special attention to the poor quality seeps on the north-east side of the pile. We are worried that poor quality water flowing over and under the tundra may reach and possibly contaminate some lakes, and so detailed studies should continue.

The toe-berm built by BHPB in 2001 must be monitored in future years to make sure it is holding water the way it was designed to.



Panda Waste Rock Toe Berm AGENCY



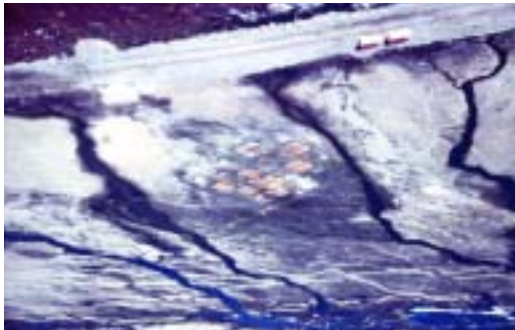
Wastewater and Tailings

In addition to waste rock deposited near the pits, mill tailings are a second important type of rock waste produced from mining. The mill crushes the ore and separates diamonds from the kimberlite to produce a waste stream of sands and silts.

The finer tailings are mixed with water and then pumped to Long Lake. The coarse portion is stored in a pile. This pile will be covered by a nearby waste rock pile. In addition to tailings, Long Lake receives treated sewage and runoff water from pits, waste rock piles, and areas near buildings. Long Lake was formerly several lakes. It has been dammed at several locations, and now contains four sections for permanently storing the tailings.



Jim Millard (BHPB) and Director Tim Byers AGENCY



Cell B re-vegetation plots AGENCY

Toxicity Studies

Researchers at Environment Canada and the University of Saskatchewan are carrying out studies to look at the chemical effects of tailings on plants and animals that live in water. Results to date show that the total number and variety of zooplankton, tiny animals living in the water, have reduced since tailings have been added to Cells B and C of Long Lake. The results also show that tailings may not be the cause of the harmful effects but, rather, leftover amounts of chemicals used to settle the small tailings particles in the water may be toxic. At this time, there is no indication of harmful effects downstream of Long Lake. However, Environment Canada is planning a study to look further into this issue.





Water Quality Issues

BHPB has predicted what the water quality coming out of Long Lake and into the Koala drainage may be in the future. The results showed that the levels of many chemicals in the water are expected to increase over time, with some increasing by 20 times or more over the next decade. BHPB also looked at whether these new levels of contaminants would possibly harm plants and animals living in the water. They determined that they would not. However, while no poisonous effects are expected, slight changes to some sensitive plants and animals may occur in downstream streams and lakes, as some may no longer be able to compete as well in the changed environment.



Wolf prints at Cell B, Long Lake AGENCY

What the Agency Thinks...

The independent research looking at the effects of tailings on aquatic plants and animals by Environment Canada and the University of Saskatchewan has been very valuable to date. However, the Agency is concerned about the increasing levels of nutrients, metals and dissolved salts being released in the water from Long Lake into downstream lakes and streams. Little is known of the impact that increasing dissolved salts will have on downstream water plants and animals. BHPB will need to monitor plants and animals in downstream lakes and streams for quite some time to make sure that serious impacts do not occur.



Director Bill Ross at tailings discharge AGENCY



Additions to the Mine

BHPB plans to mine four new diamond pipes (Fox, Sable, Pigeon and Beartooth) at Ekati. These were pits not included in the original water license. The Fox pit is south of Ekati. Sable, Pigeon and Beartooth are all north of the existing mine. To mine these new pits, BHPB will have to build access roads, drain lakes and, at the Pigeon site, create a diversion channel to divert the Pigeon stream around the new development, similar to the Panda Diversion Channel.

BHPB applied to the Mackenzie Valley Land and Water Board for the licenses it needs to mine the pipes. We provided comments to the MVLWB on BHPB's plans. We also made a presentation at the public hearings for the new developments.

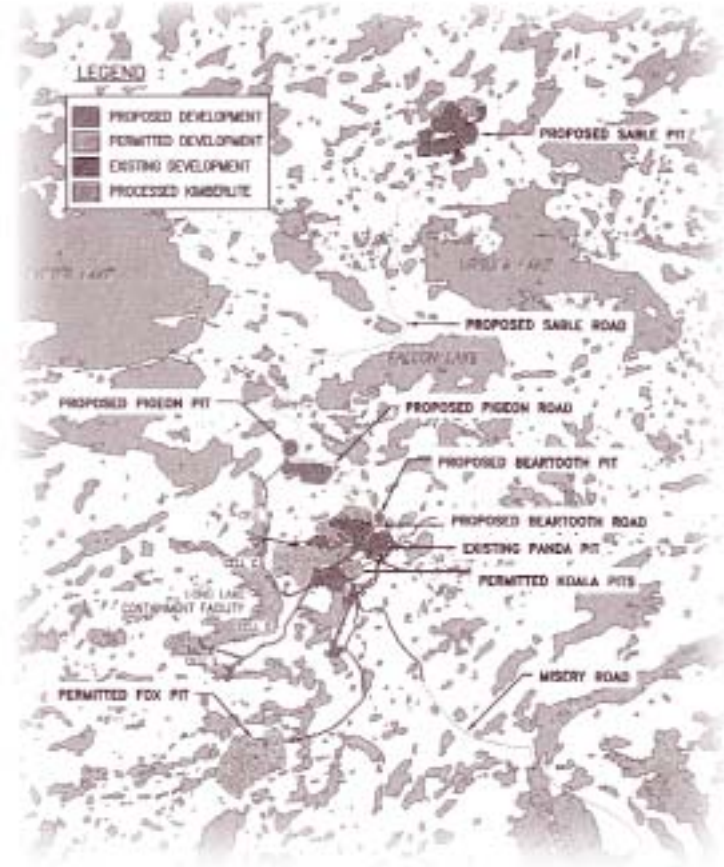
Our Comments to the MVLWB...

In letters and public presentations we told the MVLWB our concerns with the additions to BHPB's mine. Most of our concerns were about possible impacts to wildlife from the roads and possible harmful drainage from the waste rock piles in future years.

Because some of the rocks that will be brought to the surface could produce undesirable drainage over the centuries that lie ahead, it is important that before mining, BHPB should understand the chemical make-up of the rock that will be placed on the waste rock piles. We looked at the work BHPB had done in this regard, and recommended to the MVLWB that BHPB needed to do more work to better understand the types of rock in the pits, especially at the Pigeon pit. We also told BHPB that it should carry out more work in collecting water



The Mackenzie Valley Land and Water Board at public hearings for Sable, Pigeon and Beartooth. AGENCY



Ekati Diamond Mine™ including Sable, Pigeon and Beartooth. BHP BILLITON DIAMONDS INC.



quality samples in the streams and lakes that may be affected by the development, so that monitoring in the future will have a picture of the natural conditions of the site to compare any changes against.

On wildlife, we recommended to the board that all the roads should be built low to the ground to make crossing easier for animals, particularly caribou. We were disappointed that the board gave a permit to BHPB to build the Sable haul road before the board had approved the rest of the development. For a number of reasons, it is better that a mine be permitted as one whole development, and not in separate pieces.

BHPB also gave the MVLWB an estimate of what it would cost to reclaim the mine after closing. We pointed out to the board that the figures did not show the total cost, and recommended that BHPB provide new figures.

By the time you read this, the MVLWB will have reviewed all the documents

and letters and possibly issued the permits to the company. We also will have reviewed the draft permits and licenses and will have provided our comments to the MVLWB before they get issued.



Fox Bridge crossing the Nero-Nema stream AGENCY

Air Quality

A number of activities at Ekati affect air quality which in turn can affect water quality and vegetation important to wildlife. BHPB samples the air, snow, vegetation and water to determine the impact to the environment from emissions and dust created from mining.

Snow sampling carried out by BHPB shows that Kodiak Lake, the closest lake to many of the mine activities, appears to have been affected the most by dust. Dust may be affecting the water quality of Kodiak Lake and other nearby lakes. In 2001 BHPB



Haul trucks on Misery Road causing dust.

looked at the level of metals found in the tissues of lichens. The results showed that some metals found in the lichens are much higher in areas closer to project activities.

What the Agency thinks...

Mining at Ekati is causing increases in dust pollution, and snow and vegetation close to mining activities are being affected. The quality of surface water runoff and melt-water will likely become affected in lakes and streams around the mine, especially as more pits are added to the mine. As dust appears to be the biggest air quality issue at Ekati, there is a need for a study that shows where the dust and air pollutants are coming from and how they can be reduced. Dust monitoring, such as that done for the Sable road, should also be carried out along the Misery road.



Reclamation

Reclamation is the recovery of areas of land and water-bodies that BHPB disturbed during mining. BHPB has said that it will not wait until the mine is finished to do the reclamation but, rather, it will reclaim areas as soon as possible during the mining, so that only a small amount of reclamation will exist at the end of the mine. This approach is called progressive reclamation.

BHPB is also carrying out studies to find out the best way to encourage new plants to grow in disturbed areas. At the moment, BHPB plans to cover the tailings with waste rock. The company is hoping that instead, it will be able to grow plants to cover the tailings in Long Lake. Plant growth would help stop wind and water from eroding the tailings.

Reclamation Activities and Research

The company's research in 2001 looked at how to best grow plants in the tailings. Plants grow very slowly in tailings, as they are a very poor soil for plant growth. BHPB has tried adding different materials, i.e., lakebed sediments, peat, sewage sludge and fertilizers to see if this would help plants grow in the tailings.

The studies showed that lakebed sediments and peat best helped plants to grow. BHPB thinks that this is likely due to more water and nutrients being held in the tailings soil. A study to look at the effect of animals grazing on plants showed that arctic hare and caribou may eat plants, and be a problem for getting plants to grow successfully.

BHPB has already worked on reclaiming some areas at Ekati. In 2001 BHPB carried out work at the Panda diversion channel, the Airstrip, Culvert Camp and Fred's Channel. At these areas BHPB has tried growing plants, and changed some landforms to make water flow in its original stream channels.

What the Agency Thinks...

BHPB is doing some good work in its studies. But, it is far from finished. One of our concerns is that some contaminants, especially some metals, may pass into plants grown on the tailings. Animals that eat these plants may be affected. BHPB needs to look closely at this issue.

We have also told BHPB, government and regulators that standards need to be set that will tell BHPB and others when reclamation is completed. For example, BHPB has said that it believes a number of areas on camp are reclaimed, but without any standards it is difficult to be sure if the reclamation was successful.

BHPB, government and regulators also have to agree on the amount of money BHPB must pay to the government as security. Security is money that government has, and can use, in case the company does not reclaim the site. This year BHPB, government and regulators have been meeting to decide if the money held is enough. Progress has been slow, and more meetings are necessary to get this very important issue resolved.



Long Lake cell B re-vegetation plots DENISE BURLINGAME/BHP BILLITON DIAMONDS INC.





Watching the Regulators

In conducting its mining operations, BHPB must comply with a number of permits and licenses. Regulators are organizations in charge of giving out these permits and licenses. DFO, the MVLWB, RWED and DIAND are all in charge of a permit, license or other authorization issued to BHPB.

Part of our job is to watch how regulators do their job. We try to make sure that regulators develop and issue permits and licenses that best protect the environment.



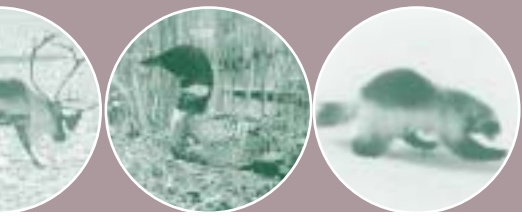
Meeting participants of the Inter-Agency Coordinating Team for BHPB. AGENCY

What the Agency Thinks...

This year we told DIAND that we were very worried about the lack of inspections at Ekati. DIAND has staff who inspect the mine to make sure that the company is doing what its licenses and permits tell it to. However, last year two inspectors for BHPB resigned. This meant that Ekati was not inspected regularly.

We found that last year, DFO and the MVLWB were both doing a fairly good job of keeping track of their responsibilities at the mine. We think that the MVLWB needs to develop clearer rules on how applications are reviewed, but this issue is improving. DFO still needs to talk to communities more, and find a way to use the Fish Habitat Compensation fund that is acceptable to communities, AND effectively replaces fish habitat lost at Ekati.

DFO: Department of Fisheries and Oceans
MVLWB: Mackenzie Valley Land and Water Board
RWED: Department of Resources, Wildlife and Economic Development
DIAND: Department of Indian Affairs and Northern Development



Cumulative Effects

Cumulative effects are impacts to a part of the environment caused by the combination of changes resulting from more than one development. In our last year's annual report (year 2000), we reported our concern about how poorly managed food wastes were attracting wolverine to a number of camps in the Lac de Gras area.

We were very concerned about the number of wolverine that, as a result of food management problems in camps, had to be killed or moved away. This was an example of a significant, negative environmental effect, in which the Ekati project was one of the contributors. We are pleased that this year BHPB is doing a much better job at handling its food wastes. This is causing fewer wolverine to travel into camps and, as a result, the cumulative impact has been significantly reduced.

In the north today, many people are concerned that the growing number of developments may produce cumulative effects. At the moment, there is no clear approach for monitoring cumulative effects of diamond mining, or other projects, in the Northwest Territories. We have heard from community members and others that monitoring agencies looking only at single projects may not be able to detect cumulative effects. To overcome this problem, the concept of a regional watchdog agency has been suggested and we support it.

A regional watchdog agency would have the job of focusing on the changes to important environmental indicators (such as caribou and fish) that might result from a number of projects, such as the diamond mines. Other projects may be included as they are developed. So far, DIAND has been taking some steps to move towards designing such a regional monitoring body. Several challenges, including funding, remain before a regional watchdog body becomes a reality. We have encouraged the federal government to find the needed resources.

Our directors last year reviewed the environmental report for DeBeer's Snap Lake project to see if this new diamond mine might cause effects that would add to the impacts from Ekati and Diavik. Our review is still ongoing, and we will report next year.

On a practical level, our Agency and the Environmental Monitoring Advisory Board for the Diavik project have taken steps to work together on the cumulative effects issues arising from the two operations, such as the design and cooperation on the environmental monitoring programs carried out by both companies. We have jointly hosted and attended workshops, and share a boardroom. We meet regularly to share our concerns and experiences with the projects.



Lupin winter road site map BHP BILLITON DIAMONDS INC.

2001-2002 Annual Report

Recommendations

Traditional Knowledge

1. BHPB should work with aboriginal people to develop a method of documenting the suggestions and concerns of aboriginal people visiting the site.

Wildlife

2. The wolverine track survey should be expanded to four or five times per season. At the same time, BHPB should develop and implement the scent station monitoring program.

3. The data relating to caribou abundance and distance from mine infrastructure should be analysed and presented independently for the northern migration and post calving period.

Aquatic Effects Monitoring

4. BHPB should expand the AEMP to include Leslie Lake.

Special Effects Monitoring

5. BHPB should determine the cause of elevated nitrates within Little Lake.

6. BHPB should conduct follow-up sampling in Little Lake within three or four years to confirm that the lake has recovered completely from nutrient inputs.

7. BHPB should continue monitoring fish in the Panda Diversion Channel in 2002.

8. BHPB should develop a conceptual plan for the flooding of the Panda and Koala pits, and either the long term maintenance or abandonment of the Panda Diversion Channel.

Waste Rock

9. BHPB should conduct a thorough mineralogical examination of all kimberlite types.

10. Next year the seepage survey report should explicitly highlight any occurrences of non-compliant seeps for easy reference.

Air Quality

11. BHPB should establish a dust monitoring program along the Misery road similar to the one in place along the Sable road.

Reclamation

12. BHPB should provide estimates of liability for the Ekati Diamond Mine™, that do not include the assumption that progressive reclamation has been carried out.

13. The company, regulators, government and other interested agencies promptly begin a process to develop clearly defined reclamation completion criteria.



Independent Environmental Monitoring Agency Board of Directors at Ekati™ AGENCY

Independent Environmental Monitoring Agency



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(to June 2002)