

ENVIRONMENTAL MONITORING ADVISORY BOARD FOR THE DIAVIK MINE

# Working with *the People for the* Environment



**ANNUAL** 2014  
2015  
**REPORT**





## ENVIRONMENTAL MONITORING ADVISORY BOARD FOR THE DIAVIK MINE

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# CHAIR'S MESSAGE

*"EMAB strives to continuously improve and address the expectations of the Parties and the Affected Communities."*



This last year has presented a number of challenges to the Board that we have taken on with the intent of continuing to move forward in our important work.

EMAB members and Parties were saddened this year when long-time member and former EMAB Chair Doug Crossley passed away on Feb 7, 2015. On behalf of the Board, I would like to acknowledge Doug's long service and major contribution to the Board, and to enriching all of our lives. His experience and guidance will be missed. We send our condolences to his family and many friends and colleagues.

I also want to take this opportunity to welcome Gord Macdonald back to the Board as the Diavik appointee and to thank our two departing members for their service: Seth Bohnet (Diavik) and Robert Eno (GN).

EMAB strives to continuously improve and address the expectations of the Parties and the Affected Communities. An important way we do this is by reviewing our strategic plan to assess where EMAB has been and where we would like to go. The Board had a valuable session this year and we look forward to turning the results into actions.

EMAB was unsuccessful in reaching agreement with Diavik on our next two-year budget for 2015-17. The end result reduced EMAB's budget for next year by almost one-quarter. The Board is concerned these cuts will reduce EMAB's effectiveness as a watchdog.

This year was a transitional one for EMAB staffing, with our recently hired Executive Director taking the full load for much of the year, and a significant staff restructuring which led to the hiring of an Environmental Specialist who started in January 2015. The Board believes EMAB is now better able to fulfill its mandate with respect to review of Diavik's

environmental monitoring reports and management plans.

EMAB was pleased to host a workshop in March with participants from each of the Parties to the EA to review Diavik's air, water and wildlife reports and make recommendations to us.

Over the next few years the Diavik Mine will move towards closure and reclamation and EMAB will put greater emphasis on this aspect of our monitoring role, including the need for meaningful incorporation of Traditional Knowledge / Inuit Qaujimajatuqangit. In the short term EMAB has decided to intervene at Diavik's water licence renewal, which will take place over the summer of 2015. EMAB will also pay careful attention to the construction of the dike surrounding the A21 pit, which will be taking place over the next four years.

On behalf of all EMAB members, I would like to thank the Parties, community members and regulators for their commitment and support. We look forward to continuing our work of monitoring the mine and working with the communities affected by the mine to protect the environment around Diavik.

*Sean Richardson, Chair*

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*The Environmental Monitoring Advisory Board is an independent body that plays an important role in the monitoring of the Diavik Mine.*

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**It is the mandate of this Board to review all Diavik's environmental monitoring programs, plans and activities.**



# WHAT HAVE WE DONE THIS YEAR?

EMAB Photo



*Sean Richardson, Seth Bohnet, Charlie Catholique, Brenda McDonald: strategic planning at Blachford Lake Lodge*

EMAB works with the people of the Affected Communities to help protect the environment around the Diavik Mine.

This is a summary of our activities in 2014-15, with more detail on the following pages. Readers can also check out our website: [www.emab.ca](http://www.emab.ca).

**GOVERNANCE:** EMAB held a two-day strategic plan review in August. The Board assessed its performance in the key areas of Leadership & Governance; Oversight & Management; Aboriginal Peoples & Community Involvement; and Communication and identified a number of areas to focus on enhancing and improving.



*Executive Director - Brenda McDonald*



*Environmental Specialist - Robin Heavens*

We also made a significant staff restructuring by creating the position of Environmental Specialist while eliminating the positions of Program Manager and Administrative Assistant.

#### **COMMUNITY INVOLVEMENT:**

EMAB held two community update meetings in 2014-15. We also held a workshop with elders from the five Aboriginal Parties to review Diavik reports on air quality, water quality and wildlife monitoring.

**BUDGET:** EMAB submitted its recommended two-year budget to Diavik, following the process set out in the Environmental Agreement (EA). For the third time in a row, Diavik disagreed with our budget and we were not able to reach an accommodation with them. Where there is disagreement

on the budget the EA requires that EMAB and Diavik each submit a budget to the Minister of ENR, and if agreement cannot be reached, the Minister chooses one of the budgets. The Minister selected Diavik's proposed budget for the period, reducing EMAB's budget by about 24% from \$615K in 2014-15 to \$468K in 2015-16.

**OPERATIONS:** The office operated for most of the year with only the Executive Director, requiring prioritization of some activities. In January we welcomed Robin Heavens as our new Environmental Specialist.

**REVIEWING REPORTS:** During 2014-15 EMAB received 15 reports and undertook detailed reviews on five of them. These reports are required by the water licence,

fisheries authorizations, and the Environmental Agreement. EMAB focuses on reports in our priority areas (water, wildlife, air, closure and TK/IQ): the Aquatic Effects Monitoring Program, Wildlife Monitoring Program, Interim Closure and Reclamation, and Air Quality. We also review Diavik's Environmental Agreement Annual Report.

**BOARD MEETINGS:** We held four meetings in 2014-15 and another four by teleconference.

KIA member for many years, Doug Crossley, passed away this year. There were two other changes to the Board: Robert Eno, the Government of Nunavut appointee left the Board, and Diavik appointee Seth Bohnet was replaced by Gord Macdonald.

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# WHO ARE WE?

The Environmental Monitoring Advisory Board was set up in 2001 under the Environmental Agreement for the Diavik Diamond Mine (EA) and is in its 14th year of operations.

There are 8 parties to the Environmental Agreement (EA).

Each party appoints a member to the Board. EMAB operates at arm's length and independent of the Parties. Since December of 2013, the Government of Canada, Aboriginal Affairs and Northern Development, has begun to take steps to withdraw from the EA as a result of the Devolution process. In the meantime, Canada has delegated its authority regarding the EA to the GNWT.

## WHAT DO WE DO?

- Watch over the environment at Lac de Gras, especially around the Diavik Mine
- Independent review of regulatory and management reports and plans by EMAB staff and expert consultants
- Provide and receive information from the affected communities through community visits and our Aboriginal Party Board members
- Assess and recommend on Diavik's use of Traditional Knowledge / Inuit Qaujimajatuqangit
- Provide information to the public through our website, public registry, annual report and other publications

## BOARD MEMBERS



**Sean Richardson,**  
Chair  
*Tłı̨chǫ Government*



**Charlie Catholique,**  
Vice-Chair  
*Lutsel K'e Dene First Nation*



**Arnold Enge,**  
Secretary-Treasurer  
*North Slave Métis Alliance*



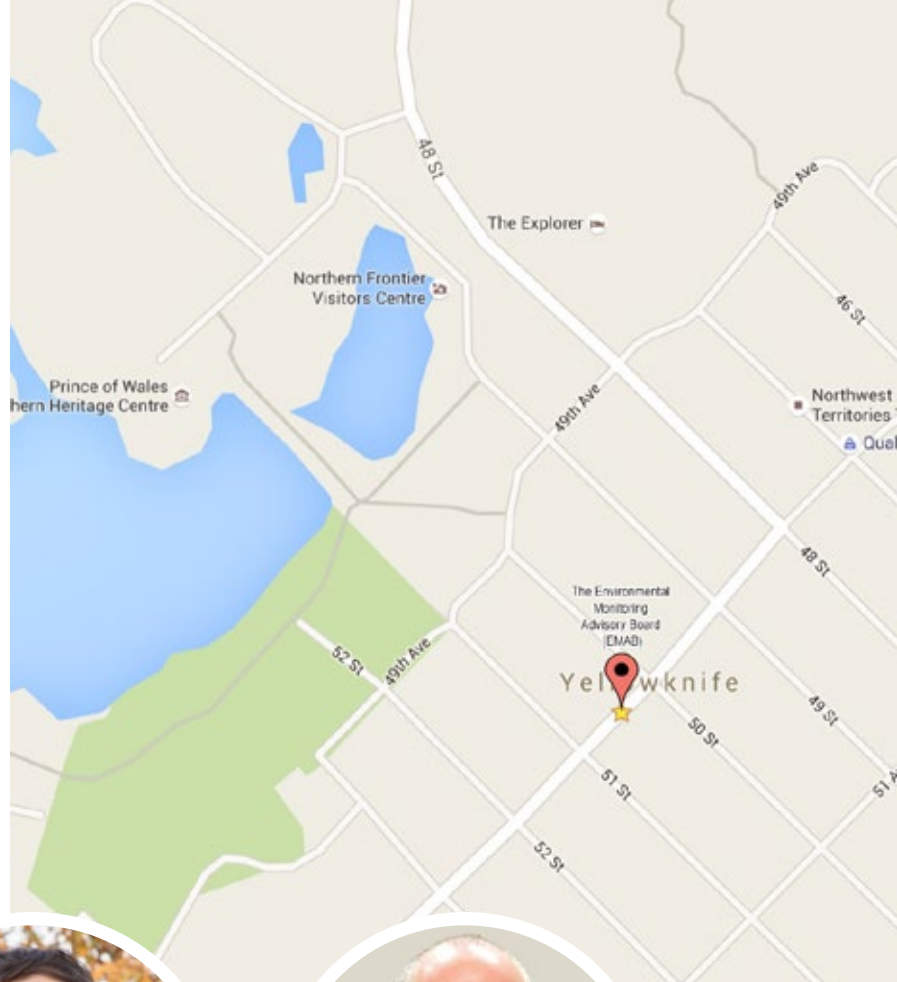
## WHERE IS OUR OFFICE?

We are located in downtown Yellowknife at 5006 Franklin Ave, Suite 204 on the second floor of the 50/50 mini mall. We have two staff: an Executive Director and an Environmental Specialist.

Our phone number is  
**867-766-3682**

Email contact is  
**emab1@northwestel.net**

Website is  
**www.emab.ca**



**Napoleon Mackenzie**  
*Yellowknives Dene First Nation*



**Stephen Ellis**  
*Government of the Northwest Territories*



**Gord Macdonald**  
*Diavik Diamond Mines Inc.*

**BOARD MEMBERS**

**Vacant** - *Kitikmeot Inuit Association* | *Government of Canada*





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# WHAT IS THE DIAVIK MINE'S ENVIRONMENTAL SETTING?

Lac de Gras is a large lake, 60 kilometres in length, with an average width of 16 kilometres and 740 kilometres of shoreline. This lake is located 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. Lac de Gras is the headwaters of the Coppermine River, which flows 520 kilometres north to the Arctic Ocean. Typical of Arctic lakes, it is cold with long ice-covered

periods and 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 Bathurst caribou herd range. The caribou population has declined considerably from 186,000 in 2003 to 20,000 in 2015 (GNWT). Many other animals include the Lac de Gras area in their home ranges, such as grizzly bears, wolves, wolverines, smaller mammals, migratory birds and waterfowl.



Diavik Photo

*Diavik - February 2015*

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## DIAVIK NOW (courtesy of Diavik)

Diavik is a fully underground mine. For the year ending 2014, Diavik safely mined 2.1 million tonnes of ore and processed 2.3 million tonnes of ore. Diamond production was 7.2 million carats, unchanged from 2013. During the fourth quarter of 2014, Rio Tinto approved a positive feasibility proposal to add A21 to the existing mine plan. An implementation team is in place and construction activities began immediately. Development includes site preparation, earthworks, water management, and pre-production overburden stripping. First ore production from A21 is expected in 2018. The addition of the A21 open pit to the mine plan is not expected to extend mine life, but will offset decreasing underground output, ensuring a continuation of existing production levels.

# INVOLVING AND SUPPORTING COMMUNITIES

EMAB Photo



*Kugluktuk - 2015*

EMAB visited two communities this year to update them on EMAB activities and receive input about concerns about the Mine.

On June 9th, 2014, EMAB held a community consultation session in Kugluktuk, NU.

On February 9th, 2015, EMAB held a community consultation session in Lutsel K'e.

In addition to our community updates, EMAB Board members appointed by Aboriginal Parties are expected to act as a link between the board and the communities.



*Lutsel K'e Class - 2015*

Board members update community members on EMAB activities and bring back any community concerns for Board discussion.



*Charlie Catholique in Lutsel K'e - 2015*



# OVERSIGHT AND MONITORING

JK Photo



*Board members viewing site*

EMAB monitors Diavik and regulators to make sure they are doing a good job protecting the environment around the Diavik Mine, and that they, and all the other Parties, are keeping the promises they made in the Environmental Agreement.

Most of EMAB's focus is on Diavik's environmental monitoring programs and reports, and on the way the regulators handle them. 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.

Each year we do our own reviews of the Wildlife Monitoring Program report and the Aquatic Effects Monitoring Program report. We also review reports on Air Quality and on Closure and Reclamation. Occasionally we will review other reports.

This year a significant regulatory change took place in the NWT when authority over land and resource management was devolved to the GNWT from Canada. Land and water management expertise and regulatory responsibility was also transferred from the federal government to the territorial government.

Another significant regulatory change was the passing of the new NWT *Wildlife Act*. A key feature for EMAB is the provision of regulatory authority over wildlife monitoring programs for major projects, such as the Diavik mine.

## WHO ARE THE REGULATORS AND MANAGERS?

- **Wek'èezhii Land and Water Board (WLWB)** are responsible for the Diavik water licence and the technical review of all documents required under



Napoleon Mackenzie, Board member at Blachford Lake

the licence. The WLWB is a regional panel under the Mackenzie Valley Land and Water Board.

- **Canada**

- › **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.
- › **Environment Canada (EC)** reviews the reports required by the water licence focusing on water and air quality. EC officers inspect compliance with federal environmental regulations and permits, such as fisheries authorizations.

- **GNWT**

- › **Department of Lands** reviews reports required by the water licence and the land leases. Lands has an inspector assigned to Diavik. This inspector updates the Board regularly 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 and Natural Resources (ENR)**, has regulatory responsibility for wildlife, including monitoring under the *Wildlife Act*. It also proposes better ways to monitor effects of Diavik on wildlife. ENR also has responsibility for environmental protection, including air and water quality, and provides detailed reviews of reports in these areas.

- **Wek'èezhii Renewable Resources Board (WRRB)** is a wildlife co-management authority established by the Tłı̄chq Agreement. The WRRB is responsible for managing wildlife and wildlife habitat (forests, plants and protected areas) in the Wek'èezhii area.



## REPORTS RECEIVED FOR REVIEW

Report Name	Date Received	Regulatory Instrument
Type 'A' Water Licence (Annual, 2013)	31 March 2014	Water Licence
Aquatic Effects Monitoring Program (Annual, 2013)	28 March 2014	Water Licence
Management Plans (Annual, Various)	31 March 2014	Water Licence
Seepage Report (Annual, 2013)	31 March 2014	Water Licence
Wildlife Monitoring Program (Annual) 2013: includes Waste Management Plan, Lichen and Permanent Vegetation Plot Monitoring Programs	31 March 2014	Environmental Agreement
Wildlife Monitoring Permit	12 May 2014	Wildlife Act
Environmental Agreement Annual Report (Annual, 2014)	12 June 2014	Environmental Agreement
Wildlife Monitoring Program Comprehensive Analysis Report (every three years)	August 2014	Environmental Agreement
Air Quality Monitoring Report (Annual, 2013-2014)	30 September 2014	Environmental Agreement
Interim Closure & Reclamation Progress Report (Annual, 2014)	31 October 2014	Water Licence
Water Management Plan (Annual, 2014)	30 December 2014	Water Licence
Water Licence Renewal Application	2 February 2015	Water Licence
Type 'A' Water Licence (Annual, 2014)	21 March 2015	Water Licence
Wildlife Monitoring Program (Annual) 2014: includes Waste Management Plan, Lichen and Permanent Vegetation Plot Monitoring Programs	26 March 2015	Environmental Agreement
Seepage Report (Annual, 2014)	31 March 2015	Water Licence

# AQUATIC EFFECTS MONITORING PROGRAM (AEMP)



Youth Joseph Richardson  
inspects Lake Whitefish

Diavik Photo

## 1. 2013 AEMP REPORT

The 2013 AEMP report was reviewed through the WLWB process. EMAB did not submit comments on the 2013 AEMP Report. EMAB noted that Lands submitted comments, EC and DFO had no comments, and ENR did not submit any comments. Report was approved by WLWB while identifying some issues regarding action levels in response to changes; EMAB will monitor the response and implementation of recommendations.

## 2. AEMP VERSION 3.0 (2011-2013) SUMMARY REPORT

This year EMAB contracted North/South Consultants Inc. (NSC) to conduct a review of Diavik's 2011-2013 Aquatic Effects Monitoring Program (AEMP) Summary Report. EMAB organized a meeting on November 18, 2014, with NSC and EMAB representatives to review the Summary Report and discuss the comments and recommendations made by NSC. Comments made by EMAB to the WLWB on the 2011-2013 Summary Report are summarized in the following section.

The focus of EMAB's review was on looking for results that may show important changes in Lac de Gras



Diavik Photo

AEMP sampling



over time and any emerging concerns since the last summary report (2007-2010).

EMAB made detailed technical review comments to the WLWB which can be found on the WLWB registry. While EMAB identified a number of concerns and specific issues, we should note that we continue to be very pleased with the quality of the reporting, including the detailed appendices. In addition to EMAB, EC and ENR made comments on the report. DFO indicated it did not have any comments.

EMAB highlighted the following key comments and recommendations for Diavik and the WLWB to consider – see the EMAB website for the full list: [www.emab.ca](http://www.emab.ca).

## 2.1 REFERENCE AREAS

The AEMP design is based on having reference areas in Lac de Gras (i.e., areas that are not affected by mining activity). These reference areas are critical in determining if the Mine is having any effect on the lake. However, water quality measurements have shown that since 2007 the reference areas are being somewhat affected by the effluent released by Diavik. They may also be affected by the Ekati Mine's effluent

Diavik Photo

## THE ENVIRONMENTAL AGREEMENT AND THE WATER LICENCE

The water licence and the EA both contain requirements for the AEMP. Most of the water licence requirements are more detailed than those in the EA. The WLWB cannot make Diavik meet any of the EA commitments unless they are also in the water licence. In the EA Diavik said it would do its best to involve Aboriginal People in designing monitoring programs, and that all its monitoring programs would include activities to:

- consider TK/IQ;
- establish or confirm thresholds or early warning signs;
- trigger adaptive mitigation measures;
- provide ways to involve each of the Aboriginal Peoples in the monitoring programs; and
- provide training opportunities for each of the Aboriginal Peoples.

*EMAB is working with Diavik to help meet its commitments as described throughout this annual report.*

Diavik Photo

Lac de Gras



Sampling for the AEMP

which flows through a series of small lakes into Lac de Gras in the general area of the reference areas. So the reference areas no longer represent the background conditions in Lac de Gras.

**RECOMMENDATION:** Please provide discussion concerning the issues that may be encountered with the assessment of mine-related effects as suitable (i.e., not influenced by Diavik effluent or 'other sources') 'background' data becomes separated over time from yearly monitoring results (e.g., changes in methods over the years may result in difficulties when comparing recent and historical data).

#### REFERENCE CONDITIONS FOLLOW UP

Based on EMAB's comments and the NSC review, the WLWB directed Diavik to submit a Reference Conditions Report by April 15, 2015, to address the issues with the reference areas. The WLWB also directed Diavik to re-submit the 2011-13 AEMP Summary Report, and to delay submission of the 2014 AEMP Report until the Reference Conditions Report is approved. The WLWB also directed Diavik to submit AEMP Design Version 4.0 by August 31, 2015.



Turbidity buoy outside A21 Silt Curtain



## 2.2 OUTLIERS

There were a large number of data points removed from analyses as they seemed either too high or too low in comparison to other data collected in the same area of the lake ('outliers'); however, good reasons were not given in the Summary Report for removing these data. Algae in water and invertebrates in lake sediments are notorious for being very patchy, so one needs to be careful when removing data that seems like a mistake as you could throw out 'real' data; this might then change your understanding of how organisms are changing over time or in response to the operation of the Mine.

**RECOMMENDATION:** The WLWB has previously asked that reasons be given for the removal of data and this needs to be done for AEMP summary reports as well.

## 2.3 SUBSTANCES OF INTEREST (SOIs)

Moderate level effects have been seen in the tissues of Slimy Sculpins for seven metals since 2007. This indicates that fish living near the Mine are likely exposed to higher concentrations of these metals than fish living in the reference areas of the lake. Of these seven metals, three (bismuth, lead, mercury) were not included as SOIs for water and three (barium, strontium, mercury) were not included for lake sediments. Since they were not included, changes over time for these metals were not looked at in water or sediment. As a result, it is not possible to see if there is a relationship between these metals in water and/or sediment and Sculpin tissues.

**RECOMMENDATION:** A substance that has a moderate level effect on Sculpin tissue should be included as an SOI for both water and sediment so any potential links may be looked at.

## 2.4 SLIMY SCULPIN HEALTH

It is unclear what would trigger a High Effect ranking for the health of Slimy Sculpin, which is described as "persistent, moderate-level effects linked to the Mine that pose a risk to the long-term viability of fish populations".

**RECOMMENDATION:** The number of years of monitoring studies that show moderate effects to be considered "persistent" needs to be decided on. Also the endpoint(s) (i.e., what is measured) and threshold(s) (i.e., the amount of change) used to determine the point at which the long-term health of the Sculpin population is at risk need to be proposed.

## 2.5 MERCURY IN LAKE TROUT

Because the pattern of increasing mercury in Lake Trout is similar in both Lac de Gras and Lac du Sauvage (and concentrations in a given year are also similar), the Summary Report concluded there is no link to the Mine and therefore the change over time in the fish in Lac de Gras is not an effect.

**RECOMMENDATION:** The conclusion of no link between the Mine and increasing mercury in Lake Trout in Lac de Gras would be better supported with: fish movement data that show little or no movement of these fish into Lac du Sauvage; and a description of how mercury has changed in fish in other northern lakes over the same amount of time that the Mine has been operating.

## SPILLS DATABASE – 2014-15 (GNWT)

Spill No.	Date	Site Description	Commodity	Quantity	Source
2014121	4/25/2014	Diavik Diamond Mine Process Plant	Processed Kimberlite Slurry	80000 L	Pipe or line
2014133	5/1/2014	Diavik Diamond Mines Inc.	Hydraulic Fluid	185 L	Other transportation
2014147	5/7/2014	Diavik Diamond Mine	Hydraulic Oil	228 L	Other transportation
2014208	6/11/2014	Diavik Diamond Mine	Emulsion	40 L	Other transportation
2014375	10/14/2014	Diavik Diamond Mine	Sewage	500 L	-
2014389	10/24/2014	Diavik Diamond Mine	Diesel	400 L	Other transportation
2014394	10/28/2014	Diavik Diamond Mines	Glycol	500 L	Storage tank greater than 4000 litres
2014405	11/10/2014	Diavik Diamond Mine	Diesel	500 L	Storage tank greater than 4000 litres
2014409	11/14/2014	Diavik Diamond Mines	Hydraulic Oil	600 L	Truck
2015006	1/4/2015	Paste Plant Construction Area	Minewater	3000 L	Pipe or line
2015051	2/16/2015	Diavik Diamond Mine - Underground Surface	Hydraulic Oil	200 L	Storage tank less than 4000 litres
2015072	3/1/2015	Diavik Diamond Mine - Underground Surface Laydown	Rheo TEC Z-60 (MasterSure Z60)	1000 L	Storage tank less than 4000 litres
2015086	3/10/2015	Diavik Diamond Mine - North Inlet	untreated mine water	194250 L	Pipe or line
2015095	3/15/2015	Jay cut off road	Hydraulic Oil	10 L	Pipe or line
2015101	3/17/2015	Diavik Diamond Mine Road to the A21 Drill Site	-	0 L	Unknown
2015106	3/20/2015	Diavik Diamond Mine UG North Mine Dry Area	Shotcrete Accelerator	950 L	Drum or barrel
2015107	3/22/2015	Diavik Diamond Mine Site, North Country Rock Pile	Hydraulic Oil	250 L	Pipe or line
2015118	3/29/2015	Diavik Diamond Mine A21 on-ice Drill Site	Oil	0 L	INST

**TOTAL SPILLS ON THIS REPORT: 18**



# INTERIM CLOSURE AND RECLAMATION PLAN (ICRP)

Diavik Photo

*Stockpile of ore in an open pit*

Diamond mining produces large amounts of waste and causes physical disturbances to the landscape, such as roads, gravel pits, concrete pads, and processed kimberlite containment facilities. Interim closure and reclamation refers to the process that Diavik will follow to reclaim the land as close to its original state as possible. Diavik is required to provide an ICRP Progress Report to the WLWB every year. The purpose of the Progress Report is to keep all parties informed about closure planning at the Mine site and to make sure Diavik remains on schedule.

Diavik works with a Traditional Knowledge Panel to review the proposed closure planning and receive input. The Panel's recommendations can be found on the EMAB website: [www.emab.ca](http://www.emab.ca).

## 1. ICRP PROGRESS REPORT 2014

Diavik submitted the 2014 ICRP progress report on October 31, 2014. The WLWB directed DDMI to resubmit a revised version of the progress report on

March 16, 2015 because some required information was missing.

In December 2014, ARCADIS (formerly SENES Consultants) reviewed the 2014 ICRP Progress Report, Appendices, and the 2014 DDMI Security – RECLAIM Estimate. DDMI prepared a detailed update and useful research and development data in support of the closure plan.

The decision to proceed with the A21 pit is a major change to the project. Diavik intends to use the stripped rock and till from the A21 pit as cover materials for the North Country Rock Pile. Diavik expects this will eliminate long-term acid production and contaminated seepage release from the North Country Rock Pile.

The 2014 ICRP Progress Report also shows the efforts Diavik made towards community engagement. Of specific interest are the ongoing TK panel sessions, which discussed vegetation and road reclamation options.



Diavik Photo

North Country rock pile



Diavik Photo

Revegetation plots at Diavik site

In addition to EMAB, comments on the report were submitted by DFO, ENR and Lands.

## 2. REVIEW OF THE ICRP PROGRESS REPORT 2014

This section details the results of the 2014 ICRP Progress Report review, and provides EMAB's recommendations.

### Processed Kimberlite Containment (PKC) spillway

The long-term stability of the PKC spillway is a concern if it becomes blocked with ice. This could lead to the rapid release of water causing erosion to the spillway and surrounding environment.

**RECOMMENDATION:** Diavik should include a long-term surveillance and maintenance plan to address the potential of ice blocking the spillway.

**RECOMMENDATION:** Diavik should include a fund for very long-term care and surveillance of the PKC facility in the next RECLAIM model update. The net present value of this long-term fund is not likely to be a major cost. EMAB feels it is reasonable to include this in the closure cost estimate.

Note: RECLAIM is a model used for estimating reclamation costs at many Canadian mine sites.

### Revegetation

Diavik continues to undertake Research and Development programs on revegetation. However, there has been no decision on what to revegetate, or how to revegetate.

**RECOMMENDATION:** Diavik should include a cost estimate for revegetating a portion of the site in the next RECLAIM model update.

### Security Deposit Review

EMAB monitors changes to Diavik's Security Deposits. Diavik has Security Deposits held under the water licence, land leases and the Environmental Agreement. Diavik requested the Minister of DIAND review the Additional Security Deposit (ASD) under the EA in 2008. This was coordinated with a review of the Water Licence Security Deposit (WLS) resulting from revisions to the Interim Closure and Reclamation Plan. Diavik again requested a review of the ASD in July 2014, this time to the Minister of ENR, following devolution. The Minister agreed and made a decision on December 4, 2014. The current security deposit was slightly reduced by \$1.81 million to a total of \$144.11 million as follows:

WLS – increased from \$109 million to \$129.55 million

ASD – decreased from \$36.92 million to \$14.56 million

There is also an Environmental Agreement Security Deposit of \$3 million, which was unchanged.



# ENVIRONMENTAL AIR QUALITY MONITORING PROGRAM (EAQMP)

EMAB Photo



*Caribou*

Diavik began the Environmental Air Quality Monitoring Program (EAQMP) in 2012 to monitor Total Suspended Particulates (TSP), and to determine the effect of dust deposition on wildlife and aquatics. This program is an EA requirement under section 7.2(a), and EMAB is pleased that Diavik now monitors TSP, along with existing programs including: the dustfall collection system, annual snow core sampling program, and GHG emission calculations from all onsite sources.

## 1. ENVIRONMENTAL AIR QUALITY MONITORING REPORT

In October 2014, ARCADIS Canada Inc. completed a peer review of the 2013-2014 Environmental Air Quality Monitoring Report, the first report submitted under the new program. The report summarizes the air quality monitoring activities conducted at the Mine during 2013 and 2014, and the results of this program.

EMAB reviewed the report and formally submitted comments and recommendations to Diavik. EMAB

noted that the report does not always present enough data to support Diavik's conclusions.

### 1.1 CONTINUOUS TOTAL SUSPENDED PARTICULATE MONITORING

Community interest in the effect of dust deposition on wildlife and aquatics is the main reason why Diavik focuses on TSP monitoring. The Environment and



Diavik Photo

*Fresh air supply for underground mine*



*Checking a dust monitoring gauge*



*Scanning for caribou*

Natural Resources division of the GNWT has guidelines for the allowed average concentration of TSP for a day and for a year.

- Two TSP monitoring stations were established at the Mine. The first was near the A154 dike (along south-east corner of A154 pit), and the second was near the Communications Building. Besides one data point recorded in December, all data remain below the daily and yearly allowable average.

EMAB noted that there are problems with Diavik's equipment calibration. This raises questions about the validity of all the TSP data, or that the data show actual air quality conditions.

## 1.2 DUSTFALL MONITORING

Dust fall generated by the Mine has the potential to enter Lac de Gras through runoff during the summer, and by deposition onto ice-covered surfaces during winter. This program was implemented to identify total particulate deposition rates at various distances from the Mine. Dust gauges and snow cores were used to collect samples.

- Data collected from 12 dust gauges on and off site, and 27 snow core samples were used to analyze total dust fall deposition.





*Dust suppressing in action, water truck*

- The 2013-2014 Environmental Air Quality Monitoring Report found that in general, dustfall decreases with increased distance from the mine.

EMAB noted that the sites that are supposed to measure background dust levels sometimes have higher levels than the ones affected by Diavik, so may not show true background.

**RECOMMENDATIONS:** Although EMAB was pleased this program is now being implemented, the following recommendations were made for future AQMP Reports:

- Consider returning to monthly dustfall sampling, or at a minimum, perform monthly sampling during snow-free periods so that dust suppression efforts can be better evaluated.
- Complete a separate statistical analysis for the dust gauge and snow core dustfall data.
- Use available meteorological data and records of on-site activity to investigate increased concentrations of ambient TSP.
- Include a comparison of monitored and modelled TSP/dustfall.

\* The above list shows the most important recommendations EMAB sent to Diavik. The full list can be found on the EMAB website: [www.emab.ca](http://www.emab.ca).









# WILDLIFE MONITORING PROGRAM (WEMP)



Diavik has completed a Wildlife Monitoring Program (WMP) since 2002 as part of the Environmental Agreement. The WMP's objective is to see how mine activities affect vegetation and wildlife, and compare these results with predictions made at the beginning of the project. As part of the WMP, Diavik produces an annual report called the Wildlife Monitoring Program Report. This Report describes the effects mine related activities have on wildlife and vegetation. The results of this report are then compared with the predictions Diavik made at the beginning of the project to note changes in wildlife and vegetation.

## 1. CHANGES TO THE WMP

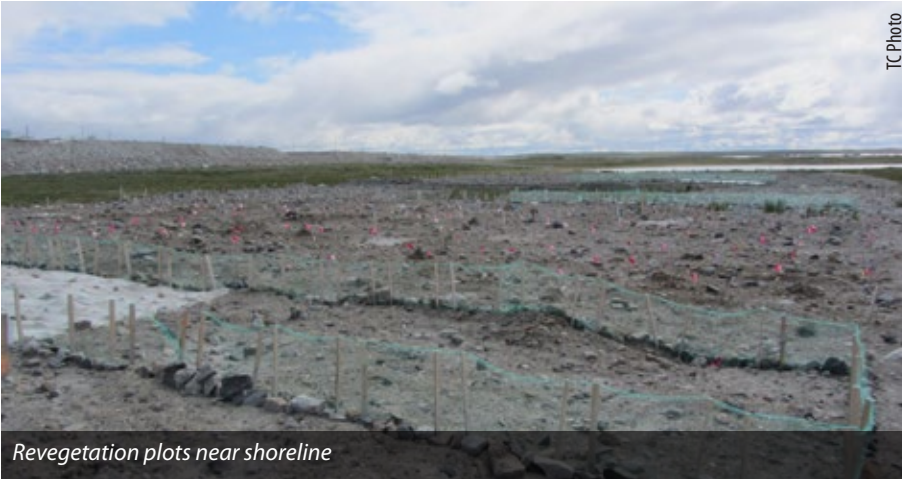
By 2009, the yearly reports showed that many effects on vegetation and wildlife remained within the predicted levels. Other mines in the area made similar conclusions based on their monitoring programs. In 2009, the mine operators and government agencies responsible for environmental resource management held a workshop to discuss the monitoring programs. The purpose of the workshop was to organize programs among different parties and address wildlife management issues on a larger scale.

Diavik developed new objectives for the WMP. The new objectives are based on the 2009 workshop, changes in mine operations (mine going underground), and recommendations from EMAB. Some of the new objectives include:

- Determine if changes in mine activity affect caribou and grizzly bear presence.
- Monitor grizzly bear presence using a hair-snagging program. The hair-snagging program is a partnership between Ekati, De Beers, and Diavik. The results of this program will also identify the number of grizzly bears in the area.
- Monitor wolverine presence using a hair-snagging program. The hair-snagging program is a partnership between Ekati, GNWT, and Diavik. The results of this program will also identify the number of wolverine in the area.

## 2. WMP REPORT 2014

EMAB reviewed Diavik's 2014 WMP report. Diavik also produced a Comprehensive Analysis Report, and an analysis of the 2012-2013 grizzly bear hair-snagging program. The Comprehensive Analysis Report is part of the WMP that provides more detailed statistical analysis,



*Revegetation plots near shoreline*

and comes out every three years. This year it examined how mine activity indirectly affects caribou and wolverine. It used data collected from collared caribou and wolverine snow tracks. A different independent consultant produced the report on the grizzly bear hair-snagging program, and it is not part of the WMP.

EMAB's wildlife consultant, Management and Solutions in Environmental Science (MSES) reviewed the methods and results of the 2014 Wildlife Monitoring Program Report and Comprehensive Analysis Report. EMAB reviewed MSES' comments and sent them to Diavik as recommendations. The areas that this report examines are: vegetation, caribou, grizzly bear, wolverine, and falcons.

## 2.1 WILDLIFE ENVIRONMENTAL ASSESSMENT PREDICTION REVIEW

This section details the results from the 2014 WMP Report, and provides EMAB's main recommendations.

### Vegetation

The total area of vegetation/habitat loss remains at a lower level than predicted.

**RECOMMENDATION:** Since the 2010 WMP Report, MSES has recommended that Diavik discuss revegetation programs. This will help Diavik re-establish vegetation to the condition it was in before the Mine existed. EMAB would like Diavik to: (1) Discuss the effect of the Mine on vegetation structure in reclamation and revegetation studies and; (2) Discuss how re-establishment of vegetation to the condition it was before the Mine will affect wildlife recolonization.

**RECOMMENDATION:** Please provide details of future monitoring plans for lichen, such as frequency and timing of monitoring.

### Caribou

Barren-ground caribou have social, economic, and ecological



*Caribou crossing on winter road*



importance for northern residents and northern ecosystems. The Bathurst caribou herd is a type of barren-ground caribou found in the Lac de Gras region of the NWT. During this herds' annual migration to and from the calving grounds, they move through the Lac de Gras region and may be influenced by mining activities.

- From 2002-2009, Diavik completed weekly aerial surveys to determine the Zone of Influence (ZOI) of Mine activity on caribou. The surveys showed that caribou are most likely to be found 14 km away from the Mine rather than closer to the Mine. In 2012, Ekati Diamond Mine and Diavik completed aerial surveys together. However, in 2013 Ekati and Diavik asked to omit the aerial surveys for caribou monitoring. The Environment and Natural Resources department of the GNWT approved this request, and aerial surveys were not completed in 2013 or 2014.

**RECOMMENDATION:** Please consider the interpretation of the 14 km ZOI. The 14 km distance may demonstrate a group of caribou that would not exist without the Mine. EMAB Recommendation: Please explain and justify why aerial surveys have been postponed "in favor of other studies". Please provide details on what "other studies" would examine that may cause caribou to avoid the Mine.

- In 2014, Diavik completed ground-based caribou behavioural studies to find out if caribou behaviour changes with distance from the Mine. Diavik will analyze the ground-based caribou behavioural data when more is collected.

**RECOMMENDATION:** In the future, when behavioural data are analyzed, please justify the pooling of caribou behavioural data across years and any assumptions made.

- Geographic locations collected from collared caribou tracked their migration patterns. During the southern migration, collared female caribou travelled west around Lac de Gras. However, the expected migration pattern predicted caribou would travel east around Lac de Gras.

**RECOMMENDATION:** Please provide a discussion of the potential causes of this unpredicted migration pattern, and potential response actions.

**RECOMMENDATION:** Please consider how the information gained from various caribou datasets could be used in terms of mitigation for the Diavik Mine in particular and for other future projects in the region in general.

## Grizzly Bear

- Habitat loss for grizzly remained lower than predicted.
- In 2012-2013, a hair-snagging program determined grizzly bear abundance and distribution in the area. The hair-snagging program was not completed in 2014.



Diavik Photo



*Wolverine*

- Monitoring data from grizzly bears suggest they are found closer to the Mine rather than farther away.

**RECOMMENDATION:** Please consider the possibility that grizzly bear presence on the site may be rising. Please provide a detailed analysis of grizzly bear data.

## Wolverine

Results of a hairsnagging and snow track program for wolverine indicate a declining trend in wolverine in the study area. This trend suggests that site management of food and waste have been effective in keeping wolverine away from the Mine.

## Falcons

There do not appear to be any changes regarding the presence and health of falcons. For that reason, there are new objectives in the WMP to gain a better regional understanding of falcon populations.

## Waste Transfer Area (WTA) and Landfill

The number of fox observations were lower in 2014 than in 2013.

**RECOMMENDATION:** Please evaluate whether the decrease in fox observations in the WTA in 2014 persists in future years.



*Fox at Waste Transfer Area and Landfill*



# TRADITIONAL KNOWLEDGE / INUIT QAUJIMAJATUQANGIT

The use of Traditional Knowledge / Inuit Qaujimajatuqangit (TK/IQ) in environmental management and monitoring at the Diavik Mine has been an ongoing point of discussion between EMAB and Diavik. The meaningful involvement of Aboriginal people in environmental monitoring program design, as well as the inclusion of TK/IQ has been an EMAB priority since EMAB's creation. EMAB tried various ways to encourage Diavik to take action on this EA commitment.

EMAB is pleased to see that Diavik has made efforts to include TK/IQ in closure planning.

In 2011 EMAB became more actively involved in bringing TK/IQ holders together as a TK Panel, to address issues such as caribou and closure planning. Then in 2013 Diavik began to take a greater role in facilitating the TK Panel, with EMAB assessing the results of the work and Diavik's response. EMAB also made recommendations to

Diavik Photo

## TRADITIONAL KNOWLEDGE / INUIT QAUJIMAJATUQANGIT

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.



TK Panel - August 2014 at Diavik Revegetation Site

C. English Photo





*Traditional Knowledge panel group photo*

Diavik on ways to more effectively work with the panel.

The Panel’s recommendations, and Diavik’s responses, are included as part of Diavik’s closure planning reports and can be found on the EMAB website: [www.emab.ca](http://www.emab.ca).

# 1. ELDERS WORKSHOP

In March 2015 EMAB organized a workshop with community elders to review the most recent AEMP, WMP and EAQMP reports, as well as the TK Panel recommendations. The group included some members of the TK Panel, some EMAB members and staff and guests from WLWB, Diavik and IEEMA. Following the review, the elders made a number of recommendations. The workshop report will be reviewed by the participants for

accuracy. Once the report is finalized, EMAB will consider the recommendations and develop formal recommendations to Diavik.



*Elders workshop*



# EMAB GOVERNANCE AND OPERATIONS

This year the Board met eight times, four face-to-face meetings and four conference calls. We held our Annual General Meeting on September 18.

EMAB also attended the Geoscience Forum in November.

Following a number of staff vacancies that took place at the end of last year, the Board undertook a review of staffing needs in relation to implementing the Environmental Agreement. As a result we restructured by creating the position of Environmental Specialist while eliminating the positions of Program Manager and Administrative Assistant. We hired Robin Heavens in January to fill our newly created Environmental Specialist position.

## 1. 2015-2017 BUDGET DISPUTE

Every two years the EA requires that EMAB submit a recommended budget to Diavik. EMAB and Diavik review the budget and try to reach agreement. If we cannot reach agreement within 60 days, we each submit a budget to the Minister, and all three try to reach agreement. If that fails the Minister chooses one of the budgets and that becomes the budget for the next two year period.

In 2011-13 and 2013-15 EMAB was unable to reach agreement on a budget with Diavik and the Minister, and the Minister chose Diavik's proposed budget. With each dispute EMAB's budget was reduced.



In 2015-17 EMAB was unable to reach agreement with Diavik after several attempts. EMAB and Diavik submitted budgets to the Minister, and for a third time the Minister chose Diavik's reduced budget.

Budget Proposal 2015-17	EMAB	Diavik
2015-16	627,587	467,663
2016-17	640,139	477,590

EMAB's budget in 2014-15 was \$615,282.

The Minister's decision to choose Diavik's proposed budget has reduced the funding available to EMAB by \$147,619 for 2015-16, about 24%. This affects EMAB's ability to carry out its mandate under the EA. The Board is assessing its options.

## 2. STRATEGIC PLAN REVIEW— BLACHFORD LAKE LODGE — AUGUST 13 - 14TH, 2014

EMAB initiated a review of its strategic plan during 2014-15. Board members spent two days reviewing the strategic plan, assessing EMAB's performance

in meeting its objectives and developing approaches to improving the organization's ability to meet objectives. The main points were:

- Enhance relationship of Aboriginal Board members with their Parties
- Improve technical capacity through recruiting staff expertise
- Develop recommendations to enhance participation of Aboriginal Peoples and Affected Communities in training and monitoring
- Recommend more TK/IQ studies
- Improve accessibility of communication: meetings and reporting



Board members at strategic plan review



## WHAT ARE EMAB'S PLANS?

All EMAB's activities have been affected by the budget decrease of almost a quarter of the previous year's budget due to the Minister's decision. This situation has required EMAB to review our priorities and activities in carrying out our entire mandate.

Our priorities for the 2015 - 2016 year will be:

### OVERSIGHT AND MONITORING

- Participate in Water Licence Renewal Hearings
- Monitor construction of the A21 dike
- Review Reports:
  - › AEMP Reference conditions
  - › Revised 2011-13 AEMP summary
  - › AEMP re-design
  - › AEMP 2014
  - › WMP 2014
  - › EAQMP 2014
  - › ICRP

### ABORIGINAL AND COMMUNITY INVOLVEMENT

- Diavik TK Panel
- Engage Communities
- Follow up AQMP Workshop

### COMMUNICATIONS

- Annual Report
- Website
- Public Registry

### GOVERNANCE

- Hold Regular Meetings,
- Oversee EMAB Operations



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# AUDITED FINANCIAL STATEMENTS

## Independent Auditors' Report

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

We have audited the accompanying financial statements of Environmental Monitoring Advisory Board (the "Board") which comprises the statement of financial position as at March 31, 2015 and the statements of operations - operating fund, changes in tangible capital asset fund and cash flows for the year then ended, and a summary of significant accounting policies and other explanatory information.

#### *Management's responsibility for the Financial Statements*

Management is responsible for the preparation and fair presentation of these financial statements in accordance with Accounting Standards for Not-for-profit Organizations, and such for internal control as management determines is necessary to enable preparation of financial statements that are free from material misstatement, whether due to fraud or error.

#### *Auditors' Responsibility*

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with Canadian generally accepted auditing standards. Those standards require that we comply with ethical requirements and plan and perform an audit to obtain reasonable assurance whether the financial statements are free of material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

#### *Opinion*

In our opinion, these financial statements present fairly, in all material respects, the financial position of the Board as at March 31, 2015 and the results of its operations and cash flows for the year then ended in accordance with Accounting Standards for Not-for-profit Organizations.



Yellowknife, Northwest Territories  
November 12, 2015

Chartered Accountants

## Environmental Monitoring Advisory Board

### Statement of Operations - Operating Fund

For the year ended March 31,	Budget (Unaudited)	2015	2014
<b>Revenue</b>			
Diavik Diamond Mines Inc.	\$ 615,282	\$ 604,909	\$ 656,448
Interest income	5,411	7,541	6,810
Carry forward from 2012	-	-	10,084
	<b>620,693</b>	<b>612,450</b>	<b>673,342</b>
<b>Program expenditures</b>			
Administration (Schedule 1)	189,488	165,949	129,802
Management Services (Schedule 2)	162,834	156,501	194,643
Board Expenditures (Schedule 3)	93,223	112,122	70,916
Science Program (Schedule 4)	25,000	85,313	35,154
Air Quality Management Program (Schedule 5)	-	56,268	-
Transfer of tangible capital asset purchases	2,500	14,728	1,986
	<b>473,045</b>	<b>590,881</b>	<b>432,501</b>
<b>Excess revenue</b>	<b>147,648</b>	<b>21,569</b>	<b>240,841</b>
<b>Contribution repayable</b>	<b>-</b>	<b>(76,569)</b>	<b>(185,841)</b>
<b>Transfer from (to) deferred revenues</b>	<b>-</b>	<b>55,000</b>	<b>(55,000)</b>
<b>Excess revenue</b>	<b>147,648</b>	<b>-</b>	<b>-</b>
<b>Balance Operating Fund, beginning of year</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Balance Operating Fund, end of year</b>	<b>\$ 147,648</b>	<b>\$ -</b>	<b>\$ -</b>

## Environmental Monitoring Advisory Board

### Statement of Changes in Tangible Capital Asset Fund

For the year ended March 31,	2015	2014
Tangible Capital Asset Fund, beginning of year	\$ 9,935	\$ 14,351
Transfer from operating fund of tangible capital asset additions	14,728	1,986
Amortization	(5,801)	(6,402)
<b>Tangible Capital Asset Fund, end of year</b>	<b>\$ 18,862</b>	<b>\$ 9,935</b>



## Environmental Monitoring Advisory Board

### Statement of Financial Position

As at March 31,	2015	2014
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#### Assets

##### Current

Cash	\$ 788,997	\$ 902,250
Accounts receivable	2,875	-
Prepaid expenses	13,372	1,106
	<b>805,244</b>	<b>903,356</b>

Tangible capital assets (Note 3)	18,862	9,935
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	<b>\$ 824,106</b>	<b>\$ 913,291</b>
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#### Liabilities

##### Current

Accounts payable and accrued liabilities (Note 4)	\$ 75,171	\$ 57,606
Contributions repayable (Note 5)	262,410	185,841
Deferred revenues (Note 6)	467,663	659,909
	<b>805,244</b>	<b>903,356</b>

#### Net Assets

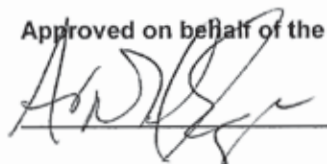
Tangible capital asset fund	18,862	9,935
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Operating fund	-	-
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	<b>18,862</b>	<b>9,935</b>
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	<b>\$ 824,106</b>	<b>\$ 913,291</b>
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Approved on behalf of the Board

 Director

 Director

## Environmental Monitoring Advisory Board

### Statement of Cash Flows

For the year ended March 31,

2015

2014

#### Cash provided by (used in)

##### Operating activities

Excess revenue (expenditures)	\$ -	\$ -
Change in non-cash operating working capital		
Accounts receivable	(2,875)	-
Prepaid expenses	(12,267)	14,041
Accounts payable and accrued liabilities	17,566	2,233
Contributions repayable	76,569	175,756
Deferred revenue	(192,246)	3,462

Change in cash position	(113,253)	195,492
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Cash position, beginning of year	902,250	706,758
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Cash position, end of year	\$ 788,997	\$ 902,250
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# Environmental Monitoring Advisory Board

## Notes to Financial Statements

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March 31, 2015

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### 1. Organization and Jurisdiction

The Environmental Monitoring and Advisory Board (the "Board") is a not-for-profit organization established as a requirement of the *Diavik Environmental Agreement*. It aims to provide a meaningful role for Aboriginal People 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.

The Board is exempt from income tax under section 149(1)(l) of the *Income Tax Act*.

### 2. Significant Accounting Policies

The following is a summary of the significant accounting policies used by management in the preparation of these financial statements.

#### (a) Financial Instruments – Recognition and Measurement

Financial assets originated or acquired or financial liabilities issued or assumed in an arm's length transaction are initially measured at their fair value. In the case of a financial asset or financial liability not subsequently measured at its fair value, the initial fair value is adjusted for financing fees and transaction costs that are directly attributable to its origination, acquisition, issuance or assumption. Such fees and costs in respect of financial assets and liabilities subsequently measured at fair value are expensed.

The Board subsequently measures the following financial assets and financial liabilities at amortized cost:

Financial assets measured at amortized cost include cash and accounts receivable.

Financial liabilities measured at amortized cost include accounts payable and accrued liabilities and contributions repayable.

At the end of each reporting period, management assesses whether there are any indications that financial assets measured at cost or amortized cost may be impaired. If there is an indication of impairment, management determines whether a significant adverse change has occurred in the expected timing or the amount of future cash flows from the asset, in which case the asset's carrying amount is reduced to the highest expected value that is recoverable by either holding the asset, selling the asset or by exercising the right to any collateral. The carrying amount of the asset is reduced directly or through the use of an allowance account and the amount of the reduction is recognized as an impairment loss in operations. Previously recognized impairment losses may be reversed to the extent of any improvement. The amount of the reversal, to a maximum of the related accumulated impairment charges recorded in respect of the particular asset, is recognized in operations.

## Environmental Monitoring Advisory Board

### Notes to Financial Statements

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March 31, 2015

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#### 2. Significant Accounting Policies (continued)

##### (b) Fund Accounting

The Board uses fund accounting to segregate transactions between its Operating Fund and Tangible Capital Asset Fund. The Operating Fund accounts for the Board's operating and administrative activities. The Tangible Capital Asset Fund reports the assets, liabilities, revenues and expenses related to tangible capital assets.

##### (c) Tangible Capital Assets

Purchased tangible capital assets are recorded in the Tangible Capital Asset Fund at cost. Amortization is recorded in the Tangible Capital Asset Fund using the declining balance method at rates set out in note 3.

##### (d) Revenue Recognition

The Board follows the deferral method of accounting for contributions. Restricted contributions are recognized as revenue in the year in which the related expenses are incurred. Unrestricted contributions are recognized as revenue when received or receivable if the amount to be received can be reasonably estimated and its collection is reasonably assured. Contributions which are not expensed in the current year are set up as deferred funding to be used in the future year when services are provided and goods acquired or refundable contributions that must be repaid to the contributor. Interest income is recognized on the basis of the time funds are in the account and interest is accrued.

##### (e) Unexpended Funds

On January 16, 2011 an Arbitration Award findings resulted in a change in accounting policy for the recognition and treatment of unexpended funds. Previously the Board classified the unexpended funds as unrestricted net assets. Beginning in 2011, unexpended funds are classified as net unexpended contributions repayable. The Board may not accumulate unrestricted net assets from unexpended Diavik Diamond Mines Inc. funds over a two year period.

##### (f) Allocation of Expenses

The Board allocates expenditures according to its activities. Expenditures are allocated to Administration, Management Services, Board, Science Program and Air Quality Management Program based on the nature of the expenses.

##### (g) Use of Estimates

The preparation of financial statements in conformity with Canadian accounting standards for not-for-profit organizations requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the updated amounts of revenues and expenses during the period. Actual results could differ from those estimates.



## Environmental Monitoring Advisory Board

### Notes to Financial Statements

March 31, 2015

#### 3. Tangible Capital Assets

				2015	2014
	Rate	Cost	Accumulated Amortization	Net Book Value	Net Book Value
Furniture and fixtures	30%	\$ 20,877	\$ 15,274	\$ 5,603	\$ 934
Office equipment	30%	31,484	27,514	3,970	5,671
Computer equipment	30-100%	60,895	51,606	9,289	3,330
		\$ 92,379	\$ 79,120	\$ 18,862	\$ 9,935

#### 4. Accounts Payable and Accrued Liabilities

	2015	2014
Trade accounts payable	\$ 67,590	\$ 53,471
Payroll remittances payable (E.I., C.P.P, Income Taxes)	6,477	3,664
NWT Payroll Tax	1,104	471
	\$ 75,171	\$ 57,606

#### 5. Contributions Repayable

	2015	2014
Contributions repayable - Diavik Diamond Mines Inc.	\$ 262,410	\$ 185,841

#### 6. Deferred Revenues

	2015	2014
Contribution - Diavik Diamond Mines Inc.	\$ 467,663	\$ 604,909
Air Quality Management Program - Diavik Diamond Mines Inc.	-	55,000
	\$ 467,663	\$ 659,909

## Environmental Monitoring Advisory Board

### Notes to Financial Statements

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March 31, 2015

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#### 7. Interfund Transfer

The amount of \$14,728 (2014 - \$1,986) consists of the transfers from the Operating Fund to the Tangible Capital Asset Fund to fund the acquisition of assets.

#### 8. Financial Instruments

##### Credit risk

Credit risk is the risk that a third party to a financial instrument might fail to meet its obligations under the terms of the financial instrument. The Board's financial asset that is exposed to credit risk consists primarily of cash and accounts receivable. The Board's cash is maintained with one large federally regulated financial institution. The Board is exposed to credit risk on accounts receivable of \$2,875 (2014 - \$0). This risk has not changed from the prior year.

##### Interest rate risk

Interest rate risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market interest rates. The Board's financial asset that is exposed to interest rate risk consists primarily of cash. The cash flow from variable rate financial instruments fluctuate as market rates of interest change. The risk has not changed from the prior year.

#### 9. Commitments

The Board has entered into contracts for lease of office premises with the following future minimum payments:

	Total
2016	\$ 31,500
2017	31,500
	<hr/>
	\$ 63,000

#### 10. Economic Dependence

The Board is dependant upon funding in the form of contributions from Diavik Diamond Mines Inc. Management is of the opinion that if the funding was reduced or altered, operations would be significantly affected.



## Environmental Monitoring Advisory Board

### Schedule 1 - Administration

For the year ended March 31,	Budget	2015	2014
<b>Expenditures</b>			
Advertising	\$ 15,000	\$ 8,412	\$ 13,505
Annual report	10,000	1,733	7,174
Audit fees	15,400	11,000	11,828
Bank charges and interest	566	797	4,736
Bookkeeping fees	3,500	3,434	3,586
Contract wages	63,273	49,849	13,028
Insurance	7,393	8,499	8,651
Library/Publications	2,434	1,500	10,000
Office supplies	6,500	10,535	4,212
Personnel committee	-	3,375	3,651
Postage and freight	700	1,018	395
Printing and photocopy	2,614	5,464	1,706
Professional fees	18,000	6,349	-
Rent	31,500	31,500	31,500
Repairs and maintenance	2,308	8,354	7,190
Telephone and internet	7,500	8,062	6,194
Text translation	-	500	-
Webpage	2,800	5,568	2,446
	<b>\$ 189,488</b>	<b>\$ 165,949</b>	<b>\$ 129,802</b>

## Environmental Monitoring Advisory Board

### Schedule 2 - Management Services

For the year ended March 31,	Budget	2015	2014
<b>Expenditures</b>			
Employee benefits	\$ 11,400	\$ 16,411	\$ 17,100
Professional development	6,400	6,917	-
Relocation	-	1,999	10,040
Salaries	133,534	125,421	165,149
Travel	10,000	5,445	2,354
Workers' compensation	1,500	308	-
	<b>\$ 162,834</b>	<b>\$ 156,501</b>	<b>\$ 194,643</b>

## Environmental Monitoring Advisory Board

### Schedule 3 - Board Expenditures

For the year ended March 31,	Budget	2015	2014
<b>Expenditures</b>			
Accommodations	\$ 6,058	\$ 24,242	\$ 3,333
Conference calls	1,325	-	1,053
Food and beverages	1,950	2,375	774
General community consultation	36,000	40,225	39,025
Honoraria	32,863	28,788	17,411
Hospitality	1,500	2,005	-
Meetings	543	916	1,771
Per diem	3,757	3,313	1,897
Transportation	9,227	10,258	5,652
	<b>\$ 93,223</b>	<b>\$ 112,122</b>	<b>\$ 70,916</b>

## Environmental Monitoring Advisory Board

### Schedule 4 - Science Program

For the year ended March 31,	Budget	2015	2014
<b>Expenditures</b>			
Consultants	\$ 25,000	\$ 85,313	\$ 35,154

## Environmental Monitoring Advisory Board

### Schedule 5 - Air Quality Management Program

For the year ended March 31,	Budget	2015	2014
<b>Expenditures</b>			
Workshop	\$ -	\$ 56,268	\$ -



# EMAB RECOMMENDATIONS

## EMAB RECOMMENDATIONS TABLE 2014-15

Recommendation	To	Response
<b>AEMP</b>		
Please provide discussion concerning the issues that may be encountered with the assessment of Mine-related effects as suitable (i.e., not influenced by Diavik effluent or 'other sources') 'background' data becomes separated over time from yearly monitoring results (e.g., changes in methods over the years may result in difficulties when comparing recent and historical data).	Diavik via WLWB	Comparisons are to a specific period (2007-2010) of results for the reference areas. This was in a period when effects were not measured. This reference area approach was specifically identified, discussed, reviewed and approved as part of the AEMP Designs 2 and 3. The program has been implemented on this basis. Please see AEMP Design V3.5 - Section 5.6.4.1.
The WLWB has previously asked that reasons be given for the removal of data and this needs to be done for AEMP summary reports as well.	Diavik via WLWB	Outliers were explained in the annual reports. In trend analysis, outlier data can mask true effects. Statistical analyses are sensitive to outliers, so removing these allow the statistics to be more sensitive (i.e., they can more easily detect differences). This is a recommended practice in most types of statistical analysis.
A substance that has a moderate level effect on Sculpin tissue should be included as an SOL for both water and sediment so any potential links may be looked at.	Diavik via WLWB	All the metals undergo an initial analysis. If the metals in question are not considered SOLs in water or sediment, this means there are no differences between exposure and reference areas. Since there is no Mine influence on these metals, there is no value in further evaluating them in water and sediments. Again, the non SOLs were evaluated to determine that they are not SOLs.
The number of years of monitoring studies that show moderate effects to be considered "persistent" needs to be decided on. Also the endpoint(s) (i.e., what is measured) and threshold(s) (i.e., the amount of change) used to determine the point at which the long-term health of the Sculpin population is at risk need to be proposed.	Diavik via WLWB	Please refer to the study design Version 3.5 for further explanation. Please note that these rankings are for the weight of evidence only. The Action Levels describe the response required for a given level of effect seen in the fish.
The conclusion of no link between the Mine and increasing mercury in Lake Trout in Lac de Gras would be better supported with: fish movement data that show little or no movement of these fish into Lac du Sauvage; and a description of how mercury has changed in fish in other northern lakes over the same amount of time that the Mine has been operating.	Diavik via WLWB	Will consider in future reports.

Recommendation	To	Response
<b>ICRP</b>		
Diavik should include a long-term surveillance and maintenance plan to address the potential of ice blocking the PKC spillway.	Diavik via WLWB	A stated goal for the closure design is “1. Land and water that is physically and chemically stable and safe for people, wildlife and aquatic life.” (ICRP V3.2 pg 6). AANDC (2007) defines physical stability as “Physical Stability - Any mine component that would remain after closure should be constructed or modified at closure to be physically stable such that it does not erode, subside or move from its intended location under natural extreme events or disruptive forces to which it might be subject after closure. Mine site reclamation will not be successful into the long term unless all physical structures are designed such that they do not pose a hazard to humans, wildlife, or environment health and safety.” DDMI suggest that it is premature to conclude that this goal cannot be achieved for the PKC spillway.
Recommendation: Diavik should include a fund for very long-term care and surveillance of the PKC facility in the next RECLAIM model update. The net present value of this long-term fund is not likely to be a major cost. EMAB feels it is reasonable to include this in the closure cost estimate. Note: RECLAIM is a model used for estimating reclamation costs at many Canadian mine sites.	Diavik via WLWB	See above
Diavik should include a cost estimate for revegetating a portion of the site in the next RECLAIM model update.	Diavik via WLWB	DDMI understands that the next RECLAIM model update will be prepared following the approved ICRP V4. The scope of the approved ICRP V4 will be the new basis for the RECLAIM update.
<b>EAQMP</b>		
Consider returning to monthly dustfall sampling, or at a minimum, perform monthly sampling during snow-free periods so that dust suppression efforts can be better evaluated.	Diavik	No response
Complete a separate statistical analysis for the dust gauge and snow core dustfall data.	Diavik	No response
Use available meteorological data and records of on-site activity to investigate increased concentrations of ambient TSP.	Diavik	No response
Include a comparison of monitored and modelled TSP/dustfall.	Diavik	No response

Recommendation	To	Response
<b>WMP</b>		
Since the 2010 WMP Report, MSES has recommended that Diavik discuss revegetation programs. This will help Diavik re-establish vegetation to the condition it was in before the Mine existed. EMAB would like Diavik to: (1) Discuss the effect of the Mine on vegetation structure in reclamation and revegetation studies and; (2) Discuss how re-establishment of vegetation to the condition it was before the mine will affect wildlife recolonization.	Diavik	There is no 2014 update regarding revegetation.
Please provide details of future monitoring plans for lichen, such as frequency and timing of monitoring.	Diavik	Taken from Appendix A, Table A-1: Actions by DDMI in Response to 2011 Recommendations on the dust deposition to lichen study. 2014 Status: While the report recommends that monitoring of PVP continue and that methods for the lichen sampling remain consistent, no further details were provided and no indication was given that cumulative effects or climate change will be assessed in the future.
Please consider the interpretation of the 14 km ZOI. The 14 km distance may demonstrate a group of caribou that would not exist without the Mine. EMAB Recommendation: Please explain and justify why aerial surveys have been postponed “in favor of other studies”. Please provide details on what “other studies” would examine that may cause caribou to avoid the Mine.	Diavik	Boulanger et al. (2012) conclude a zone of influence of 14 km. We do not criticise the analysis completed by Boulanger et al. (2012) in terms of the validity of the 14 km ZOI. However, we question the interpretation of the “zone of influence”. We think the 14 km distance actually demonstrates an aggregation of caribou that would not exist without the mines. No further discussion provided.
In the future, when behavioural data are analyzed, please justify the pooling of caribou behavioural data across years and any assumptions made.	Diavik	No response
Please provide a discussion of the potential causes of this unpredicted migration pattern, and potential response actions.	Diavik	No response
Please consider how the information gained from various caribou datasets could be used in terms of mitigation for the Diavik Mine in particular and for other future projects in the region in general.	Diavik	No response
Please consider the possibility that grizzly bears presence on the site may be rising. Please provide a detailed analysis of grizzly bear data.	Diavik	There appears to be an increasing trend in the number of incidental grizzly bear observations over time, the number of days with bear visitations to East Island over time, and the number of days deterrent actions were utilized over time (see Section 3.3 of this report for more details). No discussion regarding the effectiveness of the deterrent system was provided.
Please evaluate whether the decrease in fox observations in the WTA in 2014 persists in future years.	Diavik	In 2014, fox observations appear to have decreased in the WTA and landfill, but data are only presented in tabular form. The trend in the number of foxes should be confirmed with continued monitoring.





# Working with *the* People *for the* Environment

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