

2012 Environmental Agreement Annual Report

Diavik Diamond Mines Inc.

Rio Tinto



Diavik Diamond Mine

Document #: ENVI-292-0513 R0

Published: 18 October 2013

A Message from Diavik's President



It is my pleasure to introduce to you the latest version of Diavik's Environmental Agreement Report that summarizes the monitoring and management activities that happened at the mine during 2012.

The following pages highlight Diavik's vision of creating a legacy of responsible environmental practice for long-term community benefit. Diavik is dedicated to controlling environmental risks for our people and communities, and the new wind farm that was installed on site this past year supports this commitment, as a reduction in greenhouse gas emissions benefits all residents of the Northwest Territories. While supporting Diavik's objective of continually trying to reduce the environmental footprint of our mine, it is our hope that Diavik is also able to prove that this technology can be used in local communities and for future resource developments.

Another important goal for Diavik is to incorporate both scientific and Traditional Knowledge (TK) into our environmental monitoring and planning processes. I am very proud of the work that was done by community members to develop and carry out a successful and safe Traditional Knowledge monitoring program for fish and water health during 2012. Additionally, Diavik staff was actively engaged with the TK Panel that was formed under the Environmental Monitoring Advisory Board (EMAB). The TK Panel is working hard to come up with ideas on how TK can be incorporated into caribou monitoring and closure planning.

This report is a summary of many other reports and plans that Diavik provides to regulators and communities and, as such, may not answer all of your questions. We are committed to providing information in an open and honest manner and have therefore provided a list of reports that contain additional information. I look forward to continuing to work with our community partners to operate and close the Diavik mine responsibly, leaving behind a positive community and environmental legacy.



The Diavik Diamond Mine: An Introduction



DID YOU KNOW?

Diavik produces a lot of reports and plans for regulators and communities to review each year.

Employees also have to become familiar with a large number of Standard Operating Procedures (SOP's) in order to do their job safely and prevent environmental impacts that could be caused by the work that they do.

The Diavik diamond mine is located on the East Island of Lac de Gras, in Canada's Northwest Territories, approximately 300 kilometers northeast of the capital city of Yellowknife. There are a lot of different types of wildlife in the area. The environment is considered pristine and sacred for the communities who have used this area in the past, which is why Diavik carried out a comprehensive Environmental Assessment before beginning mining.

Diavik signed an Environmental Agreement ("the Agreement") with 5 Aboriginal organizations and the federal and territorial governments in 2000. The Agreement says what Diavik is to do to protect the environment while operating the mine. There was also an Advisory Board formed as part of this Agreement; the Board is a public watchdog of the regulatory process and the implementation of the Environmental Agreement. The Diavik diamond mine was in its tenth year of operations during 2012, and mining of the A154 and A418 open pits was finished; Diavik is now an all-underground mine.

This report summarizes the results of Diavik's environmental monitoring and management programs during 2012. Copies of the reports listed can be found on-line in the EMAB library, Wek'èezhii Land and Water Board public registry or in the public registry at the EMAB office,

Environmental Monitoring and Management



The International Standards Organization (ISO) is recognized around the world. This symbol can help you recognize companies that have been checked and certified against their strict criteria

Many companies, including Diavik, have an Environmental Management System (EMS) that provides a structure to identify, control, measure and improve the environmental performance of day-to-day operations at the mine. Diavik's EMS is checked against the ISO:14001 criteria each year by people who work for a company specializing in this. Diavik passed the review in 2012 and maintained our EMS certification. The EMS includes procedures for operational controls, environmental monitoring, communication plans and the recording of information.

The EA says that Diavik's environmental plans and programs are to be 'adaptable', or able to change in response to results. A company that conducts adaptive management would consider possible changes to decrease proven impacts, as necessary.

There are currently no specific guidelines related to adaptive management for the mining industry in the north, however, Diavik's management plans and monitoring programs follow the EMS improvement cycle, where changes have been made based on the results received. Examples include: installation of equipment and buildings that reduce emissions, finding new water sources from the mine to reduce lake water use and several changes to dust sample locations and air quality monitoring.

Research Results: Re-vegetation



In 2004, Diavik started doing research to look at the best types of native plants, soil and additives that could be used for plant growth at the mine site after closure. Diavik also wanted to research how best to grow native plants and if surface features such as boulders affect plant development.

To date, the results from this research have shown that the best soil for plants to grow on is the mud from the bottom of the lake that was removed before mining. Gravel worked well early on, but was not as good over time, and processed kimberlite did not work well. Addition of native plants and seeds is valuable, and nutrient addition from sewage sludge is helpful for plant growth. Plant litter also helps to increase the nutrients in the soil and assist with plant growth over time.

The next phase of this research will occur from 2013 to 2016 with a goal of determining how best to grow plants from seed. It will also look at how effective it is to use different planting techniques in patches around the mine site at closure, as this is something that has worked well for other large sites. This work will also include more monitoring of the research plots from 2004, to see how well they are doing over time.

Monitoring Program Results & Trends: Wildlife



Under the Environmental Agreement, Diavik conducts a wildlife monitoring program, as outlined in its Wildlife Monitoring and Management Plan (WMMP). This program was created to collect information about habitat, birds and animals in the area to see if they are affected by the mine. Results are often compared to Environmental Assessment predictions. Here are some notes about 2012.

At the end of 2012, the total amount of habitat lost due to mine development was 10.1 km² (3.9 mi²). The total amount lost to date is below the amount predicted from the Environmental Assessment.

Waste inspections continued to be done every other day during the year 2012. Compared to 2011, there was a decrease in the number of times food and food packaging were found during inspections at the Waste Transfer Area and landfill.

SUPPORTING INFORMATION

- 2012 Wildlife Monitoring Report (<http://www.emab.ca/Library.aspx>)
- 2012 Wildlife Monitoring & Management Plan (<http://www.emab.ca/Library.aspx>)
- 2010 Comprehensive Analysis (<http://www.emab.ca/Library.aspx>)
- 2012 Grizzly Bear DNA Study Design (EMAB Public Registry)

Monitoring Program Results & Trends: Wolverine & Grizzly Bear



Wolverine snow track surveys were done in 2012 with the help of a community assistant. Snow track survey results to date show that there has not been a measurable change in wolverine presence within the study area, and this matches with the prediction made in the Environmental Assessment. A total of 27 tracks were seen. Two wolverines were found dead at a Diavik project site on West Island in 2012; they had climbed into an empty dumpster and could not get back out. Diavik participates in a wolverine DNA study in cooperation with the GNWT and EKATI mine. The purpose of the survey is to find out which areas they use and how many male and female wolverines are in the area around the mines and Daring Lake. The most recent results of the DNA study showed that there are 18 wolverine in the Diavik study area with 9 males and 9 females. The next sampling session for this program is currently being planned for spring 2014.

Diavik stopped doing grizzly bear habitat surveys in 2009, primarily because of safety concerns. Since then, the company has been working with consultants, other mines and regulators to develop a new grizzly bear monitoring program. A grizzly bear DNA sampling program was designed in 2011 and done over a large study area in cooperation with the EKATI mine during 2012. A total of 1,902 hair samples were taken and will be analyzed by a lab to determine the number of individuals, both males and females. A second year is planned for this study in summer 2013. There were 97 incidental sightings of grizzly bear around the mine area in 2012 and one family of 3 bears (a sow and 2 cubs) were relocated with assistance from the GNWT. No grizzly bear mortalities occurred during 2012.

Monitoring Program Results & Trends: Caribou



Aerial caribou surveys were done in 2012. Results to date show that the Zone of Influence (ZOI—the size of area where caribou avoid the mine) is larger than originally predicted. The original prediction was between 3 to 7 kilometers (1.8 to 4.3 miles) but results to date have ranged between 11 and 30 km (6.7 and 18.3 mi). Things such as the effect of Lac de Gras and other development in the area make it difficult to figure out the exact number. Results have shown that the amount of activity at the mine does not appear to affect ZOI, overall caribou presence or the relative number of cows with calves in the Diavik study area over time. While the ZOI does not appear to be increasing over time, the overall number of caribou seen over time appears to be decreasing, but the number of caribou with calves has been higher in recent years. The movement patterns predicted in the Environmental Assessment have shown to be correct—to the west of Diavik in spring and to the east in fall.

A total of 86 behavioural scans (watching caribou to study their reaction to mining or other activities) were done in 2012, and community members helped out. To date, results show that caribou behavior changes with distance from the mine, and that the environment also influences behaviour. For example, caribou with calves spend 10% less time feeding/resting and 7% more time moving/alert when they are within 5 km (3 mi) of the mine, and increases in temperature, rainfall and insects leads to increases in feeding/resting behaviours. There were no caribou deaths due to mining activities in 2012.

Monitoring Program Results & Trends: Falcons & Waterfowl



Last year, Diavik changed their falcon monitoring program to align with a Canada-wide monitoring program. As a result, regional nest and chick searches are now done every 5 years, with the next survey planned for 2015. Each year Diavik also searches areas at the mine site for falcon nests. Because these birds like to nest high up on cliff ledges, buildings and pit walls can be very appealing to a nesting pair. In 2012 there was one peregrine falcon nest found on the mine site near the process plant. Two adults and 2-3 chicks were sighted. The wing of 1 dead peregrine falcon was found near the A418 dike. The Environmental Assessment predicted that the mine would have little impact on falcons. To date this has shown to be true, and there have been a relatively high number of nests with birds. The chance of success for raising healthy chicks has been shown to increase with distance from the mine, and to decrease if there is a lot of spring rain.

The shallow bays of Lac de Gras, on the south side of East Island, are a unique feature to the region and as such were selected for study during spring migration because they were predicted to be one of the first open water areas available for migrating birds. Waterfowl such as geese, swans and different types of ducks were seen at the East Island shallow bays. Waterfowl are also still using the ponds that have been changed by the mine on the Island (engineered collection ponds), particularly the North Inlet.

Monitoring Program Results & Trends: Dust & Air Quality



Air, wildlife and water quality concerns related to dust in the air, on the ground or in the water from mining activities were identified as a concern. Diavik has developed a program to measure dust deposition resulting from mining activities that has been ongoing since 2001. The program goals are to measure dust deposition rates at various distances from the mine (using snow core samples (photo on left) and dust gauges [photo on right]) and to determine physical and chemical characteristics of dust that may be deposited onto land or water from mining activities.

There are 24 snow survey stations along five transects on land and ice around the mine site. The stations range from approximately 25 to 2000 meters (82 feet to 1.5 miles) from mining operations. Control stations are also setup further from the mine site and are used to measure natural (or background) dust deposition.

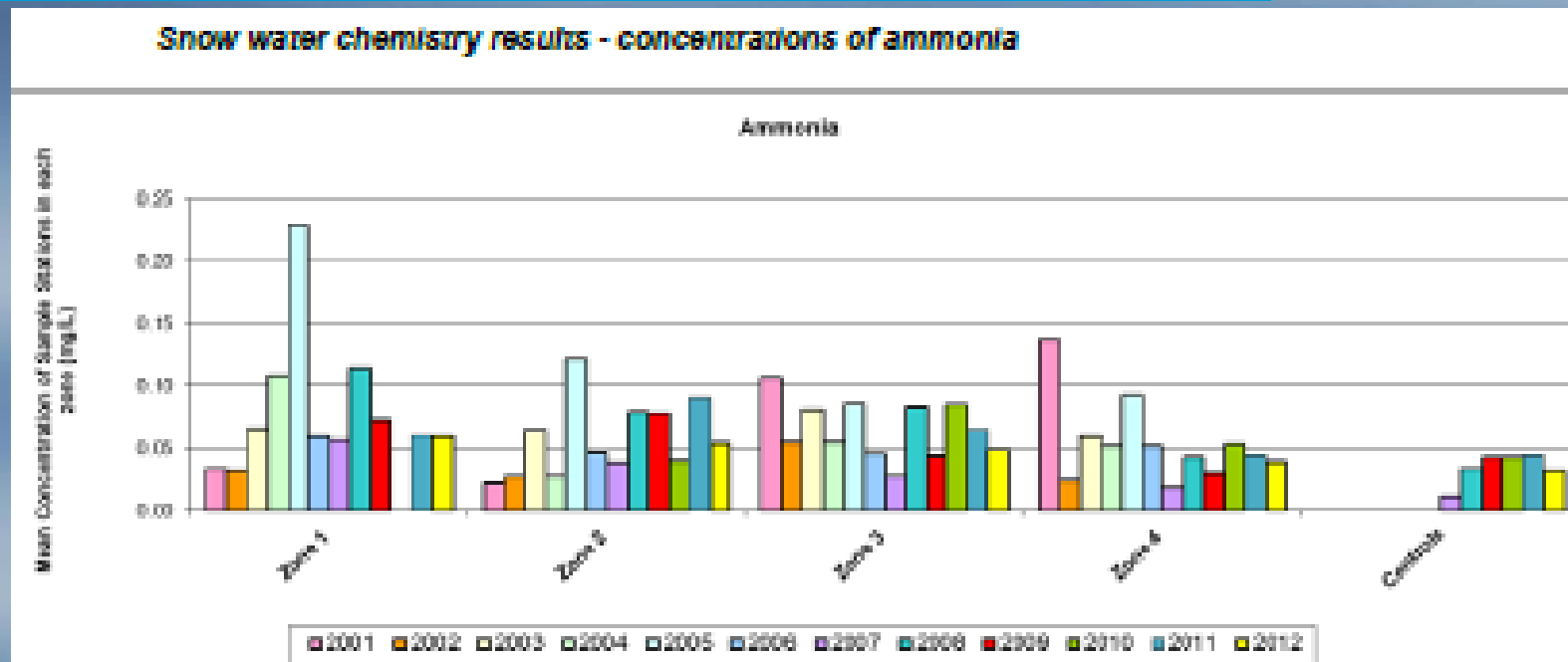
There were 12 dust gauges placed at various locations on East Island and surrounding islands. They were collected for analysis in March, June, September and December. The above map shows their location and the relative amount of dust collected.

SUPPORTING INFORMATION



- 2012 AEMP Monitoring Report, Appendix 1 (<http://www.mvlwb.ca/Boards/WLWB/SitePages/search.aspx?app=W2007L2-0003>)
- Draft Air Quality Monitoring Program (EMAB Public Registry)
- National Pollutant Release Inventory (http://ec.gc.ca/inrp-npri/donnees-data/index.cfm?do=facility_substance_summary&lang=en&opt_npri_id=0000018241&opt_report_year=2011)

Monitoring Program Results & Trends: Dust & Air Quality



Snow samples are taken every spring and they are melted to test for water quality and the amount of dust. Dust particles are also captured in collectors and checked to see if there are patterns in the amount and location of dust from the mine. As predicted, dust deposits are greater closer to the mine and are lower further away. Dust deposition during 2012 decreased a bit in some areas compared to previous years.

Snow water quality (measurements of chemicals in the water from melted snow) showed that the amount of chemicals measured in 2012 were below what is required under the Water License. The overall amount of dust measured since 2001 (including 2012) has been higher than predicted during the Environmental Assessment. The highest areas of dust deposits were beside the airstrip and west of the open pits. Some important things have changed with mine operations (for example, more construction for buildings to support the underground mine) so a review was done to determine what levels to expect in the future. At the end of 2012, a new Air Quality Monitoring Program and sampling equipment were being prepared for use in 2013.

Each year, Diavik reports the amount of greenhouse gases generated from fuel use to the regulators. In 2012, the amount reduced by approximately 20,000 tonnes from previous years and equalled 178,586 tonnes of carbon dioxide (CO_2e). Fuel use was reduced by 4 million litres, mostly because of less blasting in the pits.

Monitoring Program Results & Trends: Water Quality



Diavik monitors water quality around the mine site in accordance with the Surveillance Network Program (SNP), which is a component of Diavik’s Water License. The SNP outlines where Diavik collects water samples, how often samples are collected, and what parameters (metals, nutrients, other compounds and other water quality characteristics) are to be measured. The SNP includes sample stations for: the Water Treatment Plant, Lac de Gras water, pit water, underground mine water, PKC water, North Inlet water, collection ponds, seepage and groundwater stations and the Sewage Treatment Plant effluent. The map above shows the SNP stations.

Each month Diavik submits an SNP report to the WLWB outlining the previous month’s SNP results. SNP data for the year is also compiled and presented in the Type A Water License Annual Report. No notable issues occurred during 2012.

SUPPORTING INFORMATION

- Monthly SNP Reports
- 2012 Type A Water License Report
- 2012 Seepage Survey Report

All reports: <http://www.mvlwb.ca/Boards/WLWB/SitePages/search.aspx?app=W2007L2-0003>

Monitoring Program Results & Trends: Water Quality

Table 2: Results for 2012 Seepage Samples where License Limits were Exceeded

Element	Grab Sample License Limit	2012-SEEP-01	1645-24 – May	2008-SEEP-01
Aluminium (mg/L)	3.0	n/a	4.82	n/a
Zinc (mg/L)	0.02	0.187	0.0407	0.04
Nickel (mg/L)	0.1	0.288	n/a	n/a
TSS (mg/L)	25	n/a	122	n/a
Turbidity (NTU)	15	n/a	222	n/a

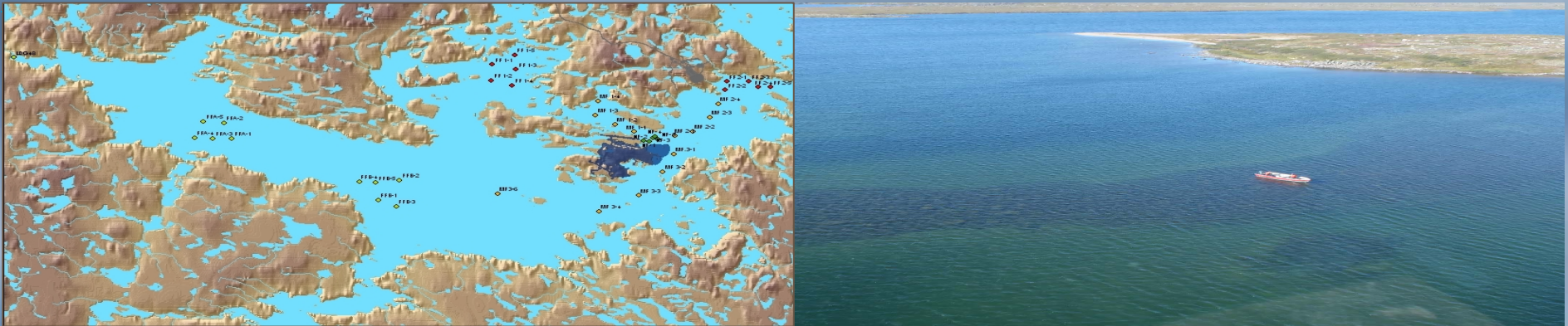
Diavik monitors dams and dikes around the mine site for seepage. The dikes and dams are designed to hold back water, however, some seepage through these structures is expected. The purpose of the survey is to check areas of potential seepage so that Diavik can take appropriate measures to address seepage issues. The monitoring includes regular inspections of the dam and dike structures and collection of water samples.

Diavik has a drainage control and collection system of ponds to intercept seepage before it enters Lac de Gras. There are some times where runoff from other areas of the mine may not go into a pond and will enter Lac de Gras, but it is usually a small amount of water for a short period of time. Typically, seepage occurs from May through to the beginning of October but the PKC contains enough water that it does not completely freeze in the winter, and therefore seepage can occur all year round.

The 2012 seepage survey monitored 22 stations, including: 7 seepage survey stations, 5 groundwater monitoring stations, 10 collection pond stations and 2 additional seepage areas. There was sufficient flow to allow for seepage samples 5 times during 2012. One was from 1645-20 (June; west side of island, drains into Lac de Gras) and another was from 1645-24 (May; south side of island, drains into Lac de Gras). The second was from 2008-SEEP-01, where zinc levels were slightly above license requirements, similar to previous years (0.09 mg/L at the highest). Three seepage samples occurred on the south side of the island, 2 from 2008-SEEP-01 (May and June; drains into the shallow bays of Lac de Gras) and 1 from 2012-SEEP-01 (December; drains into Lac de Gras near A21). The sample from 1645-20 in June did not exceed license limits. Four elements from the 1645-24 sample in May did exceed license limits (TSS, turbidity, zinc and aluminium) but were influenced by natural conditions and runoff materials from the spring melt, rather than it being mine water. One of the samples from 2008-SEEP-01 had higher levels of zinc, but this was found to occur in this area before the mine was operating as well.

Other areas of seepage were also monitored in 2012 and included: PKC East and West Dams, Pond 5, PKC Seepage Interception Wells, Pond 13, Pond 2 and the North Inlet East Dike. For each of these areas, Diavik kept the AANDC Inspector informed of seepage issues and of the short and long term plans for monitoring and repairs.

Monitoring Program Results & Trends: Water Quality



The Aquatic Effects Monitoring Program (AEMP) is the primary program specified in the Water License for monitoring the aquatic environment of Lac de Gras. During the Environmental Assessment that was completed before the mine was built, it was predicted that the mine would cause some effects on the lake. The purpose of the AEMP is to see if those predictions were correct and to make sure the effects don't harm the fish in Lac de Gras.

Sampling efforts focus on sampling stations in Lac de Gras that are located closer to the mine (where effects would first be expected to be measured). There are also sampling stations far away from the mine (where effects would take much longer to measure). Comparing information from both places allows changes in the lake caused by the mine to be measured over time (temporal) and can be measured near the mine site and further away (spatial). Effects are categorized as being low-level, moderate-level or high-level. When certain effects are measured that were not predicted, Diavik conducts Special Effects Studies on specific areas based on data and results from the AEMP.

There are 37 sampling stations (refer to above map) that are sampled under ice in spring and during open water in summer.

SUPPORTING INFORMATION

- 2012 AEMP Monitoring Report
- AEMP Study Design, Version 3.0 (2011)
- Three Year AEMP Results Summary for 2007 to 2010
- AEMP Quality Assurance Project Plan 2.0

All reports: <http://www.mvlwb.ca/Boards/WLWB/SitePages/search.aspx?app=W2007L2-0003>

Monitoring Program Results & Trends: Water Quality



Diavik continued to do the Aquatic Effects Monitoring Program (AEMP) in 2012. This was the ninth year of this program, and it is required for Diavik's water license. A 3-year analysis was done after the 2010 monitoring year and changes to the frequency and location of some AEMP samples changed for 2012. Sediment (mud on the bottom of the lake) and benthic invertebrates (small animals that live in the lake sediment) samples were not required this year. Water quality, nutrient and plankton (tiny plants and animals that float in the water) samples were taken from under the ice and in open water.

Data gathered from the AEMP to date has identified effects on Lac de Gras related to mine activities. Small changes in water chemistry (quality), sediment chemistry (quality), plankton (amount and type—see above map that shows affected area) and benthic invertebrates (amount and type) have been measured. These changes are mostly caused by an increase in nutrients in the lake and have been rated as 'moderate'. This means that these changes are generally more noticeable near the mine (near-field sampling locations) than at distances further from the mine (far-field sampling locations). Diavik tries to reduce the amount of nutrients that reach Lac de Gras by using blasting controls, careful selection of blasting materials as well as state of the art water management and treatment processes.

Monitoring Program Results & Trends: Fish & Water TK Program



SUPPORTING INFORMATION

- 2012 AEMP Report, Appendix XIV (14)
- Documentary Film: 5 Days, 2 Ways, 1 Camp



Diavik conducted a Traditional Knowledge (TK) program as part of the 2012 AEMP. The TK program was conducted from a camp on the south side of Lac de Gras and focused on fish and water health in the lake, particularly in areas close to the mine. Thorpe Consulting Services developed the program design based on direction from TK holders from each of the 5 Aboriginal organizations that are a part of the Environmental Agreement. A series of planning meetings were held in the communities during 2011 and 2012, with a final pre-camp meeting in June 2012 in Yellowknife.

During the planning sessions, community representatives explained that TK is best captured and shared through video rather than written reports. A small camera crew was hired to conduct a training session for youth from the communities so they could assist with filming and recording the camp activities while learning from their Elders. A copy of the video can be requested from Diavik.

Camp participants noted the importance of TK's context and sharing process, which is situated in, and interconnected with spirituality, codes of conduct, and connection to the land, animals, and ancestors. Customs, practices and stories about the journey-based creation of unique landscape features underscore this context of TK.

Monitoring Program Results & Trends: Fish & Water TK Program



Overall, camp participants noted that the status of the fish and water in Lac de Gras near the Diavik mine is good.

Two fish were identified as being of poorer condition, noting that the fish were skinny and, in the case of one, had a larger head. Another fish was also observed as having some intestinal worms and being of poorer condition. Participants noted that this tends to occur in all fish populations and that the fish are not eaten. Those that were tasted as part of the palatability study resulted in scores of 1 (excellent for eating, looks better than fish usually caught) or 2 (good for eating, looks similar to fish usually caught) from all participants.

Camp participants noted the environmental indicators that they use to assess water quality, such as condition of the shoreline and clarity of the water. Additionally, a tea test was used to assess water quality and participants noted that tea made from water of a poor quality results in film or scum on the surface of the cup. None of the water samples from Lac de Gras had this scum or film and all the samples tasted acceptable to participants.

Monitoring Program Results & Trends: Water Quantity



As a requirement of Diavik's Type 'A' water license, an annual report is prepared and submitted every year. The report provides information on activities related to water and waste including tables and figures on amounts, sources and uses for water used at the mine site, dewatering activities, water discharged to and from the PKC facility, amounts of waste rock moved, the amount of water pumped from the open pits and underground and numbers related to sewage.

It is too difficult to summarize all sections of the Water License Annual Report in this report, because of the amount of detail and figures. A full copy of the report can be found at: <http://www.mvlwb.ca/Boards/WLWB/SitePages/search.aspx?app=W2007L2-0003>. Some of the highlights are presented below.

- 602,514 m³ (160 mill gallons) of fresh water were used for drills, domestic use, kimberlite processing and dust control.
- Approximately 3.5 million m³ (925 mill gallons) of water was recycled from the PKC and North Inlet for use in the process plant.
- 6 spills (greater than 100L (26 gal) or near water) were reported to the NWT Spill line in 2012. Spills were cleaned up and many were closed by the AANDC Inspector before the end of the year.
- 0.12 million m³ of country rock (including Type 1, 2 and 3) was removed from the open pits and underground during 2012.

2012 Fresh Water Use at Diavik:

Domestic Water: 74,938 m³

Process Plant & Dust Control: 527,576 m³

Drills: 0 m³

1 m³ = 1,000 Litres or 264 gallons

As in past years of operations, fresh water was taken from Lac de Gras for many uses. However, Diavik recycles water from the PKC and North Inlet as much as possible, in order to minimize the amount of fresh water used from Lac de Gras.

Management Plans

Management plans are formal documents that Diavik writes to provide employees the information required to control environmental risks in their work areas. Many of these plans are also required for review and approval by regulators so that they can be better informed of how Diavik manages environmental risks at the mine. Management plans are reviewed each year and, if there are changes required, they are submitted to the Wek'èezhii Land and Water Board for review and approval. A summary of Diavik's management plans is provided below, and those revised in 2012/13 are noted. The most current version of each plan can be found at: <http://www.mvlwb.ca/Boards/WLWB/SitePages/search.aspx?app=W2007L2-0003>.



Management Plan	Purpose	Revised in 2012/13 (Y/N)
Ammonia Management Plan, V4.1	How to minimize the amount of ammonia in water due to blasting at the mine site.	No
Interim Closure and Reclamation Plan, V3.2	Engineering design, research and planning for the closure of all the major components of the mine	No
Waste Rock Management Plan, V6	Waste rock identification and separation methods to reduce the possibility of acidic water running off of the rock pile	No
Hazardous Materials Management Plan, V16	Safe transport, storage and handling methods for materials that may be harmful to health and/or the environment	No
Operational Phase Contingency Plan, V16	Response procedures for an accidental release (spill) of hazardous or toxic substances, or large volumes of water	No
Water Management Plan, V11	Water movement and treatment across the mine site	Yes
Waste Management Plan, V16	Collection, storage, transport, minimization and disposal of waste across the mine site	Yes

Community Involvement



Each year, Diavik visits the communities that are a party to the Environmental Agreement to provide them with an update on what is happening at the mine. These updates include things such as any changes that are being planned for environmental monitoring programs as well as updates on closure planning and mining operations. Diavik visits the schools and presents to the students about different topics, such as mining, geology, budgeting and the importance of staying in school.

Diavik tries to bring community members to the mine site so that they can see the mine and observe the surrounding environment with their own eyes. While it is impossible to bring everyone to site, the hope is that those who have been share their experience with others back home in the community. Diavik organizes working group meetings with community members and leadership in order to involve communities in closure planning and Traditional Knowledge programs.

Diavik is also proud to have contributed over \$110,000 to support various environment, science and Traditional Knowledge programs in local communities during 2012.

Community Updates	Behchokq (Tłıchq), 1 March	Whati (Tłıchq), 29 February	Gamèti (Tłıchq), 28 February	Wekweèti (Tłıchq), 27 February	Kugluktuk (KIA), 6 February	Dettah (YKDFN), 31 January	Lutsel K'e (LKDFN), 2 February	Yellowknife (NSMA), 30 January
TK Meetings	NSMA, 31 Jan & 4 June	KIA, 20 & 21 February	YKDFN, 23 Feb & 11 May	Tłıchq, 24 Feb & 10 May	LKDFN, 8 & 9 May	Yellowknife, 5 & 6 June	Mine Site (camp), 30 July—3 Aug	Yellowknife, 1-4 February 2013
Closure Meetings	NSMA, 15 November	Tłıchq (Kwe Beh), 20 November	LKDFN, 11 December	KIA, 28 January 2013	YKDFN, pending	Yellowknife (TK Panel), 26-28 June	Mine Site (TK Panel), 20 August	Yellowknife (TK Panel), 23-25 Oct
Environment Programs	Seasonal Community Staff: Ericson Sanguéz & Tracey Bekale , Apr to Sept	Tłıchq Community Assistants (caribou): Joseph Zoe, Jonas Nitsiza, James Rabesca, 9 to 13 October			YKDFN Community Assistants (caribou): Mike Francis, Morris Martin, Lena Drygeese, 17 to 20 September			

Site Improvements

In the fall of 2012 Diavik installed 4 wind turbines on the west side of the island. The turbines are connected to the electrical grid system for the mine and they started running on 28 September. Each turbine stands at 64 m (210 ft) high and each blade is 33 m (108 ft) long. From September 2012 to the end of April 2013, the turbines have lowered fuel use by about 2 million litres (530,000 gallons), which decreases emissions and saves about 40 truck loads of fuel transport along the winter road.

These 2.3 megawatt turbines are unique in the north, especially at such a remote site, so there have been many technical challenges. The wind turbines were successfully transported in pieces along the 2012 winter road and then assembled at the mine site during the summer. This is a good example of industry trying new technology and designs that could possibly be used in communities as a way of lowering the amount of fossil fuels used throughout the North.



Two new incinerators began operating at the mine site in October 2012. These new incinerators are located inside a building, which helps to reduce animal attraction and improve sorting conditions for the waste management staff. The machines are equipped with water-based 'scrubbers', which are air pollution control devices that remove many harmful particles and gases from the emissions caused by burning garbage.

Testing is done to check the emissions and waste material (ash) that are produced when the garbage is burned.



Compliance and EMAB



The Inspector for Diavik's water license and land leases works for Aboriginal Affairs and Northern Development Canada (AANDC) in Yellowknife. During 2012, the Inspector visited the mine site six times and noted only 3 action items that were then fixed by Diavik. The dams and dikes that surround the ponds and open pits were also inspected and a few minor water leaks that occurred were managed and repaired in a timely manner.

There were no direct communications or letters expressing concerns from the public about the mine or its operations during 2012 and the Minister of AANDC confirmed the 2011 Environmental Agreement Annual Report to be satisfactory on 15 October 2012.

The Environmental Monitoring Advisory Board (EMAB) and Diavik exchanged letters relating to topics such as the budget, development of business rules, the formation of a Traditional Knowledge (TK) Panel and recommendations from the TK Panel, review and responses to the Wildlife and Lichen monitoring programs, and changes to the grizzly bear and air quality monitoring programs. EMAB held a meeting at the mine site in February and both the members of the Board and the TK Panel visited the mine site during August 2012.

Summary



SUPPORTING INFORMATION

- 2012 Socio-economic Monitoring Agreement Report
 - 2012 Sustainable Development Report
- All reports: (<http://www.diavik.ca/ENG/resources/661.asp>)

Diavik is celebrating 10 years of operations and is proud of the many positive accomplishments that have been a part of the development of this mine. Relating to the environment, the biggest successes during 2012 included:

- ◇ **Installation of 4 wind turbines to reduce diesel fuel consumption and emissions**
- ◇ **Traditional Knowledge monitoring program completed for fish and water health in Lac de Gras**
- ◇ **Monitoring program improvements for water, air and wildlife in consultation with all Parties**
- ◇ **New incinerators that help to improve air quality**
- ◇ **EMAB's formation of a Traditional Knowledge Panel**
- ◇ **Development of Closure Planning Working Groups with each Aboriginal organization**
- ◇ **Approval to bury stable, non-reactive closure materials in the on-site landfill**
- ◇ **Increased community involvement and visits to the mine site**
- ◇ **Continued good performance in meeting water license criteria and minimizing our environmental impacts**

Thank you/Marsi Cho/Masi Cho/Quana to all of our community partners for the efforts of their staff, businesses and individual members who worked with Diavik staff during the 2012 year. These include the Kitikmeot Inuit Association, Tłı̄ch̄ Government, Yellowknives Dene First Nation, Lutsel K'e Dene First Nation and the North Slave Metis Alliance. Diavik would also like to thank our Community Liaisons—Jonas Sangris, Camilla Nitsiza and Beatrice Bernhardt—for their work in supporting employees at the Diavik site and assisting with community visits, working groups, programs and events in 2012.

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