



# **Report Card**

# What's happening with the environment?

Water – within licence limits; monitoring program needs to be redesigned to make sure that Lac de Gras has not changed because of Diavik operations.

(See page 24 for details.)

Comments:

- Expert reviews show baseline data is not usable to determine if Lac de Gras is changing.
- EMAB's expert made 30 recommendations for changes to the Aquatic Effects Monitoring Program (AEMP).
- The Wek'eezhii Land and Water Board has directed Diavik to revise its AEMP by May 31, 2006.
- 2005 AEMP report is delayed until June 30, 2006 to allow for changes to AEMP.
- Progress is being made on studies to bring down ammonia levels.

### Fish – stable. Some monitoring information is inadequate.

(See page 34 for details.)

Comments:

- Community participants in EMAB's fish palatability study say that the taste and texture of fish in Lac de Gras has not changed.
- Still searching for ways to replace fish habitat altered or destroyed by mine so as to not disturb more lakes.
- Some monitoring is still not providing useful information. DFO is working with Diavik to improve this.

### Wildlife - stable, within or below predictions; more information is needed

(See page 36 for details.)

#### Comments:

- EMAB's review of the Wildlife Effects Monitoring Program 2005 Report shows that Diavik's effects on wildlife are below the levels they predicted before the project started.
- Monitoring needs to be improved to better determine if and how far the mine's effect on caribou movement is occurring.
- Communities remain concerned about effects of the mine on caribou migration routes and caribou health.
- Diavik has started work to study effects of dust on lichen that caribou eat.
- Regional cumulative effects on wildlife, especially caribou, need to be better studied.

Annual Report 2005/2006

# EMAB Environmental Monitoring Advisory Board

# Letter to readers

### Dear reader,

The Environmental Monitoring Advisory Board's fifth year has been our most intense and productive year.

In August 2005, Diavik submitted their water licence renewal application to the Mackenzie Valley Land and Water Board. We were fully prepared to participate in that process. We held a workshop for representatives of the Aboriginal parties to help them be better prepared to grapple with the technical issues involved. We continued our work related to fish habitat replacement, the ammonia amendment to Diavik's water licence, intervenor funding, and Aboriginal involvement in environmental monitoring.

I'm sure, as you read this report, you will learn about these and many other challenges EMAB has successfully met this year. If you would like more information, please do not hesitate to contact our office at 766.3682.

On behalf of the members of the Environmental Monitoring Advisory Board, I would like to thank the Parties to the Environmental Agreement, the concerned public, Diavik, and the regulators for their active involvement in helping make the Diavik Environmental Agreement as effective and efficient as it was intended to be.

Doug Crossley

Doug Crossle Chair



IAB views the beginning of work on the A418 dik Chair Doug Crossley at centre. The Environmental Monitoring Advisory Board has a new website to keep you updated on important issues. Visit: www.emab.ca

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# What have we done this year?

We continue to work with the people of the Affected Communities to maintain the environmental quality of the Diavik mine area. We do this by communicating, monitoring, involving and supporting communities, advising and recommending, and evaluating. We recognize the value of both Traditional Knowledge and scientific knowledge and we try to use both in our decision-making.

- Aboriginal involvement: The Environmental Agreement for the Diavik Diamond Project (EA) says that the Aboriginal Peoples should be involved in protecting the environment around Diavik. This year, Diavik applied to renew its water licence. As this is a long and complex process, EMAB wanted to ensure that as much information as possible was available to the communities. EMAB held a workshop in Behchoko for community representatives on the subject. Most of EMAB's Aboriginal members also attended the technical sessions related to the water licence renewal in December. Read all about these and other related efforts in the following pages.
- **Community-based monitoring camps:** We organized a second year of camps at Diavik's community-based environmental monitoring camp. This site is located east of the mine, on the mainland. The camps were: Water Quality Monitoring Workshop, Caribou Monitoring Workshop, and the fourth Fish palatability and Texture Study. Over 30 Elders, adults, and youth from the Aboriginal Parties participated in these camps.

• Reviewing reports: EMAB received 18 plans and reports from Diavik. These reports are required by the water licence, the water licence amendment, the fisheries authorizations, and the Environmental Agreement. EMAB focuses most on the Aquatic Effects Monitoring Program reports, the Wildlife Effects Monitoring Program reports and, this year, on reports related to ammonia management and the water licence renewal.

- Building relationships: We work with the Aboriginal Parties, regulators, government officials and Diavik personnel. Having a good working relationship with them is important to us. That also means making sure we all know who is responsible for each area of the environment. We held a workshop with regulators in December to discuss Diavik-related environment issues.
- **Board meetings:** We met five times. We also held six teleconferences and public meetings in Lutsel K'e and Behchoko. The executive committee met 9 times, mostly by teleconference. The personnel committee met by teleconference several times to hire our new administrative assistant.

The Environmental Monitoring Advisory Board welcomes questions and comments. Call us at 766.3682 Email us at: info@emab.ca

# ?edırı gháye ?edlaghe begháláída?

Háyorıla dene náde bexèl zeghálàìda Dıavık tsámba k'é háza sí gha.?edırı t'at'u sí dene xèl yáítı, zasié háídı, háyorıla bexèl bets'ídı, yatı báít'a, tth'l zasié bek'óníta.Dene bech'ánı chu kat'íne bech'ánı t'at'u la heltsı sí bet'áít'ı, tth'ı begháré yakı híltsı.

Dene bexèl Ní hadı xa yatı theza Dıavık tsámba k'e hałé bexèl zadı-ú dene bexèl ní hadı Dıavık náré ní theza. ?edırı gháye, Dıavık tue zerihtł'ís dekóth hurekèr. ?edırı thá beghálada tth'ı bóreníle. EMAB t'a huréla háyorıla dene náde hanı beba thela xa. EMAB háyorıla ts'èn dene zedırı ní halnı dene xel déltth'ı beba náákı xa yıla. EMAB bets'ı dene háyorıla náde sí tue ts'ı zerihtl'ís gha náákı kath yatı za k'e zeyer náthedèl.?edırı nedhé zerihtl'ıs bek'e yanèltı hadúwile.

Háyorıla dene xèl dechèn yághe náts'ede zasíé net'ı-Do ná gháye dechèn yághé náíde zasíé bek'únıka Dıavık náré. T'a hoza sí tsámba k'é ts'ı thé ts'en nı nedhe k'e. Dechèn yághe náts'ede t'a hası-Tue t'at'e begha náátı, zetthèn t'at'e begha náátı tth'I łue net'ı bek'únata. Kona zaşı zenékuı, zahneth tth'I sekuı kódhe dene ts'ı zane náthedèl. Hanı net'ı-EMAB hanı begha nílya Dıavık ts'ı. Dırı hanı sí tue ts'ı ?erihtł'ís begháré, tue ts'ı ?erihtł'ís yatı ?edo nalye, łue ts'en k'alde, tth'ı ní bek'e ?eghálada xa yatı hálı. EMAB t'a neł?ı sí tue t'at'u bexèl ?eghálada banı, k'ech'adı bexèl ?eghálada banı tth'ı, ?edırı gháye, dırı amonıa bet'á tthe nálk'ệth t'at'u beghálada hası tth'ı tue ts'ı ?erihtł'ís koth nałe hasí.

?eła zeghálada hałé-Dene bexỳl zegháláída, zerihtł'ís hełtsi dene begháré zeghálada xa bexỳl zegháláída, kat'íne k'álde tth'i Diavik bets'i dene. Nezu bexỳl zegháláída nuweba bet'óréza. T'ạ nik'e zasíé hałni hasi bek'órílyą. Dene betl'ázi ?erihtl'ís begháré zeghálada kath yati za nááki záílya t't'u Diavik ní bek'e zeghálana hasí.

Náákı-Sulághe k'enedhe náítı. K'etaghe k'énedhe beye yatı t'a náíltı tth'ı Łutselk'e chú Behchoko chu ná k'énedhe náíltı. Dene 2eła déłtth'ı k'alde łúta náíltı, beye yatı t'á. La dene 2eła déłtth'ı beyé yatı t'a ná náitı dene dekóth néritlis xa.

### Du xok'e ayìı edàts'jla?

Dıavık Mıne gha ndè esàwòdech'à gha dọne xè eghàlats'ìde. Du haanì eghàlats'ìde, dọne xè gots'ende, asìı hots'ıhdı, dọne goxè agets'eha xè kòta gıts'àts'edı, yatı gıgha ts'eha, yatı gogha gehao eyits'o asìı azho wek'ànàts'ehtaa. Dọne naawo sìì wet'arà họt'e wek'ets'ezho haanıkò naedik'èzho naawo su wet'arà wek'ets'ezho, eyit'à naawo ts'ehtsı ha nındè ełak'a weghaà naawo ts'ehtsı.

Dọne soh gixè: Diavik laa whero sii, ndè esàwòdech'à gha naawo giìto họt'e, eyi naawo yìì dọne soh Diavik goxè sombak'è wemoò ndè goòla sii wexogihdi ha naawo giìto. Dii xoò gha sii, ti gha nihtł'è giochi ha geèke. Dii naawo wha gots'ò wek'e eghàlahoda neèt'à EMAB gondi hazho deghaà kòta ts'ò ade ha giwo. Eyìi naawo gha EMAB kòta yagola done xè łegèadì, eyits'o Tati Zaà k'e done soh gohxè aget'i sii łegehdì goxè agèat'i. Dii wegondi azho ida nihtł'è weyiì dek'ètł'è.

Kỳta yagola asìı xogihdi k'è: Dii achị nàke xoò Diavik kỳta gots'ọ dọne asìi hogihdi gha hoòlį. Ndèedee k'e K'àmbatsòỳ ts'ọhk'e dii kỳ akọ nègìla. Dii haani k'e eghàlagìde: ti wexogihdi ghọ hoghàdegetọ, ekwỳ edị ts'ỳ nọỳra wexogihdi, hwe dị xoò ts'ỳ wekwỳ ahsì detọ nìì gha wek'agehta. Qhdaa 30, dǫne eyıts'ǫ chekoa azhǫ goxè agèat'į.

Nıhti'è Weghots'èda: Dıavık ts'o 18 ıda gogha nıhti'è hohiè eyıts'o ayıı edàtio hagıla gha nıhti'è gehtsı t'à hatio weghàts'ıda. Tı nıhti'e, tı nıhti'è ładı azı, hwe gha k'aàde eyıts'o ndè esàwòdech'à gha nıhti'è dek'èti'è, eyıts'o du xoò k'e ammonia edàanı wexòedi ha eyixè tı gha nıhti'è goòchi ha nıhti'è hoòlı.

Nezį ełexè eghàlahòda gha weèdza ha: Done soʻh xè eghàlats'ide, government cheèke eyıts'o Dıavık goot'i azho gıxè eghàlats'ide hot'e. Gıxè nezi eghàlats'ide ha gogha wet'azà hot'e. Ameè seè, ndè k'e ayiı edàtło ts'ò k'agede wek'èjo dè nezi. Dıavık ndè k'e eghàlagide gho Tatı Zaà k'e łegèadi, weghà eghàlats'ide naawo wegho łets'èadì.

K'aadee Legehdì: Sılaı ts'ò łets'àedı. Eyıxè fò k'e ek'ètaı łets'àedì eyıts'o Łıtsohk'è eyıts'o Behchokò sıı łets'èadì. K'aade 9 łegèadì, fò zo t'à. Done laà k'e nègeledo sıı fò t'à łegèadì, gogha nıhtł'è k'èdìa gınıgehtł'è gha haanı łegèadì.

# Holivakpita havaknikmik okiok?

Ovagut havakhimaktogut pikkatigivlogit inuit homi nunait Kanogiliot Inukaknit nunaotait ovani Diavik oyagakhiokvikmi. Ovagut havaktogut inuit tomaomapkakhogit, taotoktogut, elaoyugut ovalo ekayuktavutlo inukakniit, onnioyukhogit ovalo pitkovlogit, ovalo ehivgiokhivakhotalo. Ovagut elihimayugut tamaita Inuit Eliktkohiit ovalo naonaktolikiotlo elihimayait ovalo tamaknik atogahoakhogik ehomaliogotigivagavut.

Kablonanggogitot elaoyut: Okoa Nunalikotit Angigotit omonga Diavik Oyagakhiokvikmot (EA) okaohikaktok okoat Kablonanggogitot Inuit elaoyukhaokmata nunanik kayagitkoiyut ovani Diavik-mi. Okiok hamani, Diavik apikhivaktot piomaplotik nutaamik emmaktutmik laisinigomayut. Hamna apikhiyami inuknit pinnahaaknakhoni ayoknakhonilo, EMAB pioimayut kihime naonaitkotit tonivakhogit nunaliit piyakhait. EMAB meetikpaktot inuit meetikatigivlogit tafominga okaotikakhotik. EMAP-kot okoalo Kablonanggogitot meetiktit ovalo naonaktonik ehivgiokhivakhotik emmaktutmik laisimik nutangogomaplogo ovanoi Desaipami. Taigoagiamik hapkoat okoalo allat havakhat hamaniitot.

Nunanit-atokhotik taotutit tupikakvikaktot: Ovagut opalongaiyaktogut aipanik inuit tupiktinahoakhogit Diavikmi nunaliit-elaolotik nunanik taotoktiniaktavut inuit. Ona tupikakvikhak inniaktok kivataani oyagakhiokviop, ovani nunainakmi. Okoa tupikakviit emaitot: Emmak emagiknia Taotoklogo Meetiotiginiagat, Tuktutlo Taotoklogit Meetiotiginiagait ovalo hitamakhat ikaluknik Niggilotik Niggiominaknikhiokniakmiot ova Nikkikatiagnaktot ikaluit Ehivgiokniagait. Kaffit avatkomayut 30 eniknigit, eniknigitlo inulgamiitlo Kablonanggogitot elaoniaktot tupiktitaolotik.

Ehivgiogat onipkat: EMAB pivaktot 18-nik opalongaiyaotinik ovalo onipkanik Diavitkonit. Okoa onipkat piagiakaktot atokmagit emaktutit laisiata, ona emmaktut laisik allangoktokhaklo, ikaluit kanogilioktokhat, ovalo Nunalikotit Angigotit. EMAB havaknahoaktot havaagilgoit Emakmiotat Kanogilitot Taotoklogit onipkakniagait ovalo, okiok, onipkat kagaktitaotit monagiokhat ovalo emmaktutit laisikhaklo nutangogomayat.

Pivalialotik pikatigiiknikmik: Ovagut havaktogut pikkatigivlogit Kablonanggogitot hivitogigaptigik. Ovagut elittogivigaptigik inuit monagiyakhaptingnik nunalikotinik. Ematot ovagut honanik poigoitailinikmik honat nunalikotinik. Ovagut meetikpaktogut malikoiyitkot ovani Desaipami okaotigivlogo Diavitkot nunalikotainik.

Katimayiit meetiotait: Meetiktitlo meetiktogut tallimaiktokhota. Ovagut meetikpakmiogut fonikot ovalo malgoklo inuit katimapkakhogiot meetikatigivagavut ovani Lutsel K'e ovanilo Behchoko. Okoa atangoyat katimayiit meetikto 9-nik, fonikot meetikpaktot. Okoa havaktit katimayiit meetiktotlo fonikot kafeektokhotik nutaanik afisimi havaktinigahoaligamik.

# Diavik

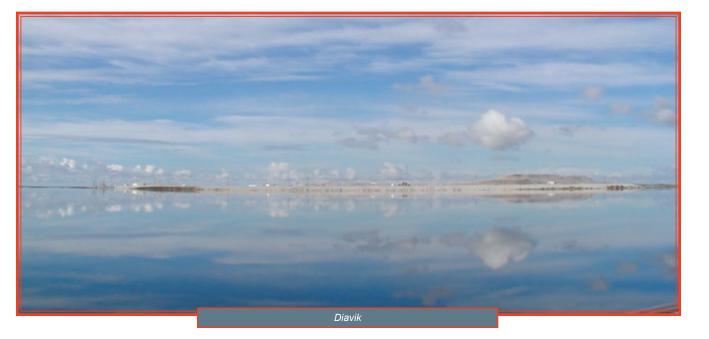
Located on a 20 square kilometre island in Lac de Gras, Diavik is approximately 300 km by air northeast of Yellowknife, the capital city of the Northwest Territories, in northern Canada.

Diavik mines diamond ore bodies, commonly called kimberlite pipes. The pipes, located in shallow waters of Lac de Gras, are small compared to the world average, but they contain a higher than average content of attractive, high quality, and readily marketable diamonds.

To safely access the pipes, Diavik constructs dikes allowing the overlying waters to be removed temporarily. Diavik completed the first dike encircling the A154 North and A154 South pipes, and virtually all of the physical plant in 2002. Construction of a second dike, the A418 dike, began in 2005. Also in 2005, Diavik began construction of two decline tunnels, one that will allow underground feasibility studies of the A154 and A418 pipes, and one that will allow bulk sampling of the A21 pipe.

All of the mine's physical plant is located on East Island and includes a kimberlite processing plant, permanent accommodation complex, maintenance shop, four 18million litre diesel fuel storage tanks, boiler house, sewage treatment plant and powerhouse. Elevated arctic corridors carry services and provide enclosed walkways that connect all major buildings. In addition, there is a drinking water treatment plant, and a wastewater treatment plant.

At December 31, 2005, Diavik's on-site ore reserves were 28.2 million tonnes containing 3.2 carats per tonne. Since production began in January 2003, Diavik has produced 19.7 million carats of rough diamonds. Total mine life remains 16-22 years as outlined in the feasibility study completed before construction.



## What is the mine's environmental setting?

Lac de Gras is a large lake roughly in the centre of the Slave Geological Province, north of the tree line, and in Canada's Southern Arctic ecozone. The area is cold and dry. The lake is the headwaters of the Coppermine River, which flows 250 kilometres north to the Arctic Ocean. Lac de Gras is typical of arctic lakes in being quite cold with long ice-covered periods, with little food for fish and other creatures. Fish species include lake trout, Cisco, round whitefish, Arctic grayling and burbot. Lac de Gras is also near the centre of the range of the Bathurst caribou herd. The population is now estimated at 185,000. Many other animals include the Lac de Gras area in their home ranges, such as grizzly bears, wolves and wolverines, smaller mammals, migratory birds and waterfowl

For a copy of the Environmental Agreement visit www.emab.ca or contact our office at (867) 766.3682

### Who signed the Environmental Agreement?

The Board has one representative from each of the Parties that signed the EA:

- Tlicho Government (TG)
- Yellowknives Dene First Nation (YKDFN)
- Lutsel K'e Dene First Nation (LKDFN)
- Kitikmeot Inuit Association (KIA)
- North Slave Metis Alliance (NSMA)
- Government of the Northwest Territories, Environment and Natural Resources (ENR)
- Government of Canada
- Diavik Diamond Mines Inc. (Diavik)

The Government of Nunavut (GN) has a representative on the Board because the EA recognizes their involvement in trans-boundary issues, such as water quality and wildlife.

# Working for the environment -Environmental Monitoring Advisory Board (EMAB)

## Why was EMAB formed?

We exist because of a contract called the Environmental Agreement (EA) for the Diavik Diamond Project. The EA came into effect in March 2000. Since then, federal and territorial government departments, Aboriginal groups and governments, and Diavik have worked together to make sure the environment around the Lac de Gras area remains as unaffected as possible by the Diavik mine. The EA also says that Diavik must comply with all licences, leases, and laws, and explains the steps that may be taken if it is not. It talks about environmental management plans and monitoring programs, and several other issues such as security, enforcement, and reclamation and abandonment.

Finally, the EA sets out EMAB's mandate.

The EA states that EMAB will work independently and at arm's length from Diavik and the other Parties who signed the agreement. It explains EMAB's mandate and lists who will sit on the Board, and notes that the Board will exist until full and final reclamation of the mine.

# Why is the EA important?

The EA is a legal contract between the Parties who have signed it. It states the commitments that Diavik and the regulators made to make sure that the effects of the mine on the environment are kept to a minimum.

The EA includes the requirement that Diavik meaningfully involve the Aboriginal Peoples in the environmental monitoring of the Diavik mine. This includes the use of Traditional Knowledge and Inuit Qaujimajatuqangit (TK/ IQ).



# Working for the environment -Environmental Monitoring Advisory Board (EMAB)

### What do we do?

The EA lists 13 points that cover a broad range of issues and activities that we need to consider in relation to the Diavik mine and the environment of the Lac de Gras area. We've condensed the full mandate for this report. Our major tasks include:

- communicating
- monitoring
- involving and supporting communities
- advising and recommending
- evaluating

As issues arise, we are usually involved in all five tasks.

#### How are we funded?

Diavik provides an annual payment of \$600 000, plus cost of living increases. For special research or projects that cannot fit within this amount, the EA allows EMAB to

submit proposals to Diavik. They must either fund them or explain their reasons in writing for not funding them. EMAB or Diavik can ask the Minister of DIAND to review the proposals to Diavik, the regulators, and the Parties to the EA, as well as the decisions.

EMAB is a registered not-for-profit society of the Northwest Territories.

### Where are we?

We have an office in Yellowknife, with three staff:

- executive director
- communications coordinator
- administrative assistant

Our hours are from nine to five Monday to Friday. Anyone can visit our office, which houses a library of materials on environmental matters related to the Diavik mine.



EMAB (from left) Florence Catholique (Vice Chair), Tom Beaulieu, John McCullum (Executive Director), Erik Madsen (Secretary Treasurer), Eddie Erasmus, Floyd Adlem, Valerie Meeres (alternate), Sheryl Grieve, Doug Crossley (Chair), John Morrison.

# What is a commitment?

In the Environmental Agreement, a commitment means a promise made by Diavik to take steps to lessen the effect on the environment or any duty given to Diavik because of a recommendation, decision, or an authorization, licence, lease, or permit.

# **The Board**

The Environmental Monitoring Advisory Board members represent a broad cross-section of northern society, with experience ranging from years in corporate and public service in the North and around the world to life spent close to the land. This diversity brings with it challenges and opportunities, as we search for ways to build strong relationships with each other and with our regulatory and company partners. We will continue to work to ensure that communities are participants in all aspects of environmental monitoring, and mitigation measures associated with Diavik.

#### Donald Havioyak, Hivoliokti Kitikmeot Inuit Katimayiit

"KIA havakatigivagait okoat havaktit ovaniota EMABkot havaktingit ovani okiok enikmat Diavitkot oyagakhioktit emmaktutait laisitoktitlogit nutangogahoaktoni ema ayokhaknaitomik emakmik taotogiami emagiknianik okaotikhat taotoktaoyukhat emap tahinik oyagakhiokvikni Ovagut nammagiakot okoa EMAB-kot havagahoaliktot pikatigilogit havaktakhait okoat AEMP ayokhaotigivagait, okoa emmat taotogiami kanogilitot allangogiakhaita oyagakviokvik Lac de Gras-mi emakakniani. Hamna taotogiami emmaknik hivitoyuk okononga KIA-not ovalo nunaptingnot, elait emak tahamangaaktok emmiktakvigikmatjuk emmak tahamaninggaktok.

"Hajja emailingmiogut ovani 2005mi, tikkoaktaohimayut KIA-kot Nunatakhimavut inuit elaovakmata ovani Diavik-kotni nunani-emaknik taotoktot havakvikaktot ovalo ovagut koviagiyavut ekayuktavut okaktokhat ovaptingnot ovalo hokot pitkoiyut emmaktutinik okalakniakmata, tuktunik taotoklotiklo ovalo ikaluknik nikk ikatiaknikhioktokhat. Okoa Inuit Kaoyimayatokangit atokniagait Tupikakvikmi elitkohit ematot nunamik oyagakhiokvikmi ehivoiokhivami tamaita atokoyaoyut atoligiangitni elihimaligoptigik oyagakhiokvikmi."

# Working for the environment -Environmental Monitoring Advisory Board (EMAB)

### Who are we?



**Doug Crossley, Chair** Kitikmeot Inuit Association

I have been a part of EMAB since September 2002. The Kitikmeot Inuit Association continues to promote the need to safeguard Lac de Gras, headwaters for the Coppermine

River. That's why we've supported EMAB's participation in the review of Diavik's water licence renewal application. It is important that all EMAB members and Diavik staff work together to ensure that the necessary monitoring requirements are in place to maintain the pristine nature of Lac de Gras. EMAB also continues to stress the involvement of the Aboriginal Parties in environmental activities at the mine site. There is an ongoing need to effectively integrate Traditional Knowledge and Inuit Qaujimajatuqangit (TK/IQ) into the mine's environmental practices. The communitybased monitoring camps near the mine site begin to address the issues of Aboriginal involvement and the gathering and use of TK/IQ.



## Florence Catholique, Vice Chair Lutsel K'e Dene First Nation

I have been involved with EMAB since the beginning as the Lutsel K'e Dene First Nation (LKDFN) representative. This Board was set up to allow the Aboriginal Parties to the

Environmental Agreement to have a better understanding about the environmental aspects of the Diavik mine. Our key concerns have been the water and the caribou, but there are other issues that have a direct link to these two concerns, such as dust and fuel emissions. Other important matters are: how monitoring is done in the way of methodology, frequency, analysis, and interpretation of data, and implementation of results. LKDFN now wants to focus on how our people will be involved in this type of work at the mine. Where are the training programs to enable our people to work as environmental monitors at the mine?

Łutselk'e dene beba thıda zedırı Dıavık EMAB dene zeła déłtth'ı. T'atthe bonídhèr ts'ı sexèl hıle. ?edırı dene zeła déłtth'ı zasié xałnı t'at'u tsámba k'e háza zeghádálana. Hanı dene nuwe ts'ı k'aldher hát'u yórelzı. T'a begha nánıde sí tue chú zetthen hát'u húlı begha thèn tth'ı zasié tles chú tth'ı thaı. Begha thèn zasié hadı, zasié bek'únaka, zasié hałe yakı nílye t'á. ?edırı dene zeła déltth'ı zasié hałnı t'at'u zeghálada sí nuwe ts'ı dene yeghálana hasi yenelzı xa hurélzı. Dlíne dene húneltèn xa zasié háza bet'a ní k'e zasié hulı háłnı zedırı tsámba k'e?



# Erik Madsen, Secretary Treasurer Diavik

I continue to represent Diavik Diamond Mines as its member, as well serve as the Board's secretary treasurer. This past year seemed to fly by but the Board kept

busy reviewing pertinent monitoring programs and other submissions by both the company and regulators. EMAB continues to provide leadership as to how effective environmental management can be a shared responsibility, an example being its involvement in Diavik's water licence renewal process.



### Sheryl Grieve

North Slave Metis Alliance

This is my second year serving on EMAB. A lot has been going on this past year: Diavik's water licence renewal application and the redesign of their Aquatic Effects Monitoring Program, just to name two big endeavours.

That's not to mention all the processes that stem from other

# Working for the environment -Environmental Monitoring Advisory Board (EMAB)

mines. One issue that continues to concern the North Slave Metis Alliance is the involvement of Aboriginal Peoples in environmental monitoring. Hopefully, the coming year will see some improvements in this area.



#### **Eddie Erasmus** Tlicho Government

I have represented the Tlicho Government in many capacities, including serving as one of several negotiators for the Tlicho Agreement. Most recently, I took the position of Director

of Tlicho Lands Protection Department. In all my duties, the land and its resources have always been of great importance to me. This is also true of my duties on EMAB. The role of an independent watchdog in relation to the environment and mining development is critical to the careful guardianship of the land and its resources for future generations.



# Lawrence Goulet

Yellowknives Dene First Nation

I am proud to be an ongoing member of EMAB. As someone who continues to be active on the land, as my father was, I know the value of carefully monitoring

what happens with the mines and the regulators. Sitting on EMAB is important for my family and my community, today and for the future.



### Floyd Adlem Canada

After a year's leave from EMAB, I'm glad to be back working with the other EMAB members. The Board has been very busy over the year and my first task will be to get caught up on all the activity. I've been in the North for over 30 years, and in that time I've seen the evolution of environmental responsibility. Boards like EMAB serve a critical role in ensuring that mining in the North is done responsibly.



### Tom Beaulieu

ENR, Government of the Northwest Territories

I was appointed to my current position as Associate Deputy Minister of the Department of Environment and Natural Resources in April 2005. I was then appointed to serve on

EMAB. I think the work done by EMAB is work that is done for future generations. In today's society everyone is after the mighty dollar and at times it is at all costs, including the environment. My wife refers to this type of work as "working for our grandchildren because they can't right now."



#### **John Morrison** Government of Nunavut

Over the last four years on EMAB one of my functions has been to represent

the Government of Nunavut on matters that could influence the Coppermine

River watershed. Along with the Hunters and Trappers Organization and the Kitikmeot Inuit Association, EMAB has tried to bring increased consideration to the fore as to how Department of Fisheries and Oceans policies, as well as other regulator policies, affect the Inuit peoples. I look forward to seeing the further implementation of Traditional Knowledge and its integration into the fabric of mine operation and monitoring. Donald Havioyak, President Kitikmeot Inuit Association

"KIA staff worked closely with the EMAB members over the initial course of the Diavik mine's water license renewal process to ensure the problematic activities related to monitoring water quality were being fully addressed. We are pleased to see that EMAB is moving ahead with an intervention relating to the AEMP shortcomings, which remains a key element of monitoring change in Lac de Gras water quality. This is a matter of critical importance to the KIA and our communities, some of which rely on drinking water coming from this source.

> "Once again in 2005, designated KIA Beneficiaries fully participated at the Diavik community-based monitoring camps and were pleased to be able to provide participant input and direction on the issues of water quality, caribou monitoring and fish palatability. The Inuit Qaujimajatuqangit utilized to achieve the Camp recommendations hopefully can continue to assist to achieve environmental program results that incorporate all forms of knowledge available.'

### What happens when EMAB makes recommendations?

In the years since its creation in 2001, EMAB has made 44 recommendations.

We get involved and make recommendations when regulators raise issues, or when regulators and Diavik disagree on an issue. We also make recommendations when the regulators or the mine are not addressing an issue we think is important. The Environmental Agreement says our recommendations are to be taken seriously and given full consideration. Regulators and Diavik must respond within 60 days. They must accept our recommendations or give us reasons why they did not.

Before making a formal recommendation, we try to resolve an issue through dialogue.

EMAB made 3 recommendations in 2005-2006 and continues to follow up on recommendations from previous years. These are outlined throughout this report.

If there is an issue that interests you and you would like more information, contact us at 867.766.3682 or visit www.emab.ca

# Working for the environment -Environmental Monitoring Advisory Board (EMAB)

### What are our special issues?

Wildlife, water, and fish – those areas matter most to us.

Early on, we realized just how many environmental issues there are and how comprehensive our mandate is. We knew that some areas were of highest priority and needed our complete focus. Thanks to the fact that the Aboriginal representatives communicate with their communities and understand their concerns, we were able, right from the start, to establish priorities.

This report is full of information about the work we did in the areas of water, fish and wildlife.

### What are the communities?

The communities we support (Affected Communities in the EA) are those that belong to the Aboriginal Parties who signed the EA:

- Behchoko
- Wekweti
- Gameti
- Wha Ti
- N'dilo
- Dettah
- Lutsel K'e
- Kugluktuk
- Metis of the North Slave

Talking with community members, and with people in the communities who have a direct interest in wildlife harvesting, fish and water quality issues, is one of our top priorities.

When there is a need for information on an environmental issue we often turn to Elders and community members who have experience and knowledge. We have terms of reference in place to form Traditional Knowledge panels. These panels bring together Elders from all five Aboriginal Parties to discuss an issue and share their valuable knowledge with us.

## In the communities

### Behchoko

In early November 2005, EMAB held a public meeting in Behchoko. Our Tlicho Government representative, Eddie Erasmus, introduced our Chair, Doug Crossley, who spoke about the Board, what it does, and what it has been up to over the last year.



# Working for the environment -Environmental Monitoring Advisory Board (EMAB)

### Lutsel K'e

Later in November, EMAB held a public meeting to update the community of Lutsel K'e. EMAB's Lutsel K'e representative, Florence Catholique, informed the community of EMAB activities that had taken place since our last visit.

Florence also updated the community on EMAB's reviews of the Wildlife Effects Monitoring Program and the Aquatic Effects Monitoring Program.

During the discussion in Lutsel K'e, after the presentation, community members raised several important points. Here are a few of them:

- There needs to be more Aboriginal participation in monitoring. Lutsel K'e wants to have its own people doing monitoring. Someone from Lutsel K'e should be at the mine to monitor caribou.
- Migration of caribou is now further from the community. Answers and more research are needed on migration change. Is it natural or is it because of the mine?

- Fencing should be put around the whole mine that's the only way to keep caribou off the island. When the mine closes that will be the only way to make sure caribou do not feed or graze on contaminated plants.
- Lutsel K'e should invite KIA to visit to discuss water and fish issues.
- Areas of concern because of the lack of information: the rock piles, contaminated vegetation, and emissions, including chemicals from blasting.
- Have there been any studies done that looks at the spiritual value of the land in relation to the monetary value of the land?
- Roads should not be built in the path of the caribou migration.
- Water licence: suggest a three-year term so that it can be looked at on a regular basis.

#### Addy Jonasson Chief

Lutsel K'e Dene First Nation

"It is important for me as the Chief of Lutsel K'e Dene First Nation that the environmental impacts of the mines is minimal as it relates to our rights as Aboriginal people to hunt, fish, trap and gather and what EMAB monitors to ensure that the mine follows best practices as it relates to the environment."

# **Traditional** Knowledge

There are many ways to define Traditional Knowledge (TK) and Inuit Qaujimajatuqangit (IQ), but generally it means knowledge that Elders hold from experience and is passed down to them through the generations. It is continuous and grows. Interpretation of knowledge is important. Traditional knowledge is not just the past, but the future combined with the past.

### INVOLVING AND SUPPORTING OUR COMMUNITIES

### At the camp

EMAB organized three camps, with Diavik funding, at Diavik's community-based monitoring camp in the summer of 2005. Over 30 Elders, adults, and youth representing the communities participated in the second Water Quality Monitoring Workshop, the Caribou Monitoring Workshop, and the fourth Fish Palatability and Texture Study.

The camp is located near the mine site on the mainland. Participants from four of the five Aboriginal Parties lived at the camp for three days during each camp. The Tlicho Government was unable to participate because they were busy implementing the Tlicho Agreement.



The community-based monitoring camp is located on the mainland, across the water from Diavik.

# ENVIRONMENTAL MONITORING ADVISORY BOARD

### Involving and supporting our communities

### Water Quality Monitoring workshop (July, 2005)

Water quality is very important to the Aboriginal people who signed the Environmental Agreement. Lac de Gras and the Coppermine River watershed have long been an integral part of life on the land. Good water quality means that fish stay healthy and that the water remains drinkable.

In 2004, we organized our first Water Quality Monitoring Workshop. We set up this camp as a three-day information and training session. In that first year participants learned the basics of water sampling and the use of scientific equipment. They chose three water-sampling sites around the Diavik mine site, which they thought important because of how deep the water was, which way the current moved, and the distance from the dike. Diavik does not monitor these sites under their Aquatic Effects Monitoring Program.

In 2005 we added sediment and benthic sampling. Benthics are the small creatures that live on the lake bottom, on which the fish feed. We used the same three sample sites so that we could look for changes from year to year.

The Board is currently working with Diavik to find ways to incorporate the data from the camps into the larger water quality picture.



Diavik environmental staff, Seth Bohnet and Ray Eskelson, demonstrate the first steps of water sampling to camp participants.



Eric Crapeau and Kevin Charlo (YKDFN) collect sediment from the bottom of Lac the Gras to sample benthic invertebrates.



Cathy Anablak (KIA) Joyce Isadore and Irene Catholique (LKDFN) with a core sampler.

### **Participants**

Cathy Anablak (KIA), Tyrone Anablak (KIA), Rita Pigalak (KIA), Irene Catholique (LKDFN), Delphine Enzoe (LKDFN), Joyce Isadore (LKDFN), Fred Turner (NSMA), Sara Turner (NSMA), Kevin Charlo (YDFN), Eric Crapeau (YDFN) Cook: Bella Rose Eyegetok (KIA)

Benthic invertebrates are animals without backbones that live in lake-bottom habitats, such as larval insects.

### **Participants**

Joseph Niptanatiak (KIA), Paul Omilgoitok (KIA), Mona Tiktalek (KIA), Alex Rabesca (LKDFN), Baptiste Catholique (LKDFN), Terri Enzoe (LKDFN), Ron Balsillie (NSMA), John Paul (NSMA), Travis Liske (YDFN), Jonathan Mackenzie (YDFN), Dave Abernethy (Environment and Natural Resources, GNWT) Cook: Bella Rose Eyegetok (KIA)

This workshop was planned because people in the communities were telling us that not enough information was being passed on to them about what is happening with caribou.

### INVOLVING AND SUPPORTING OUR COMMUNITIES

### Caribou Monitoring Workshop (August, 2005)

Participants received information on Diavik's caribou monitoring programs in the Lac de Gras area and on regional monitoring by Environment and Natural Resources (ENR). The group toured the mine to gain a better understanding of on-site caribou movement, on-site monitoring programs, and to view the temporary diversionary fencing set up to deflect caribou from the Processed Kimberlite Containment (PKC) area.

Finally, the group discussed company and government monitoring efforts in the context of Aboriginal involvement in monitoring, with a view to improving caribou monitoring. They also discussed the caribou-related recommendations in EMAB's review of the Wildlife Effects Monitoring Program (WEMP).



Partcipants of the caribou camp: (back, from left): Mona Tiktalek, Terri Enzoe, Travis Liske, Jonathan Mackenzie, David Abernethy, Alex Rabesca, Johnny Paul, Baptiste Catholique (front, from left) Ron Balsillie, Joseph Niptanatiak, Bella Rose Eyegetok, Paul Omilgoitok and Michele LeTourneau



Paul Omilgoitok watches caribou from a distance.

### INVOLVING AND SUPPORTING OUR COMMUNITIES

Based on the information they'd gathered, the group developed recommendations for EMAB's consideration related to caribou monitoring and Aboriginal involvement:

#### Caribou tracking collars:

The group agreed that the number of caribou collars used on the Bathurst herd should remain as is for now.

#### Aerial surveys:

The group agreed that joint aerial surveys by Diavik and BHPB could be expanded. However, the group insisted that any changes (redesign) that might be made to aerial surveys – or any other monitoring effort – needed to be made in consultation with the Aboriginal people. The group also noted that youth should be involved in redesign to facilitate involvement in future monitoring.

# Improving caribou monitoring/Aboriginal involvement (In order of importance):

1) The group agreed that a small, mobile two-person camp set up where the caribou are would be the best way to go. This is suggested for both Zone of Influence monitoring (close to the mine) and regional monitoring (control sites far away from the mine). This applies to the spring migration as well as the fall migration. Furthermore, the group agreed that this could be a way for Diavik to do its caribou scanning required by the WEMP, as the Aboriginal people have the time to walk the land and watch caribou for extended periods. 2) An Aboriginal person should be at the Diavik site with the sole job of monitoring caribou and reporting to communities.

3) Anyone who passes through the area and sees caribou should report what they see to one central agency.

### Cumulative effects:

As the group felt everyone is responsible for cumulative effects and no one is dealing with the issue, they concluded that EMAB should host a workshop that would bring together all the governments and Aboriginal groups and get things moving.

The recommendations from the caribou monitoring camp about caribou monitoring and Aboriginal involvement have been sent to Diavik for their consideration. Recommendations about caribou tracking collars, aerial surveys, and cumulative effects are ongoing issues that we continue to work on through conversation with Diavik and regulators. The status of these can be found later in this report.



Scott Wytrychowski, Diavik's environmental manager, gives the caribou participants a site tour, explaining where on East Island caribou might be travelling.

# **Study Design**

As per subsection 35(2) 9 of the *Fisheries Act*, Diavik, in cooperation with DFO and Aboriginal Parties, developed the study design. All involved drafted, revised, and agreed to the study design. Diavik conducted the study at the mine site on Lac de Gras in 2002 and 2003.

### The Comprehensive Study Report says

"Fisheries: The Regulatory Authorities conclude that there will be no significant adverse environmental effects on fisheries in Lac de Gras. Diavik will be required to modify its Aquatic Effects Monitoring Program in accordance with the environmental agreement and/or the Fisheries Act (FA) authorization. However, given concerns raised by the Aboriginal people, a follow-up program that will be specified in the environmental agreement and/or the fisheries authorization, will require Diavik to: i) collect baseline information regarding the palatability and texture of fish in Lac de Gras, and ii) undertake periodic monitoring of fish flesh for palatability and texture."

#### INVOLVING AND SUPPORTING OUR COMMUNITIES

Fish Palatability and Texture Study (August, 2005)

During the Environmental Assessment, Aboriginal groups expressed concern that inlake mining might affect the fish in Lac de Gras.

The Aboriginal Parties, with the Department of Fisheries and Oceans (DFO) and Diavik, developed a taste and texture study. The study also involves taking samples and sending them for scientific analysis. This is to monitor fish populations and fish health.

The fisheries authorization requires that the Aboriginal people repeat this study every five years, using the 2002 results as baseline data. Participants of the 2002 study asked to repeat the study every year.

EMAB now organizes the Fish Palatability and Texture Study at the community-based monitoring camp. We conducted the fourth study in 2005 over three days.



Ashton Hawker helps set the nets for fish collection.



The fish is viewed to determine if there are parasites

### Involving and supporting our communities

Participants collected fish from Lac de Gras with two gill nets set between the community-based camp and the Diavik mine site.

During the camp, participants caught 34 lake trout. They completed questionnaires rating fish (1-5) on appearance before and during cleaning, and on look and taste once the fish were cooked. Each Aboriginal group worked together to rate the fish. Participants also collected information on general health, weight, length, fertility, age, and stomach content.

Fish samples were sent to Agriculture Canada and Health Canada for analysis. Muscle, liver and kidney samples were tested for metals and analyzed for metallothioneins. The study also included collection of fins and otoliths.

Participants noted that the fish in Lac de Gras continue to look healthy and taste good.



Irene Catholique helps fish biologist Matt Kennedy take samples of muscle, liver and kidney.

# **Participants**

Moses Elatiak (KIA), Sadie Hanak (KIA), Jimmy Hanak (KIA), Denecho Catholique (LKDFN), Irene Catholique (LKDFN), Ernest Boucher (LKDFN), Grant Beck (NSMA), Ashton Hawker (NSMA), Mary Jane Francois (YDFN), Adeline MacKenzie (YDFN) Cook: Bella Rose Eyegetok (KIA)

Metallothioneins, produced naturally by fish, are proteins and amino acids containing metals. Because metallothionein production increases if fish are stressed, this information offers another measure of fish health.

> Otoliths are particles of calcium carbonate found in the inner ear, used to determine fish age.

## **Participants**

Doug Crossley (EMAB Chair, KIA). Geoff Clarke (KIA). Ronald Tologanak (KIA), Terri Enzoe (LKDFN), Florence Catholique (EMAB, LKDFN), Monica Krieger (LKDFN), Lawrence Goulet (EMAB, YKDFN), Paul Mackenzie (YKDFN), Sheryl Grieve (EMAB, NSMA), Valerie Meeres (NSMA), Wayne Langenham (NSMA), Eddie Jones (NSMA), Ashton Hawker (NSMA), Erik Madsen (EMAB, Diavik), Gord MacDonald (Diavik), Kathleen Racher (DIAND), Eddie Erasmus (EMAB, TG). Phillip Huskey (TG), Dora Enzoe (Akaitcho Interim Measures). Pierre Tlokka (TG), Tony Brown (SENES), Shelagh Montgomery (SENES), Elaine Irving (North-South) Facilitators: Louis Azzolini and

#### Jim Edmondson

### INVOLVING AND SUPPORTING OUR COMMUNITIES

### Workshops

Water Licence Renewal Workshop, Behchoko

EMAB held a workshop on Diavik's water licence renewal application.

This workshop brought together representatives from all five Aboriginal Parties in the community of Behchoko. Chief Leon Lafferty welcomed participants. People from the community were encouraged to sit in.

EMAB wanted input and direction on:

- key issues to be addressed in the upcoming water licence renewal process and possible approaches/ solutions
- expectations for EMAB's role at the water licence renewal hearings including:
  - conducting studies
  - providing information to affected communities
  - preparing and presenting interventions
  - ways to improve the implementation and effectiveness of the water licence

The workshop focused on:

- air quality (dust)
- aquatics (water, mud, fish and small creatures)
- abandonment and restoration research (closure)

Participants agreed that EMAB had done all it could do before the water licence renewal process. Participants recommended that EMAB intervene in the process and focus on the abovementioned issues. EMAB was asked to intervene but not to speak on behalf of Parties.

EMAB agreed, as a Board, to intervene. (More details can be found on page 24.)

### Aquatic Effects Monitoring Program Guidelines Workshop, Yellowknife

As a result of EMAB's comments, DIAND opened up attendance for an AEMP Guidelines Workshop scheduled for April 2006 and agreed that their plan needs to provide for greater involvement of Aboriginal People and inclusion of Traditional Knowledge and Inuit Qaujimajatuqangit (TK/ IQ).



EMAB held a Water Licence Renewal Workshop in Behchoko in November – (left to tight) Eddie Erasmus and Phillip Huskey (TG), and Florence Catholique (LKDFN).

### INVOLVING AND SUPPORTING OUR COMMUNITIES

### Building skills and knowledge

#### Lutsel K'e Dene First Nation (LKDFN)

Capacity funding helped LKDFN carry out their summer youth fish camp. This event was held at the Desnedhe Che Spiritual Gathering in August 2005.

Funds allowed Florence Catholique to consult and communicate with her community:

- Florence held two meetings with the Wildlife, Lands and Environment Committee, with a translator and refreshments.
- Florence attended the Desnedhe Che Spiritual Gathering and a mine reclamation workshop.
- Florence attended the LKDFN Annual General Meeting and prepared and presented a PowerPoint presentation on EMAB.

Also, Florence keeps an office in her community and funds are used for general operations and maintenance.

### Kitikmeot Inuit Association (KIA)

During 2005/06, the Kugluktuk Angoniatit Association (Hunters and Trappers Organization) engaged three community youth and a local supervisor to undertake the responsibilities of the Water Quality Monitoring Program. In early July, training with two experts from Golder Associates took place on site to review the process, generate familiarity with the HTO's Hydro Lab equipment, select local sampling sites, and learn how to download the collected data and input into the Excel software program.

Weekly measurements took place over July and August. Problems were encountered with accessing equipment, such as a boat and motor, which made it difficult to sample. Some samples were also sent out to Yellowknife for additional analysis.

Generally, the program met its 2005/06 intentions. A potential concern will be the turnover of sampling staff who move onto other academic and employment opportunities, and in some cases, likely won't return to this work in later years. Some annual retraining will likely have to become a program component.

### Capacity funding

Capacity Funding was established in 2001 by a motion of the Board as a way of supporting the Aboriginal Parties in building capacity in their communities. This is an optional program. The Board agreed to:

"provide a budget of up to \$30,000 to be allocated to each Aboriginal Party to the agreement for the fiscal year ending March 31, 2002, to assist in:

- Creating opportunities for community and public input and participation
- Facilitating effective communication about the Diavik Project with Affected Communities
- Facilitating effective participation
  of the Aboriginal Peoples
- Providing and implementing an integrated and co-operative approach to achieving the purposes of Article I of the Environmental Agreement
- Promoting capacity-building for the Aboriginal Peoples respecting project- related environmental matters
- Allow their respective representative to adequately participate on the Board"

from EMAB Motion # 3-01-11-20

Bob Overvold Regional Director General DIAND

"I would like to thank the Board for the opportunity to provide my views in their annual report. Over the past year, EMAB has become more directly involved in technical issues at the Diavik site, notably the Aquatic Effects Monitoring Program and the ammonia management issue, and has taken a leadership role in facilitating collaborative discussions and in developing workable solutions to these challenges. The Department fully appreciates EMAB's support in resolving these and other issues in ways that both protect the environment and support responsible economic development. Many thanks to the Board and staff for their good work and best wishes for the coming year."

# Environmental regulators and managers

Regulators have the important responsibility of making sure the Lac de Gras area is not harmed by Diavik's mining activities.

They do this by:

- making sure that Diavik keeps its commitments
- reviewing the many reports that Diavik has to provide

Some regulators are responsible for enforcing environmental laws, permits or licences.

EMAB monitors the regulators who oversee environmental management and monitoring at the mine to make sure they are doing a careful, thorough job. EMAB focuses on the comments and concerns about the reports that come from the government regulators and other expert reviewers. EMAB also reviews technical reports on water and wildlife and gives its comments and recommendations to the regulators and Diavik.

When EMAB notes concerns coming from regulators we take that as a signal that we need to know more about the issues. These issues are outlined in the following pages.



## Environmental regulators and managers

### Who are the regulators and managers?

- Mackenzie Valley Land and Water Board (MVLWB) was responsible for the Diavik water licence and the technical review of all documents required under the licence until February 2006.
- Wek'èezhìi Land and Water Board (WLWB) took over the responsibility for the Diavik water licence and the technical review of all documents required under the licence on February 4, 2006. The WLWB is a regional panel under the MVLWB. Staff are not technical experts; they coordinate the review of documents.
- Diavik Technical Committee (DTC) advised the MVLWB, and now advises the WLWB, on technical matters related to Diavik's Class A Water Licence Number N7L2-1645. EMAB participates in the DTC.
- Department of Fisheries and Oceans (DFO) reviews some of the reports submitted under the water licence and all the reports submitted under the fisheries authorizations.

- Department of Indian Affairs and Northern Development (DIAND) reviews reports required by the water licence and the land leases. DIAND has an inspector assigned to Diavik. This inspector attends our meetings to keep us aware of what is happening at the site. The inspector is also responsible for ensuring Diavik meets the terms of its water licence and land leases.
- Environment Canada (EC) reviews the reports required by the water licence focusing on water and air quality. They can call on experts from across Canada when needed.
- Environment and Natural Resources (ENR) is not a regulator; they are a Party to the EA and have responsibility for wildlife. They review and comment on the Wildlife Effects Monitoring Program reports. They use available information to try to look at regional effects of the mines. They also propose better ways to monitor effects of Diavik on wildlife.



# What is the DTC?

Established on September 14, 2000, before the formation of EMAB, the Diavik Technical Committee (DTC) is made up of water experts and regulators that now advise the Wek'èezhii Land and Water Board after it took over the file from the Mackenzie Valley Land and Water Board on technical matters related to Diavik Class A Water Licence Number N7L2-1645.

The members provide expert technical opinions and recommendations to the WLWB on the acceptability of all development reports and plans submitted related to the water licence. The members assist the WLWB in fulfilling its mandate and recommending acceptance or written approval of the reports or plans.

> The Aboriginal Parties to the Environmental Agreement have official standing with the committee.

### Environmental regulators and managers

### Water

### Regulator: Mackenzie Valley Land and Water Board (MVLWB)/Wek'èezhii Land and Water Board (WLWB)

As you will read in the coming pages, there are many issues that came up surrounding the water licence renewal, the Aquatic Effects Monitoring Program, and other water-related processes. It was a busy year. Some of the issues have been raised repeatedly in previous years. In some cases, because of the complicated nature of the situation, we ask that the reader go to the EMAB website (www.emab.ca) for further details.

#### Water licence renewal application

#### EMAB took an active role in initial licence-related processes.

In August 2005, Diavik submitted an application to renew its water licence, which, after seven years in effect, expires in 2007. The process involves:

- review of the application
- technical sessions
- a hearing

The only change to the licence that Diavik asked for was to the term. The mine wants a 15-year licence. This period of time would match, more or less, the mine's remaining years of operation. The WLWB has scheduled a hearing on the renewal application for November 2006.

#### We:

- asked all the Parties what concerns they had with the water licence
- contracted experts to review the three parts of the water licence that were high community priorities:
- Aquatic Effects Monitoring Program (AEMP)
- Air quality monitoring
- Abandonment and Restoration Plan
- sent the reviews to the Parties and the MVLWB
- invited Aboriginal Parties to participate in a workshop to go over Diavik's application, discuss the three expert reviews, raise any additional issues and make some recommendations on whether EMAB should formally intervene in the proceedings
- followed the workshop's recommendation to intervene at the water licence hearing, but not speak formally for the Aboriginal Parties
- submitted comments on Diavik's application to the MVLWB
- participated in MVLWB technical sessions in December
- began preparing an intervention for the upcoming hearing
- raised concerns about lack of access to intervenor funds for Aboriginal Parties to participate effectively

# Environmental regulators and managers

EMAB has also raised concerns about ways to make changes to a water licence if we identify a problem, such as Diavik's AEMP. MVLWB staff have said that, except for renewal hearings, this has never been done before. They told us the *NWT Waters Act* allows the MVLWB/WLWB to amend a licence if it appears to be in the public interest, and suggested that a letter could be written to the WLWB indicating that a change was needed in the public interest, providing reasons. They would then make a decision. EMAB believes this is a reasonable approach, but believes it is important that such a decision-making process be transparent. EMAB will pursue this issue to ensure a positive outcome.



Lac de Gras

# Important issues raised at the technical sessions in December

Diavik's water licence renewal application has been an area of major focus for EMAB. Here is a summary of the specific issues EMAB raised at the technical sessions in December. In some cases, these issues are explained in more depth in later pages. Issues that have been ongoing for the past few years can be found in more detail in previous annual reports and at www.emab.ca Technical issues: • EMAB recommended that the Aquatic Effects Monitoring

- Program (AEMP) be reviewed and redesigned, that the MVLWB/ WLWB assign the DTC to oversee this process and that they do their best to ensure full and effective participation of Aboriginal People. EMAB also recommended that the annual AEMP reports be designated for approval by the WLWB to ensure they receive a thorough review. We also made recommendations for specific wording changes to improve the content of the AEMP reports. Our submission included a 90-page expert technical review with 30 recommendations.
- EMAB noted its review of air quality and dust monitoring, which showed that Diavik is not using standard methods. The program may need to be redesigned. These results, while questionable, show Diavik is producing much more dust than predicted. The reviewers also said that a study Diavik developed to look at effects of dust on lichen, which caribou eat, needs to be reviewed and possibly redesigned.
- EMAB's review shows that the current abandonment and restoration plan must be updated with much more detail.

#### Procedural issues:

- In the past, the MVLWB has responded to EMAB's suggestion to change the AEMP by stating that the best time would be during water licence renewal hearings.
- EMAB has questioned who exactly is responsible for determining whether AEMP annual reports meet water licence requirements. (See page 29.)
- EMAB has questioned who is responsible for enforcing the AEMP. (See page 29.)

EMAB and Diavik are discussing the implementation of commitments made in the Environmental Agreement. One consideration EMAB, as a board, has discussed is suggesting to the WLWB that they add some of these commitments to the water licence.

# What is the AEMP?

The Aquatic Effects Monitoring Program is a requirement of Diavik's water licence.

The program measures the effects of the water discharge, dust, and other runoff from the mine on the water of Lac de Gras. It also looks at the effects of these on the fish and other living creatures in the lake.

Diavik submits a report every March on the results of the program for the previous year.

This program exists so that if there are significant effects to Lac de Gras, Diavik can do something about it.

## **AEMP** Issues

• problems with baseline

- not enough samples taken yearly
- need more samples collected in both summer and winter
- effects of dust not measured properly
- not enough analysis of data; explanations of changes not well supported
- no reference lake to help decide if changes are natural or from Diavik

### Environmental regulators and managers

### Aquatic Effects Monitoring Program (AEMP)

Before the process for Diavik's water licence renewal application began, EMAB raised a number of concerns about the AEMP with the MVLWB.

We expressed concern about the program and the way AEMP annual reports were reviewed.

EMAB contracted North-South Consultants to review the AEMP to support preparation of interventions by the Parties and EMAB. They presented the results at our Water Licence Renewal Workshop. North-South made 30 recommendations for changes to the AEMP. EMAB provided the report to the Parties and the MVLWB. The report says that "*Reviewers from all four components concluded that study design was, perhaps, the* 

main limiting factor preventing the program from fully meeting its primary objective, i.e. to ensure that mine operations do not have significant adverse short and long-term effects on the Lac de Gras aquatic ecosystem." They further recommended that EMAB participate in the design of a new AEMP. Diavik's AEMP is one of EMAB's top priorities because it tells us whether Lac de Gras is changing because of Diavik's operations.

Based on all the expert comments we had seen over the past few years, including North-South's, we formally recommended to the MVLWB that the AEMP be redesigned.

In March, the WLWB directed Diavik to re-design the AEMP and submit it by May 31 so it could be reviewed and, ideally, accepted by all interested parties before the hearings. EMAB will participate in the review and plans to contract our experts to review the revised version of the AEMP.

At the Technical Sessions in December 2005, EMAB recommended that: the Diavik AEMP be thoroughly reviewed by a team of experts, stakeholders and landholders, including representatives of each Aboriginal Party to the Environmental Agreement for the Diavik Diamond Project, with a view to re-designing it to meet the requirements of the water licence and to address the various concerns raised by independent expert reviewers. The review and re-design should consider each of the documented recommendations/concerns identified in the correspondence and reviews, as listed below, and at the Technical Sessions for the Diavik Water Licence Renewal Application. EMAB further recommends that the Mackenzie Valley Land and Water Board task the committee to prepare terms of reference for the review and re-design of the AEMP, and undertake to review and recommend to the Board for approval the required redesign of the AEMP. Finally, EMAB recommends that the Board make every effort to ensure that sufficient resources are available to allow each of the Aboriginal Parties to the Environmental Agreement to participate fully and effectively in the review and re-design of the AEMP. AEMP.

### Environmental regulators and managers

### What's wrong with the AEMP baseline?

Each year Diavik takes samples of water, sediment, tiny plants and bugs that live in the water, and compares the results to the baseline data to see if there is any change. If the baseline data is flawed then this comparison won't work.

#### Quality of baseline data

EMAB is now concerned that its previous assessments that Lac de Gras has not changed significantly are based on comparisons with flawed baseline data and may not be right.

Expert reviewers have been raising questions about Diavik's baseline data for the AEMP for at least the last two years.

The trigger values (the point when we know an important change is taking place) resulting from Diavik's baseline data were presented in the 2000 AEMP report (approved December 19, 2001, following a DTC recommendation), but the specific data used to develop those triggers were not provided. This year, DIAND contracted an expert to review



the data. The consultant's overall conclusion was that "... given these irremediable issues... I do not recommend that the baseline data be used to generate trigger values."

Regulators have also raised concerns about the absence of an evaluation by Diavik on the adequacy of its baseline, which is a requirement of the water licence. Diavik was to submit this to the MVLWB in October 2000, before the AEMP was developed. The goal was to identify any additional baseline information needed for an effective AEMP.

Section 1(iii) of Diavik's evaluation document states, "An extensive database of water quality information exists for Lac de Gras, which will adequately support AEM programs."

EMAB was not able to find any record that this report was ever on the DTC's agenda or that the baseline was reviewed.

In its review of the 2004 AEMP report for EMAB, Gartner Lee said there were no significant changes taking place in Lac de Gras. However, they made it clear that this was based on the assumption "...that both the baseline data and 2004 data provided by DDMI in the 2004 AEMP report are accurate representations of conditions in Lac de Gras."

Based on the information that came out this year about the baseline data, EMAB concluded that the evaluation process was inadequate. EMAB also concluded that the regulatory system failed to detect this.

The MVLWB's expert consultant reviewed the baseline compilation and evaluation in May and concluded that it was inadequate. Diavik disputed this evaluation and the MVLWB has not taken further action.

EMAB will continue to work on this issue.

### AEMP baseline issues

 not enough samples for some sites

- much fewer winter samples for all sites
- should be triggers for winter and summer, not one for the whole year
- · some data improperly included
- some problems with lab analysis
- combining data that is different
- gradual change may not be detected
- procedure for deciding if a piece of data is wrong

Baseline data is information gathered before the mine is built and any environmental change has happened.

## 2003 AEMP report

In March 2005, EMAB recommended that: the MVLWB direct DDMI to address the additional issues detailed in Gartner Lee's original review.

EMAB made this recommendation because the MVLWB accepted as sufficient Diavik's commitment to address some of the issues raised by our expert regarding the 2003 AEMP report. EMAB felt Diavik's commitments on seven of the recommendations were inadequate.

The MVLWB responded that it had clarified "...*its expectations related to such non-approval items...*" and it would not be responding to the additional issues raised by EMAB at this time.

## Environmental regulators and managers

### **AEMP** annual reports

EMAB has raised issues about the AEMP reports with the MVLWB since 2003 and continued to pursue these and other concerns in 2005-2006.

MVLWB staff stated in 2004 and 2005 that they may no longer include the review of AEMP reports on the DTC's agenda. However, EMAB understands that it is the DTC's job to advise the land and water boards on technical matters related to Diavik's water licence, which includes the AEMP.

As a result, in March 2005 EMAB recommended to the MVLWB that:  $% \mathcal{M} = \mathcal{M} = \mathcal{M} + \mathcal{M}$ 

the MVLWB do whatever is necessary to ensure that all reports, plans, programs, and other documents submitted as a requirement of the water licence receive a rigorous, comprehensive, timely technical review, and that a mechanism is in place as soon as possible that allows the MVLWB to require Diavik Diamond Mines to address any deficiencies identified during this review process.

The MVLWB responded to this recommendation on June 2, 2005 stating:

The MVLWB does not provide written approval for these reports; rather they are made available to reviewers whose comments are forwarded to the Licensee. The Licensee is encouraged to correct any inaccuracies or errors that the report may contain.

This raised serious concerns for EMAB regarding the quality and correctness of data and analysis in AEMP annual reports from 2001 on. It also raised questions about the MVLWB's view of its responsibility to make sure the AEMP reports are correct.

On August 9, 2005, EMAB recommended that:

Diavik's water licence be revised to require MVLWB approval for the annual AEMP reports at the earliest possible time.

The MVLWB repeated that:

any changes to the licence should be dealt with at the water licence renewal hearing.

EMAB is concerned for two reasons:

- If other flaws should be found in the water licence after the licence renewal hearings are completed they could have to wait until the next licence renewal to be corrected.
- If changes to the water licence require WLWB approval of AEMP reports, will these changes apply to reports submitted prior to the renewed licence, i.e. AEMP reports from 2000 to 2004? Errors and inaccuracies have been noted in all the AEMP reports and these should be corrected for the record.

### Environmental regulators and managers

### 2005 AEMP report

The MVLWB agreed to allow a three-month delay of the 2005 AEMP annual report so that concerns regarding the AEMP design could be resolved before Diavik presents the data and analysis. The review will not take place until summer 2006.

#### Who is responsible for determining compliance?

EMAB has raised the issue of who is responsible for ensuring that Diavik is meeting its water licence responsibilities.

At the technical sessions for the water licence renewal in December, EMAB stated that it is not clear whether any regulator is taking responsibility to ensure annual AEMP reports comply with the requirements in the water licence and meet standards for reporting.

We requested that the MVLWB and DIAND each review every clause in the licence and identify the ones for which they determine compliance. DIAND committed to complete its review regarding compliance by January 27. This review is still outstanding.

The MVLWB committed to complete their part of this review by early January.

The MVLWB said that they were:

responsible for determining whether annual AEMP reports comply with the water licence.

EMAB asked MVLWB/WLWB officials to explain:

how the MVLWB position that they will not review the AEMP or require changes where errors or omissions are made can be considered determining compliance.

EMAB has noted that the MVLWB approach has changed almost every year that AEMP reports have been submitted. For more information visit www.emab.ca

EMAB will continue to work on this issue.



EMAB received Diavik's response to our comments and concerns on the 2004 AEMP report in October 2005.

Diavik fully accepted 3 of the recommendations, partially accepted another 3, and rejected 7. They have not submitted the changes related to the recommendations they accepted.

This year, Diavik submitted the plume delineation study that was required in the original licence. Reviewers have asked for this study for some time because it shows how the discharge spreads out in the lake water and could provide critical information to help determine if there are changes to Lac de Gras.

This study has not yet been reviewed by independent experts.

The *NWT Waters Act* gives a large role to the inspector to determine and enforce compliance, but he is not directly employed by the land and water board and does not report to that board.



Lac de Gras

### **History of** ammonia amendment

Diavik applied for an amendment to their water licence on June 26, 2003 because ammonia levels in the mine water from the open pits were rising above predicted levels. After mediation coordinated by the MVLWB, a revised water licence was prepared. The Minister of DIAND approved it on June 24, 2004

The new licence increased the level of ammonia Diavik can put into Lac de Gras from an average of 2 mg/l to 20 mg/l for two years. The experts all agreed that the new levels should not harm the water or fish during that time. Diavik was to submit an Ammonia Management Plan by February 2006. The licence sets out clear steps and schedules for doing this.

### Environmental regulators and managers

water licence?

EMAB is monitoring how Diavik is meeting the requirements to investigate ways to bring its ammonia discharge down to originally agreed levels.

In April 2004, the MVLWB amended Diavik's water licence to allow for increased levels of ammonia to be discharged for two years. During that time, Diavik was to do its best to:

- find ways to bring ammonia levels back down to the original levels and to prepare a discussion paper on its findings
- follow up with an Ammonia Management Plan that the WLWB will review

### **Effects of Ammonia on Fish/Water**

• in very high amounts ammonia can kill fish by interfering with oxygen in their blood

- in very high amounts ammonia can affect reproduction and growth of young
- it can also harm benthic invertebrates and plankton

• because Lac de Gras is deep, cold, and low in nutrients, adding too much ammonia, which is a nutrient, over time could change the chemistry of the lake and among other things, promote excessive algae growth

The licence says that in August 2006 Diavik will have to meet the original ammonia limits, but it allows the WLWB to set different limits after it reviews Diavik's Ammonia Management Plan.

What's happening with the ammonia amendment to the A working group of experts from government regulators and Aboriginal organizations was formed to review Diavik's submissions and make recommendations to the WLWB regarding Diavik's plans to manage ammonia, including all the supporting technical investigations.

> Diavik has submitted several studies to meet these requirements, all of which have been independently reviewed by experts contracted by the MVLWB or WLWB.

> EMAB's executive director is co-chairing the working group, is keeping EMAB members informed and updated on this issue, and has expressed confidence in the process.

> The working group reviewed Diavik's first discussion paper and found it inadequate. They proposed a 30-task work plan to the WLWB to fix the discussion paper, which the WLWB directed Diavik to carry out and submit by May 15, 2006.



Scott Wytrychowski, Diavik's environmental manager, explains coarse rejects to NSMA Board member Sheryl Grieve.

### Environmental regulators and managers

Report descriptions for the ammonia amendment In review

REPORT DESCRIPTION	SUBMITTED	ТО
Status Report on Special Effects Studies & schedule for completion	July 28/04	MVLWB
GLL* Review - Completed Special Effects Studies - dike leaching	Rev. June 13/05; May 16/05	MVLWB
GLL* Review - Compilation of Existing Aquatic Information	May 27/05	MVLWB
Status Report # 2 - Ammonia Management Investigations	July 12/05	MVLWB
Discussion paper - Ammonia Management	Oct 24/05	MVLWB/ WLWB
GLL* Review - Limnology & Aquatic Ecology	Nov 16/05	MVLWB
GLL* Review - Completed Special Effects Studies - effluent toxicity	Nov 17/05	MVLWB

Completed reports/studies

REPORT DESCRIPTION	SUBMITTED	ТО
Status Report # 1 - Ammonia		
Management Investigations	Feb 18/05	MVLWB
Revised Contingency Plan	May 9/05	MVLWB

Inadequate studies

REPORT DESCRIPTION	SUBMITTED	ΤΟ
	OODMITTED	10
GLL* Review - Completed Special		
Effects Studies - effects of dredging,		
dike construction on water quality	Oct 19/05	MVLWB

The Limnology report was reviewed by the MVLWB's independent expert in November as part of the mediated Record of Agreement. The expert recommended additions and changes to the report; Diavik disagreed and the MVLWB did not provide further direction. Readers can find a detailed discussion on the limnology report in last year's annual report. EMAB continues to monitor the progress of the Integrated Description of the Limnology and Aquatic Ecology of Lac de Gras report.

In addition, four other reports reviewed by the MVLWB's independent expert as part of the mediated Record of Agreement were not finalized by the board. All of these reviews were submitted more than three months ago (two were submitted at least 8 months ago) and are awaiting some decision or direction from the board.

\*GLL – Gartner Lee Limited

#### What is EMAB doing at the DTC?

EMAB changed its role from observer to participant with the Diavik Technical Committee.

We informed the MVLWB of our change in status in November 2005. We felt it was important that our member be able to put forward and explain EMAB's views at the meetings, rather than just reporting back to EMAB.

EMAB participated in both DTC meetings this year. The DTC met in October and November. These meetings focused on the AEMP and AEMP reports, as well as the approval of two management plan revisions. For more information visit www.emab.ca

As noted in EMAB's last annual report, the MVLWB told DTC members it planned to update the DTC Terms of Reference and requested comments by January 2005. MVLWB informed DTC members at the November meeting that they had not developed draft revised Terms of Reference for the DTC, and nothing was circulated as of March 31, 2006.

Environmental Monitoring Advisory Board

### Environmental regulators and managers

What's happening with EMAB's recommendation that the MVLWB assess its capacity for technical reviews?

EMAB continues to be concerned about the land and water boards' ability to deal adequately with technical issues.

Last year the MVLWB responded to an EMAB suggestion that it review its technical capacity by saying it had the technical capacity it required "...to ensure comprehensive, rigorous, timely technical review of all plans and reports, including use of consultants and all other reasonable and foreseeable methods."

EMAB considered this response and continues to have concerns.

MVLWB review processes for Diavik documents generally involve technical review by the DTC, independent experts contracted by the MVLWB, or both. The quality of DTC reviews is subject to the workload of the members, who have many other responsibilities, potentially leaving the MVLWB to make decisions based on insufficient technical review. Reviewer comments are provided to Diavik for response, effectively giving the company the last word. Where Diavik disagrees with the reviewer comments the land and water board is left in the position of having non-technical staff advising it as to which comments it should agree with.

EMAB's opinion is that lack of technical capacity at the MVLWB likely contributed to delays in identifying and responding to problems with aquatic monitoring in Lac de Gras.

EMAB will continue to pursue this issue.

What's happening with intervenor funding?

EMAB continues to raise the problem of access to intervenor funding under the <u>Mackenzie Valley Resource</u> <u>Management Act</u> for major review processes, such as water licence hearings.

This issue became even more urgent when Diavik applied to renew its water licence.

EMAB sent a letter to the Minister of DIAND on October 26, 2005 following up this concern. We also developed a media strategy on the issue, and directors and staff did several interviews with newspaper, radio, and television media as well as an opinion letter from the EMAB Chair in the territorial newspaper.

In December, DIAND Minister Andy Scott wrote us that DIAND staff have started a study on participant funding needs. Consultants contacted Aboriginal Party representatives in February.

We had not yet seen a report as of March 31, 2006. Furthermore, any changes will come too late to provide for full and effective participation of the Aboriginal Parties in the water licence renewal process, including the review of the Ammonia Management Plan, the revised AEMP, and the hearings.

# Environmental regulators and managers

#### What is the DIAND inspector saying?

EMAB invited the DIAND inspector to its Board meetings so that we could stay informed of the details of environmental management at the mine.

At each Board meeting the inspector gives a presentation outlining the main points of his monthly inspection reports. These reports deal with the on-the-ground reality of everyday operations. The inspector closely examines any areas where water quality might be affected, including:

- where spills may occur
- chemical and fuel storage areas
- contaminated water storage areas
- where water is discharged

At the end of July 2005, the DIAND inspector dedicated to the Diavik mine left the position for an undetermined time. DIAND appointed a temporary inspector until a permanent replacement is hired.

The number of inspections dropped in the initial few months then increased to roughly the same level as before. Ten inspections took place in 2005-06, the same as the previous year. A replacement inspector has not yet been hired.



# What is No Net Loss?

The Department of Fisheries and Oceans No Net Loss policy states that when a project, such as Diavik, destroys or damages fish habitat, the company must offset the loss by replacing or creating an equal amount of fish habitat. Ideally, the habitat will be in the same area as the project and will be the same kind of fish habitat. If this is not possible then the policy allows for habitat creation away from the site or increasing habitat for the affected fish species. This could be done by fixing up damaged habitat somewhere else or by increasing the productivity of existing habitat.

## Environmental regulators and managers

### Fish

#### Regulator: Department of Fisheries and Oceans (DFO)

Diavik submits reports to DFO under the fisheries authorizations. EMAB monitors DFO's reviews of the reports and meets with DFO on specific issues from time to time.

### No Net Loss

EMAB is continuing to encourage Diavik and DFO to talk about how to replace fish habitat off-site near communities so that undisturbed lakes near Lac de Gras remain undisturbed.

In May, DFO agreed to Diavik's request of March 2005 to change the fisheries authorization to allow for off-site compensation. However, they stated that the same amount of habitat would have to be replaced as was proposed in the original fisheries authorization. Also, part of the work would still have to be done at the mine.

Diavik immediately rejected this approach as unreasonable because it would require a substantially greater effort on their part. DFO then directed Diavik to proceed with the originally approved work plan involving the three undisturbed mainland lakes near the mine and to have a design completed by the end of 2005.

EMAB met with DFO in August to tell them that our position had not changed regarding working on undisturbed lakes, to gain a better understanding of DFO's view and to explore alternatives to the mainland lakes. DFO told us that one of their goals was to monitor an enhanced lake and see how it was affected.

EMAB noted there had been many suggestions for compensation when the original proposal was approved – and that some of the others might be more suitable. We also asked about a proposal near Kugluktuk to open up a spawning lake for arctic char as an offsite project.

EMAB visited the three mainland lakes in August. Following this, EMAB wrote DFO requesting that they allow for flexibility with the deadlines for the mainland lakes enhancement to allow for time to examine other options. In November, DFO agreed to remove the deadline and review other alternatives. This review is still underway.

# Environmental regulators and managers

### Fisheries Authorization Monitoring

Diavik submitted the 2004 Lake Trout Habitat Utilization Study, also known as the shoal habitat study, in April 2005. DFO found previous reports inadequate and required Diavik to use new methods. DFO is still concerned that the study is not providing enough information to understand the results and does not seem to be showing how many fish are now using the area around the dike.

DFO is still reviewing the A418 dike baseline monitoring and A154 year 2 monitoring report on sediment, water quality, and benthic invertebrates that was submitted in June 2005.



Erik Madsen, EMAB's Diavik member, explains the silt curtain at the site of the new A418 dike to the rest of the Board members.

# What is a fisheries authorization?

Anyone who wants to carry out work that might result in the harmful alteration, disruption or destruction of fish habitat must receive permission from the Minister of Fisheries and Oceans.

If an authorization is given, it includes a description of the work that must be done to make up for any loss of fish habitat. That includes monitoring to measure the damage that is taking place.

### Environmental regulators and managers

# What is the WEMP?

The Wildlife Effects Monitoring Program is a requirement of the Environmental Agreement.

The program measures the effects of the mine on wildlife and looks at caribou, bears, wolves, wolverines, birds and plants. The WEMP measures predictions to note changes in such areas as population and migration.

Diavik submits a report every March on the results of the program for that year. This program was created so that if a change happens to wildlife Diavik can do something about it.

### Wildlife

Wildlife Effects Monitoring Program (WEMP) 2005 report

### EMAB hired MSES to review Diavik's 2005 WEMP report.

EMAB requested that MSES\* review and assess the procedures and results of the 2005 Wildlife Effects Monitoring Program (WEMP). The WEMP report talks about the results of the surveys explained in the Wildlife Effects Monitoring Program developed by Diavik in August 2002 in response to comments and issues raised by EMAB and the Department of Environment and Natural Resources (ENR).

MSES has been reviewing the wildlife reports for several years and has valuable knowledge that leads to a good understanding of what is going on with wildlife at and around the mine site.

MSES stated that, "the 2005 monitoring report and analysis were a very useful tool that improved understanding of both the potential effects of the mine on wildlife and the strength of the data that are required to measure such effects."

Furthermore, "to date, the information collected appears to support the predictions provided in the Environmental Effects Report of 1998."

More importantly, MSES stated that Diavik responded to past recommendations.

These include:

- the increase in awareness of waste protocols
- the need for vegetation control plots
- the need for more rigor in caribou behavioural observations
- the need for the measure of productivity of falcon nests by adding spring surveys to those in July

MSES made several recommendations that EMAB passed on to Diavik. The MSES report is on EMAB's website at www.emab.ca

The full report is also available at the EMAB office.

\*MSES – Management and Solutions in Environmental Science



### Environmental regulators and managers

### Dust

EMAB hired SENES to review Diavik's Dust Deposition Monitoring Program and reports for 2002, 2003, and 2004.

Diavik has two ways of measuring dust at and around the mine site: gauges that collect dust that falls from the air and snow sampling to collect dust that settles on the snow in the winter.

Dust is a concern because it can settle on lichen that caribou then eat.

### Dust gauge sampling:

SENES\* stated that Diavik does not use standard practices for their dust gauges for sampling. Because of the length of time the gauges are left out without being collected (90 days instead of 30 days), all sorts of other material like bacteria, fungus, or bird droppings can interfere with analysis. Also, material could overflow and be lost because of rain and snow.

SENES concluded that the result of this program should be considered unreliable and inaccurate.

SENES also stated that even if we ignore the unreliability, the results of the program show that dust fall is significantly higher than predicted in the 1998 Environmental Effects Report.

SENES concluded that "it is impossible to tell whether the differences between predicted and observed dust fall rates are real or simply an artifact of improper sampling procedure during the three year monitoring program."

### Snow core survey:

SENES stated that Diavik made adjustments to calculate dust fall at each site but that it is not explained what adjustments were made. That means the result cannot be reproduced based on the numbers provided and calculations cannot be verified.



### Bob Bailey Deputy Minister ENR

"The land and its resources are a central part of the cultural, spiritual and economic lives of many NWT residents. The Department of Environment and Natural Resources (ENR), is committed to the protection and conservation of our environment and the sustainable development of natural resources. Increasing resource development and other changes in the NWT present many challenges and opportunities for NWT residents. We must work together to ensure we manage our natural resources to meet the needs of today and those of future generations.

"The Environmental Monitoring Advisory Board (EMAB) plays a key role in helping to protect the environment for future generations to live, work and prosper on the land through effective and cooperative relationships with communities, Diavik Diamond Mines, other governments and organizations concerned with environmental stewardship."

### Environmental regulators and managers

SENES concluded that "if the reported total annual dust deposition rates are accepted as given in the three annual monitoring reports, the comparison of predicted and observed dust deposition rates shows that measured dust fall deposition at most snow core sampling locations far exceeds that which was predicted in the Environmental Effects Report."

SENES made four detailed recommendations to improve these monitoring methods. In December EMAB requested that Diavik respond to the report, but we have not yet received their response.

The full report is available at the EMAB office.

\*SENES - Specialists in Energy, Nuclear and Environmental Sciences

### What about lichen?

EMAB hired SENES to review Diavik's proposed Lichen Monitoring Program.

Diavik proposed a program to use lichens to monitor dust around the mine site. The program is meant to determine the concentrations of contaminants of concern in lichen tissue at pre-established distances from the mine site, and to determine if there is a relationship between distance from the mine and lichen tissue concentrations of contaminants, among other goals.

SENES determined that the proposed program was flawed and made 12 recommendations. These recommendations can be found on the EMAB website at www.emab.ca

The full report is also available at the EMAB office.

# Environmental regulators and managers

### What's happening with fencing?

EMAB requested that Diavik follow through on its commitment to finalize the fencing work plan and reassemble the Traditional Knowledge Panel on Fencing to inspect temporary fencing laid out in July 2005 at the mine site.

Fencing at the Diavik mine site is noted in the Comprehensive Study Report. Diavik committed to fencing key areas of the mine site if it proved necessary to protect wildlife, especially caribou.

Over a period of two years, EMAB worked with Elders to arrive at a consensus about whether fencing was necessary and, if yes, where it should go and what type of fencing it should be. Diavik's environmental staff worked closely with the Elders to explain how caribou moved around the mine. EMAB also enlisted the help of a government caribou expert and a fencing expert so that we could be as thorough as possible.

Because of recommendations that came from the workshop, Diavik installed temporary fencing in July 2005 at a key location near the Processed Kimberlite Containment Facility.

Two key components remain:

- finalizing the fencing work plan
- reassembling the Traditional Knowledge Panel on Fencing to inspect temporary fencing laid out in July 2005 at the mine site

What's happening with EMAB's proposal to hold a cumulative effects workshop?

EMAB has long been concerned with cumulative effects, and continues to make recommendations that will lead to a cumulative effects workshop.

Cumulative effects on wildlife are the total effects of Diavik combined with the effects from other mines or activities, such as outfitting camps.

It is understood by mining companies, regulators and environmental watchdogs, such as EMAB, and our experts, that cumulative effects need to be a focus of study.

We continue to push for action on this very important issue. The Government of Canada, the Government of the Northwest Territories, and Diavik do need to work together. As of March 31, no action has been taken.



Scott Wytrychowski, Diavik's environmental manager, demonstrates the erection of the temporary fencing intended to deflect caribou from the processed kimberlite containment area. Caribou monitoring camp participants watch.

# Reports

REPORTS IN REVIEW AS OF MARCH 31 / CARRY-OVER OR ONE-TIME REPORTS	DATE SUBMITTED	ТО
Limnology & Aquatic Ecology - Lac de Gras	Nov 7/00	MVLWB
Design Specs & Monitoring Plans - Fish Habitat Compensation		
Streams (draft)	14-Apr-03	DFO
West Island Stream	April 22/04	DFO
Shoal Habitat Utilization Survey - 2004	Apr-05	DFO
Lakebed sediment, water quality & benthic invertebrate study - A418 (baseline) & A154 (yr. 2)	June 21/05	DFO
Plume delineation study	Nov 24/05	MVLWB
A418 Dike Turbidity Monitoring Report	31-Mar-06	DFO
Hazardous Materials Management Plan ver8	Mar'05	MVLWB
Hazardous Materials Management Plan ver9	Mar'06	MVLWB
Operations Phase Contingency Plan ver 8	Mar'05	MVLWB
Operations Phase Contingency Plan ver 9	Mar'06	MVLWB

REPORTS APPROVED IN 2005-2006 OR NOT REQUIRING REVIEW	DATE SUBMITTED	ТО
Revised Contingency Plan	revision - Feb 2/05; original Aug 27/04	MVLWB
PKC Phase 3 Construction As-Built Report	Feb-05	MVLWB
SNP - request to add stations	April 16/05	MVLWB
Design Drawings - Ponds 2, 3 & 14	April 18/05	MVLWB
2003-04 Environmental Agreement Report	June 25/04	DIAND
Aquatic Effects Monitoring Program Tech. Report 2001 - revised	Nov 12/02	MVLWB
Aquatic Effects Monitoring Program Tech. Report-02	April 22/03	MVLWB
Revised Version	Sep 22/03	MVLWB
Aquatic Effects Monitoring Program Tech. Report-03	April 5/04	MVLWB
Water Licence report 2004	April 19/05	MVLWB
Aquatic Effects Monitoring Program Tech. Report-04	April 15/05	MVLWB
WEMP 2004	April 12/2005	EMAB/RWED
2004-05 Environmental Agreement Report	Aug 1/05	DIAND
Dam Safety Inspection Report	Sep 12/05	MVLWB
Water Intake Study Report - 2004	Nov 10, 2005 (revised) Aug 13/04	DFO

Annual Report 2005/2006

EMAB Environmental Monitoring Advisory Board

# Reports

### Reports to the MVWLB

In 2004 the EMAB recommended that the MVLWB commit to complete reviews of any documents submitted to them within three months. The MVLWB made this commitment in June 2004. In 2005/06 EMAB observed that one report, the plume delineation study, was submitted in November and had not completed the review process by March 31.

### Reports to DFO

In 2004 the EMAB recommended that DFO commit to complete reviews of any documents submitted to them within two months. DFO made this commitment in June 2004. In 2005/06 EMAB observed that two reports, one submitted in April 2005, the other in June 2005, had not completed the review process by March 31, 2006.

# Communicating with the public

In September, we held our fifth Annual General Meeting (AGM) at our Yellowknife boardroom. We held an annual election for the executive positions.

Doug Crossley was reelected to fill the Chair position. Florence Catholique was reelected to fill the Vice-Chair position. Erik Madsen was reelected to fill the Secretary-Treasurer position.

EMAB's AGMs are open to the public and are normally held each September. For more information contact the office at 766.3682

EMAB keeps and updates a public library at their Yellowknife office. Anyone can visit and find information about Diavik and the environment.

As a public watchdog, one of EMAB's responsibilities is to make sure that people have access to information regarding Diavik as it relates to the environment. All reports from Diavik, from EMAB, and all other relevant information are available in either hard copy or digital format.

Office hours are 9 a.m. to 5 p.m., Monday to Friday.

EMAB has worked throughout the year to create a new, more detailed website.

As EMAB has grown, the original www.emab.ca no longer satisfied the needs of the Board. Visit www.emab.ca to view the new website, which explains the history of the Board, most of the Board's activities since its beginnings and up-todate information about what we are doing.

Many historical documents, as well as EMAB's annual report and workshop reports are available to download. As well, contact information for each Board member and each Party to the Environmental Agreement can be easily accessed.

### What are our plans

### Work plan for 2006-07

EMAB's priorities for 2006-07 are:

- Participate as an intervener in Diavik's water licence renewal process.
- Participate in re-design of the Aquatic Effects Monitoring Program
- Build capacity (skills and knowledge), increase awareness and support meaningful participation of Aboriginal Peoples in environmental monitoring activities related to Diavik.
- Monitor environmental effects of the Diavik mine, while focusing on issues surrounding wildlife, particularly caribou, fish and water.
- Monitor regulators to ensure plans and programs are thoroughly reviewed and necessary follow-up is done.
- Continue to carry out the Communications Strategy.
- Use more Traditional Knowledge panels and carry out more technical reviews in areas of higher priority (water quality and wildlife).
- Complete the strategic plan with a focus on engaging Aboriginal communities in the strategic planning process.

In addition to its day-to-day mandate of monitoring the Diavik mine and the regulators, and communicating with communities regarding the mine, EMAB has a number of major projects planned for 2006-07.

Water Licence Renewal Application – EMAB is participating as an intervener in the water licence renewal process. This includes participation in the review of the redesign of the Aquatic Effects Monitoring Program and the Ammonia Management Working Group. We also plan to follow up on issues that have come up over the past few years regarding the water licence and, where necessary, we will make recommendations to improve the process.

**Aboriginal Involvement** – We plan to organize a workshop on Aboriginal involvement in the environmental monitoring of the mine with representatives from each Aboriginal Party. We also plan to continue pursuing intervener funding so that Aboriginal groups can fully participate in regulatory processes.

**Traditional Knowledge** – We will continue asking our highly successful Traditional Knowledge panels to give us advice on issues that we identify. We also plan to continue using Diavik's community-based monitoring camp for activities like water quality monitoring and dust monitoring.

**Monitoring** – EMAB will continue to work with regulators to ensure timely, rigorous review for environmental management plans, environmental monitoring programs and reports, while making sure that documents submitted by Diavik are of the highest possible quality. We continue doing technical reviews of monitoring programs and reports and management plans as needed.

**Communications Strategy** – EMAB will publish its new website in the late summer of 2006. EMAB will continue to provide updates on environmental monitoring of the Diavik mine to communities through Board members, and has targeted at least one public meeting in each community to review environmental monitoring results, answer questions

# WHAT ARE OUR PLANS?

and hear community concerns. We will update and revise the Communications Strategy based on the strategic planning results. The communications coordinator will also assist in communicating complex issues to communities and in making sure that EMAB hears, understands, and addresses community concerns. EMAB is also considering producing a newsletter, and when required plain language summaries of key documents.

**Capacity Building** – EMAB will continue its capacity funding programs to support Affected Communities in participating in monitoring the Diavik project. EMAB's communications coordinator will provide additional support to Aboriginal Parties in developing and carrying out projects to build monitoring skills and knowledge in Affected Communities.

**Relationship Building** – We will continue to hold meetings that bring together regulators that deal with the Diavik file. These meetings help everyone understand each other's roles and help resolve issues. We also plan to meet with the Diavik Community Advisory Board to better understand their role and what they do related to Diavik.

**Funding** – We will prepare and submit a two-year work plan to Diavik. Diavik funds EMAB as a requirement of the Environmental Agreement.

**Strategic planning and community engagement** – We will work with our Parties, focusing on Aboriginal Parties, to complete the community engagement started in 2004-05. This will be the basis for our strategic plan. We will work to finish the community engagement in the fall of 2006 to get a better understanding of community priorities related to the Diavik environment.

**Fencing** – We plan to encourage Diavik to continue carrying out the recommendations developed with Elders in 2004.

**No Net Loss** – We will continue to encourage the department of Fisheries and Oceans and Diavik to resolve the issue of fish habitat replacement.

**Research** – The Board will continue to track talks on development of a multi-project environmental monitoring agency for the Slave Geological Province. These talks entered a new phase after the MVEIRB Report and Reasons for Decision on the Environmental Assessment of the Snap Lake project in July 2003. The Minister of DIAND approved the report in October 2003 and added a requirement that all parties work toward joining the Environmental Agreements for the Diavik mine, the Ekati mine, and the Snap Lake mine into one single agreement. The Snap Lake Environmental Agreement recommends that this happen by July 2005. Discussions on MPEMA continue to progress.

The Board will continue to support projects to collect environmental baseline information and carry out cumulative effects monitoring in the Slave Geological Province as a means to improve decision-making and environmental assessment. EMAB will also explore the possibility of a workshop on cumulative effects on wildlife in cooperation with the Independent Environmental Monitoring Agency for the Ekati mine and the Snap Lake Environmental Monitoring Agency, ENR and DIAND.

**Organizational Development** – The Board will continue to work on its procedures and review bylaws and policies to improve efficiency and effectiveness. EMAB is considering holding a governance workshop during 2006-07.

Annual Report 2005/2006

# EMAB Environmental Monitoring Advisory Board

# What are our plans?

EMAB expects to hold six Board meetings over the coming year and plans to continue rotating meetings in the Affected Communities. EMAB will continue to use Board teleconferences; these offer greater efficiency for routine items as well as improving cost efficiency and reducing time demands on Board members.

### Budget

Administration	94,000
Capital Cost	3,000
Management Services	242,000
Board	158,000
Sub-Committees	4,000
Community Consultation	183,000
Strategic Planning	32,000
Projects	154,000
Contingency	12,000
Total	882,000

# Auditor's Report

### Management's Report

The management of the Environmental Monitoring Advisory Board is responsible for the financial statements presented here. The statements have been prepared as set out in the notes attached and were audited by Charles Jeffery – Chartered Accountants following generally accepted accounting principles.

EMAB management includes budget and financial controls to provide reasonable assurance that spending is authorized, transactions are correctly recorded, and financial records are accurate. EMAB adopted several additional internal control mechanisms this year following recommendations made in the 2004-05 auditor's report.

Erik Madsen Secretary-Treasurer

### To the Board of Directors of the Environmental Monitoring Advisory Board

I have audited the Statement of Financial Position (Balance Sheet) of the Environmental Monitoring Advisory Board as at March 31, 2006 and the statement of operations, the statement of changes in fund balances and statement of cash flows for the year then ended. These financial statements are the responsibility of the Environmental Monitoring Advisory Board. My responsibility is to express an opinion on these financial statements based on my audit.

I conducted my audit in accordance with Canadian generally accepted auditing standards. Those standards require that I plan and perform an audit to obtain reasonable assurance whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation.

In my opinion, these financial statements present fairly, in all material respects, the financial position of the Environmental Monitoring Advisory Board as at March 31, 2006 and the results of its operations and its cash flows for the year then ended in accordance with Canadian generally accepted accounting principles.

Yellowknife, Northwest Territories August 4, 2006

Charles Jeffery Chartered Accountant

Annual Report 2005/2006

# EMAB Environmental Monitoring Advisory Board

# Auditor's Report

# Environmental Monitoring Advisory Board

Statement of Financial Position

For the upper ended March 21, 2006	March 2006	March 2005
For the year ended March 31, 2006	\$	2005
Assets	\$	\$
Current assets		
Cash	885,853	839,899
Accounts receivable	3,625	000,000
Prepaid rent	4,494	
	893,972	839,899
Capital assets (Note 3)	16,744	21,522
	910,716	861,421
Liabilities		
Current liabilities		
Accounts payable and accrued liabilities	13,663	6,963
Contributions refundable - TK Camps	13,715	
Deferred revenue - Diavik Diamond Mines Inc. (Note 5)	644,000	629,000
	671,378	635,963
Net Assets		
Investment in capital assets	16,744	21,522
Unrestricted net assets	222,594	203,936
	239,338	225,458
	910,716	861,421

Approved by the board of directors.

# Auditor's Report

# Environmental Monitoring Advisory Board

### Statement of Operations

For the year ended March 31, 2006		March	March
		2006	March 2005
		\$	\$
Revenue		·	,
Diavik Diamond Mines Inc		629,000	600,000
Disvik Dismond Mines Inc - Traditional Know	viedge	129 623	137,21
Diavik Diamond Mines Inc - Traditional Know	wledge (refundable)	(13,715)	
Government assistance	•		
Government of the Northwest Territorie	5		
Department of Indian Affairs and North-	arn Development (Water licence)	40.000	
Other			40
Interest income		12.615	7,56
		797.523	745,17
Operating Expenditures			
Administration	Schedule 1	89.229	94,56
Management services	Schedule 2	233.161	226,82
Board Expenditures	Schedule 3	134 634	126.68
Community Consultation	Schedule 4	118.500	57,89
Water licence renewal	Schedule 5	39.959	07,00
Strategic Planning	Schedule 6	557	40,81
Projects - Traditional Knowledge Panel	Schedule 7	162.238	209.07
Capital assot purchases		587	91
Contingency		-	
		778.865	756,78
Excess revenue over expenditure			
expenditure over revenue)		18,658	(11,60

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EMAB Environmental Monitoring Advisory Board

# Auditor's Report

# **Environmental Monitoring Advisory Board**

**Notes to Financial Statements** 

### For the year ended March 31, 2006

The Environmental Monitoring and Advisory Board ("the Board") is a not-for-profit organization established as a requirement of the Diavik Environmental Agreement. The Board is exempt from income tax in accordance with section 149(1)(I) of the Income Tax Act.

The aim of the Board is to provide a meaningful role for Aboriginal Peoples in the review and implementation of environmental monitoring plans with respect to the Diavik Diamond Mine site in the Northwest Territories. The Board will be in place until full and final reclamation of the mine is complete.

### 1 Significant accounting policies

The financial statements have been prepared in accordance with Canadian generally accepted accounting principles. Because a precise determination of some assets and liabilities depends on future events, the presentation of financial statements for a period necessarily involves the use of estimates which have been made using careful judgment. Actual results could differ from those estimates and approximations. The financial statements have, in the opinion of management, been properly prepared within reasonable limits of materiality and within the framework of the significant accounting policies summarized below.

#### (a) Capital assets

Capital Assets are recorded at cost less accumulated amortization. Amortization is calculated using the declining balance method at the following rate:

Office Equipment	30%
Computer Equipment	30%
Furniture and Fixtures	30%

### (b) Revenue recognition

The Board follows the deferral method of accounting for contributions. Under this method, restricted contributions are recognized as revenue when the related expenditures are incurred. Restricted contributions received but for which the related expenditures have not been incurred are reported as deferred revenue.

Unrestricted contributions are recognized as revenue when received, or when receivable if the amount can be reasonably estimated and collection is reasonably assured.

# Auditor's Report

Contributions from the Department of Indian Affairs and Northern Development are labelled - Comprehensive Funding Arrangement (CFA). When Operating Revenues exceed Expenditures no portion of the Excess Revenue over Expenditures is refundable to the Department of Indian Affairs and Northern Development.

#### (c) Economic dependence

The Board is dependent on its funding from Diavik Diamond Mines Inc. The Board may not be viable without these contributions.

### (d) Financial instruments

The company's financial instruments consist of accounts receivable and accounts payable. These financial instruments might expose the company to interest rate and credit risks. In the opinion of management, the financial statements and accompanying notes contain the relevant information to reasonably assess these risks.

		March 2006	March 2005
······································		\$	\$
2 Capacity funding expenditure			
Yellowknives Dene First Nations	-	28,500	
North Slave Metrs Alliance	-	30,000	30,000
Lutsel K'e Done		30,000	27.894
TIE Cho Government		-	-
Kitikmeot Inuit Association		30,000	-
		118,500	57,894

### 3 Capital assets

	Cost	Accumulated Amortization	Net Book Value	Net Book Value
NXTEC AMD XP 1700 & HP Deskjet printer	3,131	2,379	752	1,074
Various computer equipment	1,609	1,223	386	552
Desks	1,603	813	790	367
Recording equipment	1,336	1,015	321	458
Digital imager	5,350	4,451	900	1,285
Toshiba Satellite Pro 4240	4,676	3,890	786	1,123
Computers	22,687	18,874	3,813	5,447
Proxima DS2 projector	1,605	1,336	270	385
Doug Crossley's computer	3,257	2,140	1,117	1,596
Two nomacic displays	5,153	2,068	3,085	3,364
Board room furnishings	1,873	1,558	315	450
Other office equipment and office furnishings	20,627	16,417	4,210	5,421
	72,907	56,163	16,744	21,522

4 Net change in non-cash working capital balances		
Operating resources provided by:		
Increase in deferred contributions	15,000	29,000
Increase in contributions refundable	13,715	
Decrease employee advances	-	2,900
Increase trade accounts payable	6,466	6,20
<u></u>	35,181	38,10
Operating resources applied to:		
Increase accounts receivable	(3,625)	
Increase prepaid expenses	(4,494)	
Increase in employee recievable	-	
	(8,119)	
Net Change in Non-Cash Working Capital	27,062	38,10

### 5 Deferred contributions

Deferred revenue consists of the funds contributed by Diavik Diamond Mines Inc. for the 2006-2007 operating year. This amount will be recognized as revenue over the 2006-2007 operating year as goods and services are acquired.

### 6 Misappropriation of funds

It had been determined that funds were misappropriated in the years ended March 31, 2006, 2005 and 2004. The amounts were determined by reperforming reconciliations of the bank account for each month in the period September 2003 through March 2005. Certain cheques which were cashed by the bank have been removed from the bundles of cheques returned from the bank. Certain transactions recorded as cash disbursements in the general ledger were not cashed and were not recorded as cutstanding on the bank reconciliations prepared by staff.

# What does it mean? - Definitions

Aboriginal Parties/Aboriginal Peoples: means the Tlicho Government, the Lutsel K'e Dene First Nation, the Yellowknives Dene First Nation, the North Slave Metis Alliance and the Kitikmeot Inuit Association.

Adaptive environmental management: is a way to manage the environment by 'learning by doing.' We expect plans will need changes. These are important steps:

- Admit doubt about what plan or action is "best" for the issue.
- Thoughtfully select the plan or action to be taken.
- Carefully carry out the plan and action.
- Keep an eye on key results.
- Study the results with the original objectives in mind.
- Include the results in future decisions.

Affected Communities: means Behchoko, Wha Ti, Wekweti, Gameti, Lutsel K'e, Dettah, Ndilo, Kugluktuk and the Metis of the North Slave.

**Baseline:** means all the facts, numbers and information collected about an area before development. Facts, numbers, and information continue to be collected all the time and are compared with the baseline to see if there are any changes to the environment in the area.

**Compliance:** means following all the rules and regulations, laws and legislation, as well as following through on commitments.

**Cumulative effects:** means the effects on the environment that increase, when the effect of one action is added to other actions. Cumulative effects can be the result of small, individual actions that when looked at all together become more important over a period of time or in a whole region.

**Environmental Quality:** means the state of the environment of an area at any time compared with its natural state. This includes biological diversity and ecosystem structures and process.

**Mitigation:** means the choices possible to lessen or get rid of harmful environmental effects. There are three basic choices:

- get rid of the problem by using other sites, locations or operating conditions;
- lessen the problem by using other sites, locations or operating conditions; or
- make up for the problem by remediation, replacement or payments in cash or kind.

Possible mitigation can include the requirement of additional measures or actions, which can be funded or implemented independently of the main project.

**Monitoring:** means keeping an eye on the actual operation and comparing it to what was planned or what was expected to happen. Monitoring generally involves collecting and analyzing information.

# What does it mean? - Definitions

**Reclamation:** means the way that lands disturbed because of mining are cleaned up. Reclamation can include: taking out buildings, equipment, machinery, and other physical leftovers of mining, closing processed kimberlite containment areas and other mine features, and contouring, covering, and revegetation of waste rock piles and other disturbed areas.

**Security:** means the money that Diavik gives to DIAND as assurance that it will clean up the mine site in an acceptable way after the mine closes.

**Sustainable development:** means making sure that the land our children will use is as healthy and rich as the land we have now. It means not doing harm to the environment that we can't fix, or using up resources our children will need. Sustainable actions are not wasteful, do not have unreasonable costs and are right for society, as well as respect cultures.

**Precautionary Principle:** means stopping harm from happening to the environment or human health if there is a good reason to think it might happen. Not knowing all the scientific causes and effects of the situation is not a reason to allow possible damage.

# What happened? - Follow-up on previous recommendations

In some cases, results for EMAB recommendations from previous years were delayed. The following is an overview of past recommendation and their status.

EMAB recommends that Diavik Diamond Mines Incorporated continue and expand its program to provide for site visits to the mine by community members and Elders from the Aboriginal Communities to familiarize them with the site and associated activity, as well as with environmental management and monitoring activity. DDMI is commended for their work in this area to date. (Made in 2004).

Diavik supported this recommendation and suggested the community-based camp be used for this purpose. In early 2006, Diavik committed to include site visits for all community-based monitoring camp participants during the 2006 field season.

EMAB recommends that the Parties address the question of responsibility in the case that Kugluktuk's water supply becomes contaminated due to upstream mining activity including the Diavik mine (letter of January 7, 2004 to Parties to the Environmental Agreement).

Besides the GNWT response, outlined in EMAB's 2004-2005 Annual Report, EMAB received a response from the Government of Nunavut stating that Nunavut Health and Social Services would be responsible for Kugluktuk's water supply. DIAND would have the lead on laying charges under the *Canadian Environmental Protection Act* (CEPA), although GN would retain the right to act under CEPA as well.

EMAB recommends that Diavik provide a work plan by December 17, 2004 to meet their commitment that temporary test fencing be ready for installation by July 2005. The work plan is to include:

- date for completion of draft management plan
- review/consultation on draft management plan from site visit participants (Group) and EMAB
- timing for inspection of completed temporary fence by Group
- date for completion of worst case contingency plan

Diavik installed temporary fencing in July 2005 at a key location near the Processed Kimberlite Containment Facility. Three components remain to be completed:

- finalizing the fencing work plan
- reassembling the Traditional Knowledge Panel on Fencing to inspect temporary fencing laid out in July 2005 at the mine site

• completion of the draft management plan and worst case contingency plan

See page 39.

# What happened? - Follow-up on previous recommendations

EMAB recommends that the MVLWB assess its capacity to ensure a comprehensive, rigorous, timely technical review of each report or plan submitted under Diavik Diamond Mines' water licence.

EMAB continues to be concerned about this issue and plans to follow up with the WLWB next year. See page 32.

.....

EMAB recommends that the MVLWB not consider approving the report on the Integrated Description of the Limnology and Aquatic Ecology of Lac de Gras at this time.

The report has not been approved and it is unclear how the Board plans to handle the matter. See page 31.

EMAB recommends that the MVLWB do whatever is necessary to ensure that all reports, plans, programs and other documents submitted as a requirement of the water licence receive a rigorous, comprehensive, timely technical review, and that a mechanism is in place as soon as possible that allows the MVLWB to require Diavik Diamond Mines to address any deficiencies identified during this review process.

The MVLWB said they don't review all reports; some are recorded as received and sent to reviewers. EMAB was not satisfied with this response and made a follow-up recommendation this year. See page 28.

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EMAB recommends that the MVLWB direct DDMI to address the additional issues outlined above and detailed in Gartner Lee's original review.

The MVLWB said it would not respond to the additional issues raised by EMAB. See page 28.

#### Recommendations 2005-2006

### A – good; B – fair; C – meets minimum standard; D - unacceptable

Recommendation	То	Timely Response	Satisfactory Response
EMAB recommends that Diavik's water licence be revised to require MVLWB approval for the annual AEMP reports at the earliest possible time.	MVLWB	А	C - MVLWB stated this should be done at the water licence renewal hearing.
EMAB recommends that the Diavik AEMP be thoroughly reviewed by a team of experts, stakeholders and landholders, including representatives of each Aboriginal Party to the Environmental Agreement for the Diavik Diamond Project, with a view to re-designing it	MVLWB	F – no response	F
to meet the requirements of the water licence and to address the various concerns raised by independent expert reviewers. The review and re-design should consider each of the documented recommendations/concerns identified in the correspondence and reviews as listed below and at the Technical Sessions for the Diavik Water Licence Renewal Application. EMAB further recommends that the Mackenzie Valley Land and Water Board task the committee to prepare terms of reference for the review and re-design of the AEMP, and undertake to review and recommends that the Board for approval the required re-design of the AEMP. Finally, EMAB recommends that the Board make every effort to ensure that sufficient resources are available to allow each of the Aboriginal Parties to the Environmental Agreement to participate fully and effectively in the review and re-design of the AEMP.	WLWB	A	B - WLWB gave DDMI direction to revise AEMP about 6 weeks after taking over the file, but was unable to provide access to resources for effective participation of Aboriginal Parties.
EMAB recommends that Diavik Diamond Mines address each of the recommended revisions and implement all other recommendations in the Gartner Lee review of the 2004 DDMI Aquatic Effects Monitoring Program Report.	DDMI	A	B – DDMI rejected some recommendations.

\* When EMAB makes a recommendation, the applicable regulatory authorities and Diavik have 60 days to respond.

# Recommendations

# CURRENT CONTACTS

### **Board Members**

Kitikmeot Inuit Association Doug Crossley, Chair dcrossley@qiniq.com phone (867) 983 3958 fax (867) 983 3964

Lutsel K'e Dene First Nation Florence Catholique, Vice Chair fcatholique@msn.com phone (867) 370 3190 or 3975 fax (867) 370 3964

Diavik Diamond Mines Inc Erik Madsen, Secretary Treasurer erik.madsen@diavik.com phone (867) 669 6561 fax (867) 669 9058

Tlicho Government Eddie Erasmus eddieerasmus@tlicho.com phone (867) 392 6381 fax (867) 392 6862

Yellowknives Dene First Nation Lawrence Goulet lgoulet@arcticdata.ca phone (867) 873 4177 fax (867) 873 8545

North Slave Metis Alliance Sheryl Grieve lands@nsma.net phone: (867) 873 6762 (ext: 26) fax: (867) 669 7442

Government of Canada Floyd Adlem adlem@internorth.com Government of the NWT, ENR Tom Beaulieu tom\_beaulieu@gov.nt.ca phone (867) 920 6389 fax (867) 873 0638

### Government of Nunavut

John Morrison jmorrison@gov.nu.ca phone (867) 982 7445 fax (867) 982 3701

### Alternate Board Members

Kitikmeot Inuit Association vacant

Lutsel K'e Dene First Nation Charlie Catholique phone (867) 370 3051 or 3131 fax (867) 370 3010

Diavik Diamond Mines Inc Gord MacDonald gord\_macdonald@diavik.com phone (403) 261 6116 fax (403) 294 9001

Tlicho Government Tony Pearse tpearse@gulfislands.com phone (250) 539 3015 fax (250) 539 3025

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North Slave Metis Alliance Valerie Meeres valerie@nsma.net phone (867) 873 6762 (ext: 28) fax (867) 669 7442 Government of the NWT, ENR Jane McMullen jane\_mcmullen@gov.nt.ca phone (867) 920 8069 fax (867) 873 4021

Government of Canada David Livingstone livingstoned@inac.gc.ca phone (867) 669 2647 fax (867) 669 2707

Government of Nunavut vacant

#### Staff

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