TOWARDS SUSTAINABLE MINING

Progress Report 2011

The Mining Association of Canada | L'association minière du Canada

mining.ca

TABLE OF CONTENTS

WELCOME	**3**
WHAT MINING MEANS TO CANADA	**5**
CORPORATE SOCIAL RESPONSIBILITY	**6**
WHAT IS TOWARDS SUSTAINABLE MINING?	**7**
INTERNATIONAL CORPORATE SOCIAL RESPONSIBILITY	**12**
TSM PERFORMANCE RESULTS	**13**
COMMUNITY OF INTEREST (COI) ADVISORY PANEL	**18**
EXTERNAL VERIFICATION	**21**
HIGHLIGHTS OF COMPANY ACTIONS	**22**
ARCELORMITTAL MINES CANADA	23
BARRICK GOLD CORPORATION	25
BPH BILLITON CANADA INC.	28
DE BEERS CANADA INC.	31
DIAVIK DIAMOND MINES INC.	34
HUDBAY MINERALS INC.	37
IAMGOLD CORPORATION	39
INMET MINING CORPORATION	42
IRON ORE COMPANY OF CANADA	45
NORTH AMERICAN PALLADIUM LTD.	48
SHELL CANADA ENERGY	50
SUNCOR ENERGY INC.	54
SYNCRUDE CANADA LTD.	57
TECK RESOURCES LIMITED	60
VALE	63
XSTRATA COPPER CANADA	67
XSTRATA NICKEL CANADA	70
XSTRATA ZINC CANADA	73
AWARD WINNERS	**75**

Towards Sustainable Mining is an initiative developed by the Mining Association of Canada to improve the industry's performance by aligning its actions with the priorities and values of Canadians.

Towards Sustainable Mining (TSM) provides a way of finding common ground with communities of interest in order to build a better mining industry, today and in the future.

Participation in TSM is a condition of Mining Association of Canada (MAC) membership. Our members must subscribe to a set of guiding principles backed by specific performance indicators that member companies report on annually. TSM assessments take place at the facility level, with the results externally verified every three years.

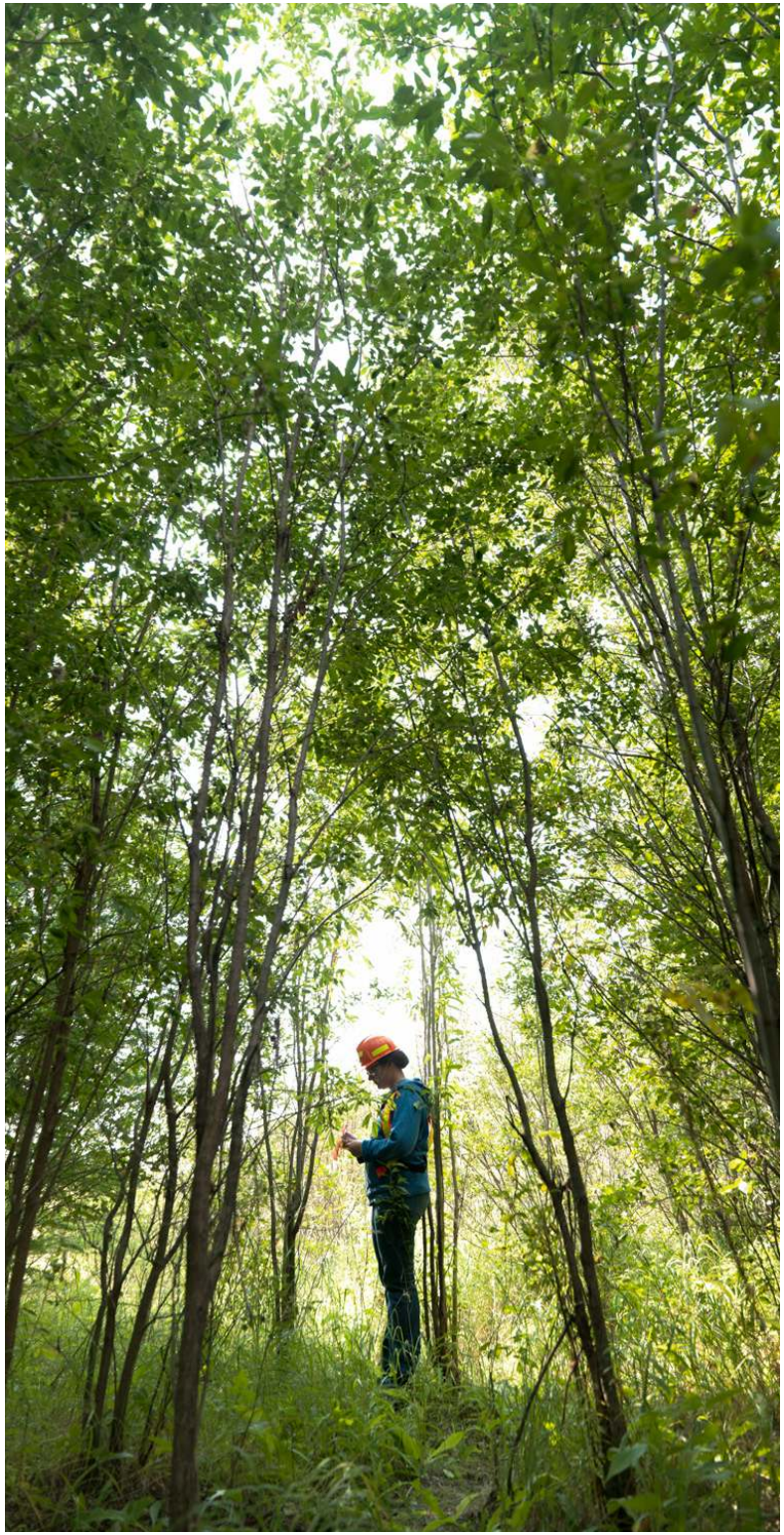
TSM includes ongoing consultation with our Community of Interest Advisory Panel. This multi-stakeholder group helps our members and communities of interest foster dialogue, improve the industry's performance and shape TSM goals.

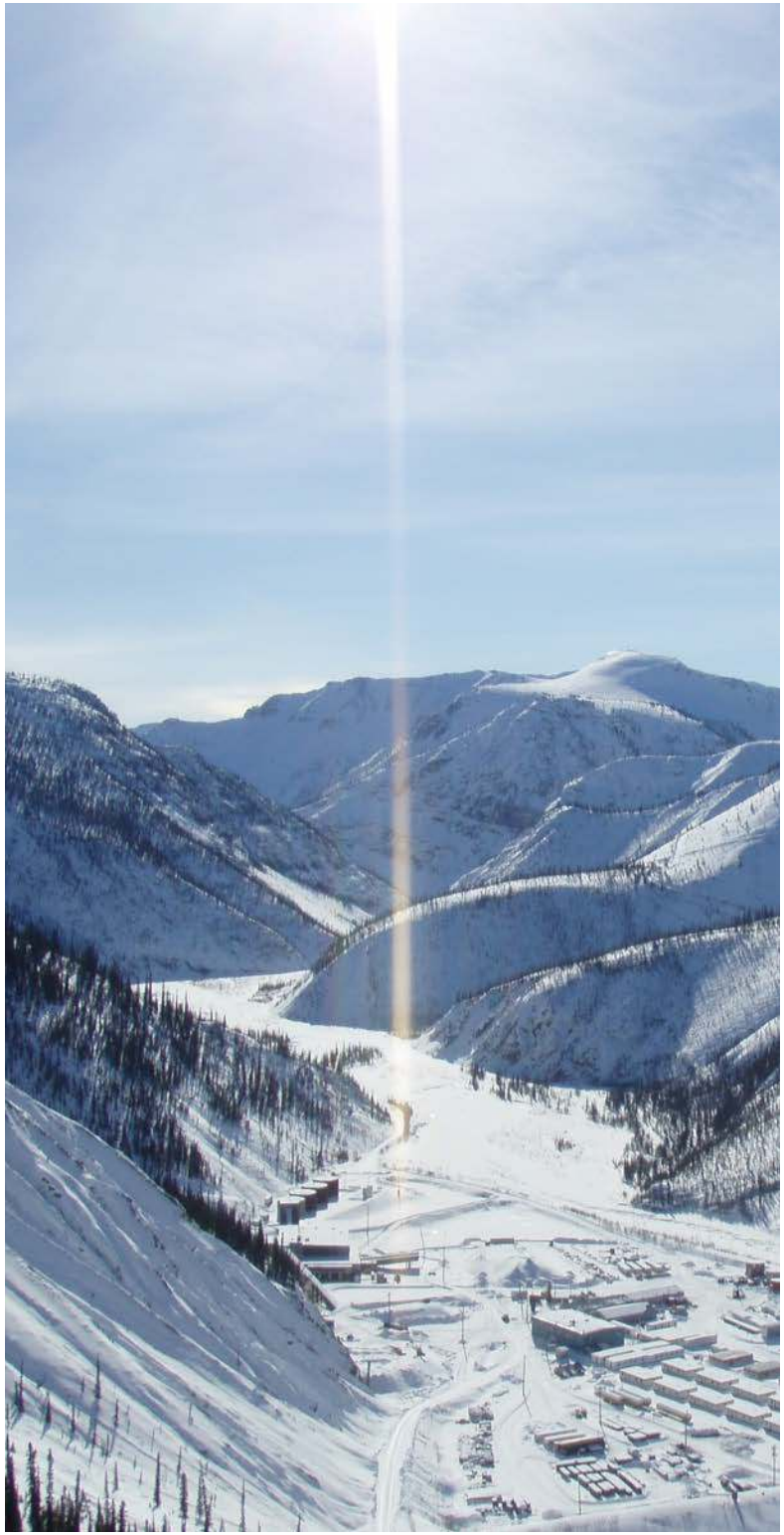
Performance Elements

Up to now MAC members have been reporting their performance in four areas, or elements: tailings management, energy use and greenhouse gas (GHG) emissions management, external outreach and crisis management planning.

Last year MAC introduced three new performance elements – the first since TSM began in 2004 – that will be integrated into TSM over the next few years. In 2010 members began reporting to MAC their scores for the three elements: biodiversity conservation management, safety and health, and Aboriginal and community outreach (this last element will replace external outreach). By 2013 all MAC members will publicly report their performance under these new elements.

In 2011 our members will continue to develop a protocol to address mine closure. They will also focus on improving their performance in the areas of biodiversity conservation as well as energy use and GHG emissions management.





You will notice that the TSM rating system has changed from numerical to alphabetical. We consider Level A to be good performance. MAC members are leaders when they achieve Level AAA.

Spread of TSM

We are pleased to announce that in 2010 the Mining Association of British Columbia became the first provincial association to adopt TSM, bringing the initiative to more mining facilities in Canada. MAC is discussing the benefits of TSM implementation with other provincial mining associations and the international community.

TSM is mandatory for our members' facilities in Canada, but we are proud that many members have adopted the initiative at their international operations as well. Many MAC members are involved in other sustainability-related standards and initiatives besides TSM, both in Canada and abroad. To better understand how TSM aligns with other frameworks, we surveyed our members about the standards and initiatives they apply in their international operations. The results will be available on our website (www.mining.ca) in the fall of 2011.

Towards Sustainable Mining would not be the success it is today without the dedication of our former President and CEO, Gordon Peeling. We wish him all the best in his retirement. Also, we are pleased to welcome back Pierre Gratton as the new President and CEO of MAC. It was under Pierre's leadership as Vice President of Sustainable Development that TSM was developed and implemented in 2004.

We hope you enjoy the new format of the TSM Progress Report. As always, it takes a detailed look at our members' progress and performance in the past year.

"TSM provides a practical and tangible system of continuous improvement of social and environmental management."

– Canadian Business for Social Responsibility

It's hard to imagine modern life without metals and minerals.

What if there was no steel, concrete or glass for buildings? No planes, trains, cars or bikes? No iPods, computers, video games or cell phones? Mining is responsible for many of the things we see, touch and use every day.

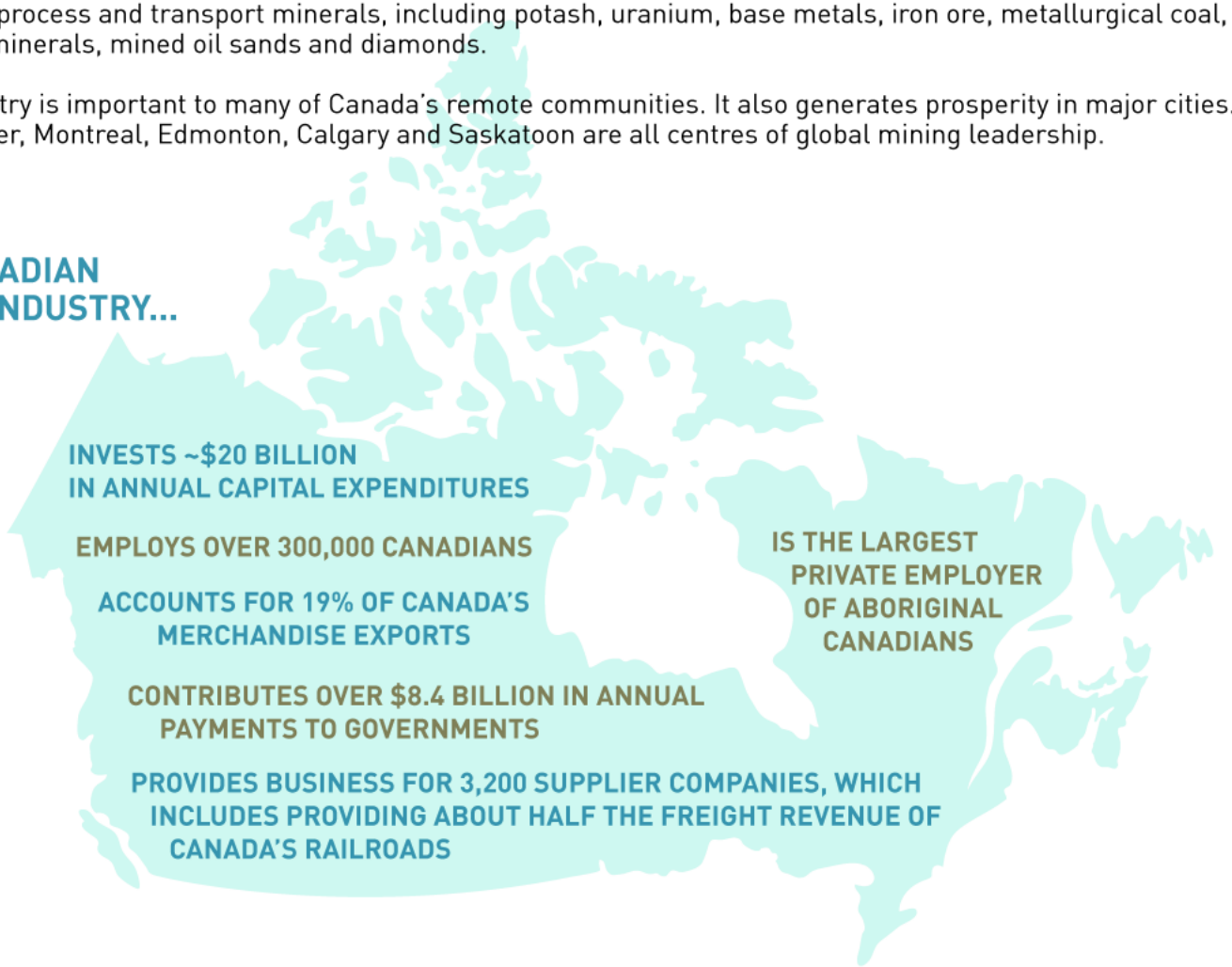
Mining has been an important part of Canada's economy since before the nation was born. From the 1600s, when Aboriginal and European explorers began mapping the location of minerals, through the 1990s, when geologists discovered diamonds here, Canada has become one of the top mining countries in the world.

At the core of the Canadian mining industry are some 220 operating mines and 33 smelters and refineries. Many of these have ongoing capital projects to expand or modernize their operations.

There are also many mineral development projects underway in all regions of Canada. These projects seek to explore, develop, extract, process and transport minerals, including potash, uranium, base metals, iron ore, metallurgical coal, gold, rare earth minerals, mined oil sands and diamonds.

The mining industry is important to many of Canada's remote communities. It also generates prosperity in major cities. Toronto, Vancouver, Montreal, Edmonton, Calgary and Saskatoon are all centres of global mining leadership.

THE CANADIAN MINING INDUSTRY...



Canadians expect the mining industry to operate in a way that respects the environment and society. The mining industry must therefore be responsible for more than finding and extracting ore at a profit.

Mining, by its very nature, disturbs land, air and water systems to some degree. The challenge for companies is to find, extract and process metals and minerals while disrupting these systems as little as possible.

Federal and provincial laws spell out how an environmentally acceptable mine may start up and operate. But mining companies want their operations to do more than just follow the letter of the law. At MAC, we believe that the industry and the Canadian public share a common interest in making sure mining takes place responsibly, in a way that creates economic opportunities, respects community interests, protects the environment and ensures public safety.

Our Towards Sustainable Mining initiative helps MAC member companies manage their corporate responsibilities for social and environmental sustainability.

During the 1990s the Canadian mining industry decided it should have a more formal system for making sure its operations met communities' changing priorities.

From 1998 to 2002, MAC conducted research and met with community leaders across the country to determine Canadians' concerns and expectations for the mining sector. From that work the Towards Sustainable Mining initiative was created.

TSM helps the industry operate proactively, in an environmentally and socially responsible way. MAC developed TSM as a stewardship initiative to improve the industry's performance by aligning its actions with the priorities and values of Canadians. Through TSM the mining industry can sustain its position as a leading economic contributor while protecting the environment and remaining responsive to Canadians.

As a condition of membership in MAC, facilities with operations in Canada must participate in TSM. Members must subscribe to a set of guiding principles backed by specific performance indicators that member companies report on annually. The reported results are externally verified every three years and reviewed by the TSM Community of Interest Advisory Panel.

Towards Sustainable Mining is spearheaded by the TSM Governance Team, a committee led by MAC's Board of Directors. Within each member company, TSM is supported by internal representatives called initiative leaders. The Community of Interest Advisory Panel is also a key part of the TSM initiative (more below).

TODAY — TSM continues to evolve and grow to meet the needs of society.

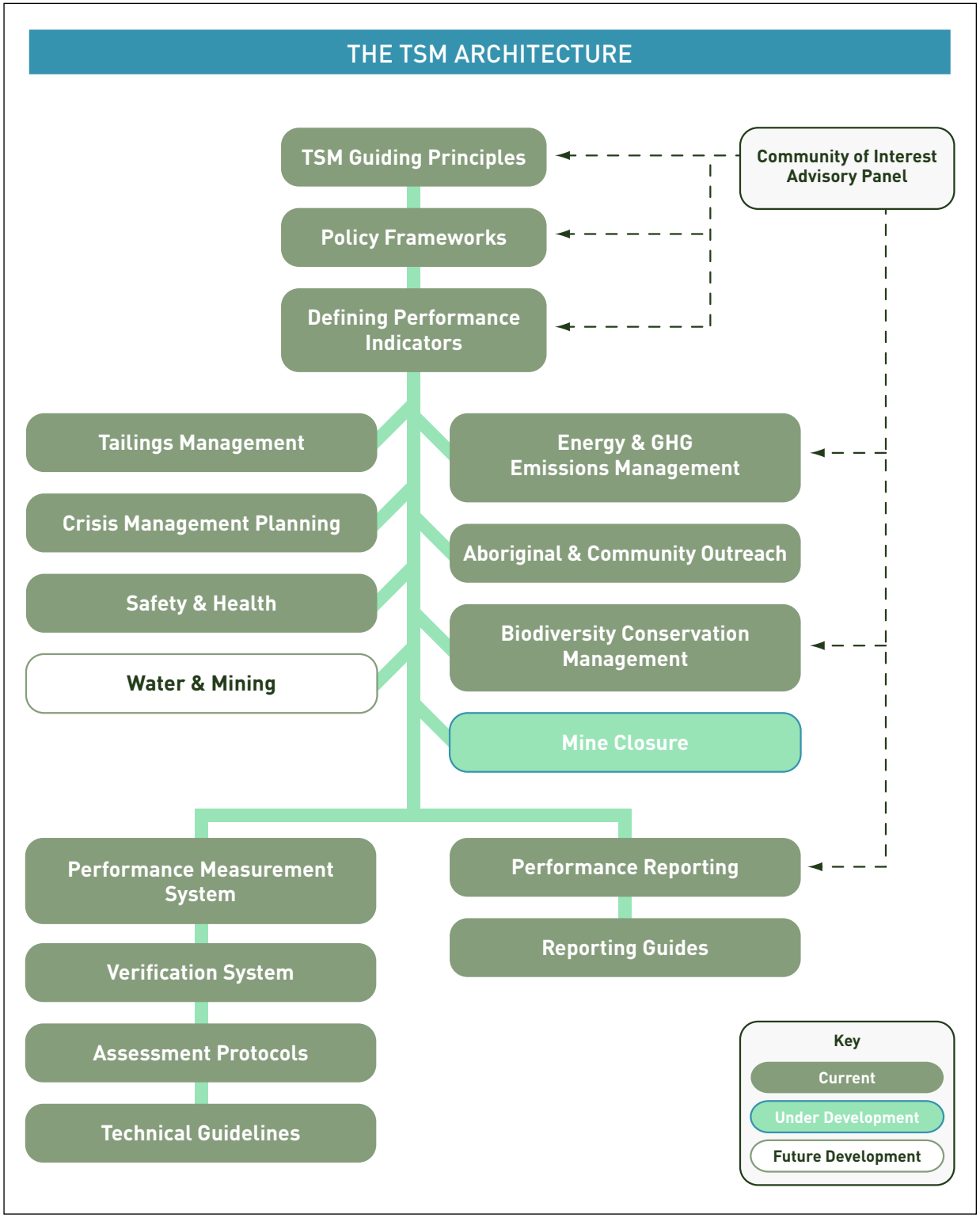
2001-2004 — New protocols were tested, and in 2004 the TSM initiative was launched at the AGM of the Canadian Institute of Mining, Metallurgy and Petroleum in Edmonton.

1998-2002 — MAC focused on gathering stakeholder input, finalizing the guiding principles and developing the key performance elements to respond to priority areas identified during the initial dialogue.

LATE 1990s — MAC Board of Directors set up a task force to consider a sustainability program. Sustainable development issues were researched, stakeholders were consulted and a set of guiding principles was designed.

Guiding Principles

TSM is based on a set of guiding principles that represent MAC's overall policy statements in areas such as community engagement, health and safety, environmental protection, biodiversity conservation and economic development. The guiding principles are instrumental for developing concrete performance elements and indicators.



Performance Elements and Indicators

The TSM guiding principles are supported by a set of performance elements and management system-based indicators, which companies report against annually. The indicators help Canadians gauge the industry's current performance and how it could improve.

TSM Performance Element	Measures a Company's Management Systems for...
Tailings Management	Dealing with tailings, the materials left over after valuable minerals and metals have been separated from ore
Energy Use and GHG Emissions Management	Using less energy and releasing less greenhouse gas
Aboriginal and Community Outreach (*formerly External Outreach*)	Maintaining dialogue with communities affected by the company's operations
Crisis Management Planning	Being prepared for all potential crises
Biodiversity Conservation Management	Conserving wildlife in and around the facility
Safety and Health	Protecting the safety and health of the company's workers, contractors and visitors

PERFORMANCE RATING

Each indicator is designed to focus on a different management component of the performance element. For each indicator, companies receive one of five scores based on which criteria they meet. The scores are described below:

C — No systems in place; activities tend to be reactive; procedures may exist but they are not integrated into policies and management systems.

B — Procedures exist but are not fully consistent or documented; systems/processes planned and being developed.

A — Systems/processes are developed and implemented.

AA — Integration into management decisions and business functions.

AAA — Excellence and leadership.

MAC is the first mining association in the world to require external verification of members' performance.

External Verification

Each MAC member company must have its TSM performance results externally verified every three years.

External verification involves three steps:

- Verification of a company's self-assessments by an external verifier
- Letter of assurance from the company's CEO or authorized officer confirming the verified results
- Annual post-verification review of two or three companies' results by the Community of Interest Advisory Panel

Community of Interest Advisory Panel

The Community of Interest (COI) Advisory Panel was established in 2004, when TSM began. It brings together about 20 individuals and representatives from Aboriginal and labour organizations, communities where the industry is active, environmental and social NGOs, and the financial community, along with members of the MAC Board and other mining industry representatives.

The COI Advisory Panel monitors TSM's progress and serves as an external source of knowledge and experience. The panel meets twice a year to provide support and advice. Its mandate is as follows:

- Help MAC members and communities of interest improve the industry's performance
- Foster dialogue between the industry and its communities of interest
- Help achieve the goals of TSM

The COI Advisory Panel provides a direct link with civil society, communities of interest and Aboriginal groups, enabling open dialogue and engagement with external stakeholders. By bringing together individuals from different backgrounds, the panel functions as an independent mechanism for analyzing the development and implementation of TSM.

Participation in TSM is mandatory for MAC members that have Canadian operations. In addition, many members have implemented TSM at their overseas operations.

Besides TSM, Canadian mining companies follow many voluntary standards and frameworks as part of their international corporate social responsibility:

In 2010 MAC's Board of Directors approved a new International Corporate Social Responsibility Committee for MAC. This committee will review international issues that affect our members' commercial and reputational interests. It will also set priorities and develop policy advice for the MAC Board.

Next year MAC members will begin reporting on their adherence to various international standards and initiatives.

TSM is built around a series of performance indicators. These indicators, by measuring the quality and comprehensiveness of companies' management systems, give the public an overview of the industry's performance.

All MAC members with operating facilities in Canada must report on their performance against the TSM indicators. New members have three years to comply with the requirements of TSM and publicly report their performance.

Understanding the Results

TSM assessments are conducted at the facility level, where they are most meaningful. In 2010, 19 member companies reported their facility-level performance, of which 10 companies went through external verification.

It is our goal at MAC to help members ultimately achieve a Level A performance for all indicators in the areas of tailings management, energy use and GHG emissions management and external outreach. For crisis management planning head offices and facilities achieve good performance when they answer "yes" for each indicator.

In 2006 all reporting MAC members went through external verification of their TSM performance. The graphs that follow compare the percentage of facilities achieving a Level A or higher in 2006 to the percentage of facilities achieving good performance in 2010. The graph for crisis management planning shows the percentage of companies and facilities that answered "yes" for each indicator.

For detailed facility-level results, please see "Highlights of Company Actions" in this report.

Because the TSM performance results do not provide a complete analysis of the industry, we also encourage you to review the environmental and GHG release data published on our website (www.mining.ca), and to consult individual companies' reports for more detailed performance information.

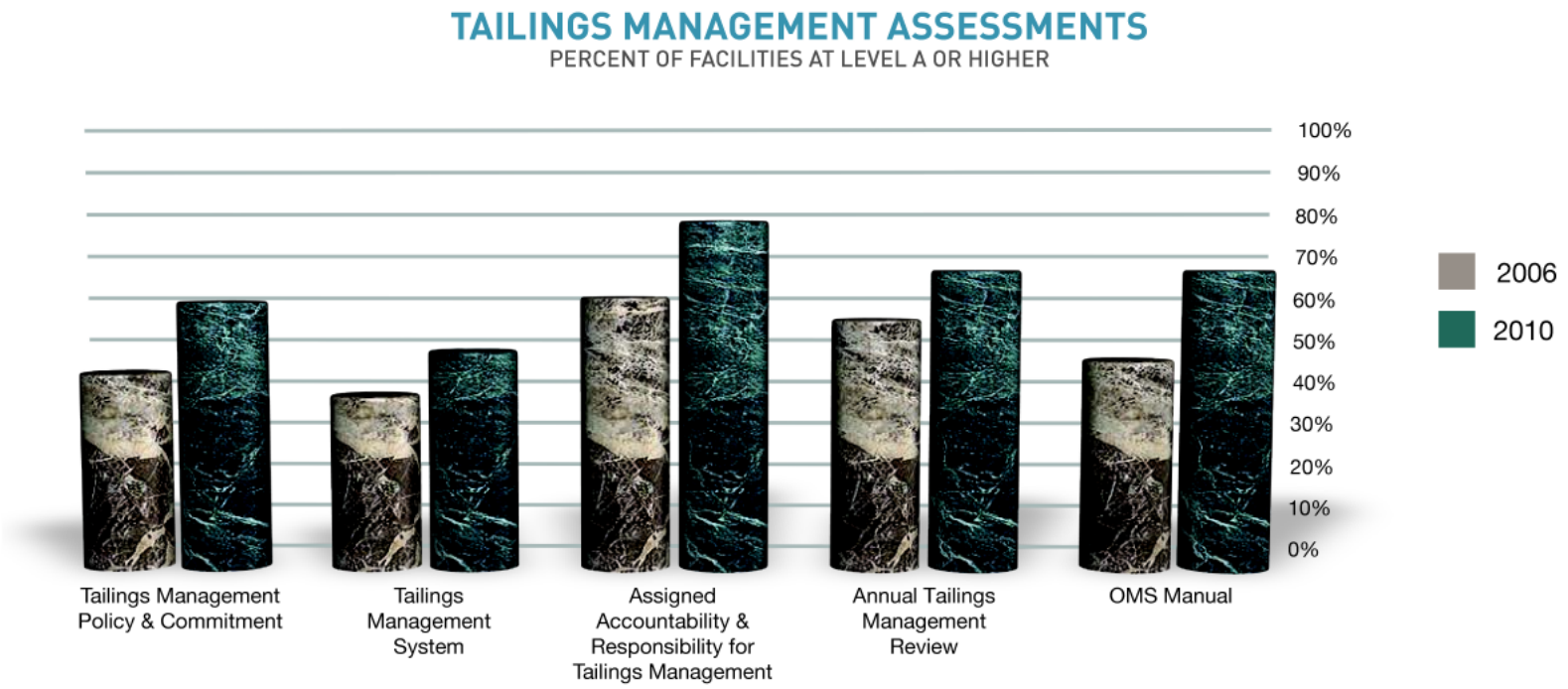
Tailings Management

Tailings facilities are complex site-specific systems with unique environmental and physical characteristics. Given the serious impacts of a tailings failure, it is necessary to manage tailings in a consistent, safe and environmentally responsible way through the full life cycle of a mining operation.

MAC members made a great deal of progress over the last year, improving their performance in many areas. The most significant progress came in the area of tailings management. Overall, MAC members improved their performance for all five tailings management indicators, both since the previous year and since 2006. The most significant progress over the last year is in the area of annual tailings management review.

In 2010 nearly half of the facilities reported having a tailings management system that provides a formal, systematic structure for assessing risks, setting goals and objectives, consulting with communities of interest (COI), implementing activities to achieve goals, assigning responsibilities, and ensuring, through assurance processes, that tailings facilities are managed effectively.

Assigned accountability and responsibility for tailings management remained the strongest performance indicator. In nearly 80 percent of facilities, an executive officer (CEO or COO) is accountable for making sure that a management structure is in place to assure the corporation and its COI that tailings are managed responsibly.



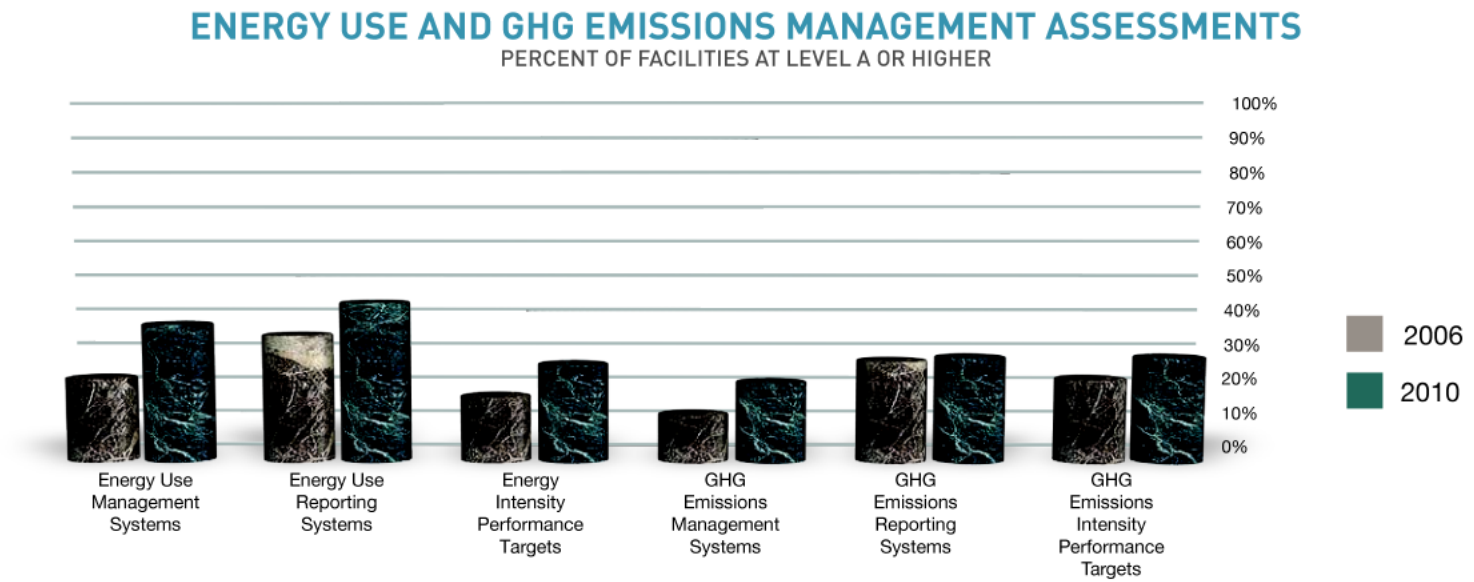
Indicators	Purpose
Tailings Management Policy & Commitment	To confirm that companies have established a policy and commitment that expresses intention, commitments and principles in relation to tailings management.
Tailings Management System	To confirm that companies have a tailings management system in conformance with the tailings management framework in MAC's A Guide to the Management of Tailings Facilities to provide a formal systematic structure for the assessment of risks, setting of goals and objectives, consultation with COI, implementing activities to achieve goals, assignment of responsibilities, and assurance processes to ensure that tailings facilities are managed effectively.
Assigned Accountability & Responsibility for Tailings Management	Executive accountability for tailings management is necessary to signal the importance of tailings facilities to our business and the adverse impacts improper tailings management practices have on the environment and our reputation. This indicator confirms that companies have an executive officer (CEO or COO) who has overall accountability to ensure that an appropriate management structure is in place to provide assurance to the corporation and its COIs that tailings are managed responsibly. It is expected that the executive officer will delegate responsibility for tailings management, budgetary issues and other tailings-related functions to operations and/or corporate personnel, while retaining ultimate accountability for the management of tailings and its outcomes.
Annual Tailings Management Review	To confirm there is an annual corporate review of tailings management that is reported to the accountable executive officer to ensure that the corporation is satisfied that the tailings management structure and systems are effective and continue to meet the needs of the organization.
OMS Manual	To confirm that the facility has developed and implemented a tailings OMS manual in conformance with Developing an Operation, Maintenance and Surveillance Manual for Tailings and Water Management Facilities.

Energy Use and Greenhouse Gas (GHG) Emissions Management

This performance element includes three indicators that address energy use and three that assess the management of greenhouse gas emissions.

Performance in this area remains the weakest of all TSM areas on an aggregate basis. There was no significant change in members' performance from 2009 to 2010. However, analysis from 2006 to 2010 does show an improvement in management systems for both energy use and GHG emissions.

In 2011 MAC will continue to research the factors contributing to weak performance in this area. MAC will also develop strategies to ensure that systems and processes are in place to manage energy use and GHG emissions.



Indicators	Purpose
Energy Use Management Systems	To confirm that systems are in place to manage energy use.
Energy Use Reporting Systems	To confirm that energy use tracking and reporting systems are in place for internal use and for public reporting.
Energy Intensity Performance Targets	To confirm that energy intensity performance targets have been established at each facility.
GHG Emissions Management Systems	To confirm that systems are in place to manage greenhouse gas emissions.
GHG Emissions Reporting Systems	To confirm that greenhouse gas emissions tracking and reporting systems are in place for internal use and for public reporting.
GHG Emissions Intensity Performance Targets	To confirm that greenhouse gas emissions intensity performance targets have been established at each facility.

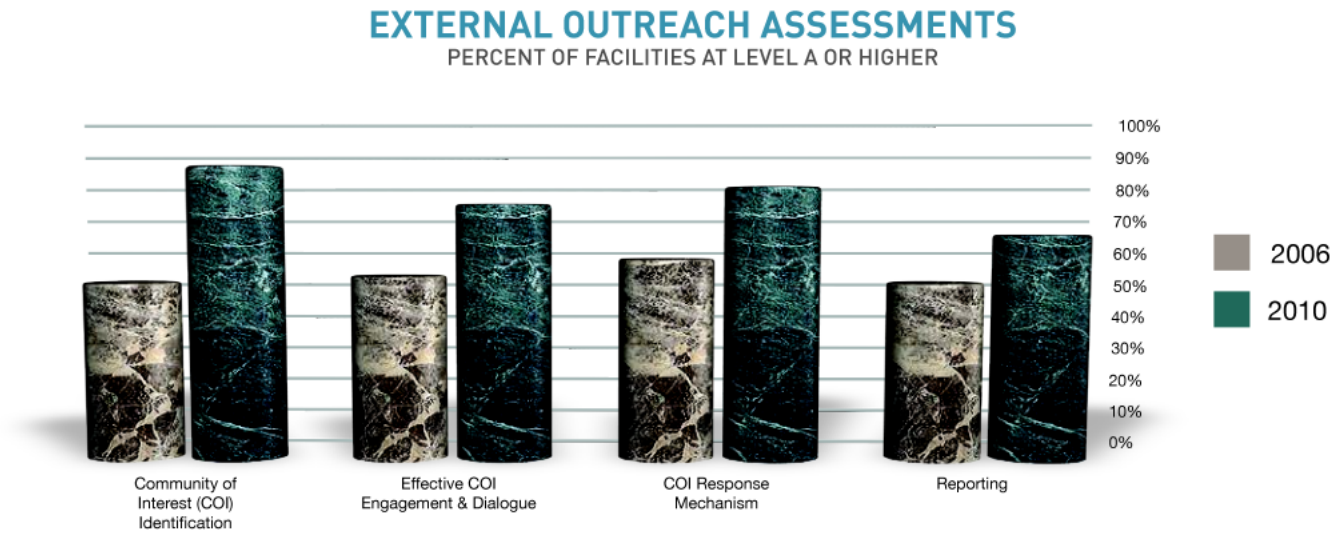
External Outreach

A main objective of TSM is to significantly improve the industry's ability to engage with communities of interest (COI) and respond to their needs and concerns. Four performance indicators measure how well member companies are engaging in dialogue with key groups and individuals outside industry on topics of mutual interest.

In 2004, when TSM began, many facilities had informal systems for identifying and responding to COI, but some facilities had none. Since then MAC members have become more engaged with their communities of interest.

In 2010, 86 percent of facilities reported having a formal, documented system in place for identifying COI at the local or site level. Also, 80 percent reported that they have a good understanding of COI concerns as well as a formal complaint and response system.

Next year the area of external outreach will be replaced by Aboriginal and community outreach. To that end, MAC's Board of Directors has approved a policy framework that outlines members' commitments concerning mining development that may impact Aboriginal communities.



Indicators	Purpose
Community of Interest (COI) Identification	To confirm that efforts have been made to identify COI affected or perceived to be affected by their operations or who have a genuine interest in the performance and activities of a company and/or operation.
Effective COI Engagement & Dialogue	To confirm that processes have been established to communicate with COI to understand their viewpoint, to transparently inform them of company activities and performance, and to actively engage them in dialogue and participation on issues of concern to them.
COI REsponse Mechanism	To confirm that there are processes to receive complaints and concerns from COI to ensure that they are understood and effectively responded to.
Reporting	To confirm that reporting on community engagement and dialogue activities is open and transparent.

Crisis Management Planning

The three performance indicators for crisis management planning are intended to help companies leverage best practices and critically assess their business performance. Reporting involves answering "yes" or "no" for each indicator. To answer "yes," head offices and facilities must meet all the criteria for the indicator.

According to 2010 reporting, over three-quarters of companies and facilities have developed a crisis management plan. Nearly two-thirds have reviewed and updated their plan to ensure that it still meets their needs, reflects the risks associated with their operations and is consistent with best practice in the industry. Two-thirds of companies and facilities have provided crisis management training, including appropriate simulation exercises. This last result shows a strong improvement since 2006, when only 40 percent of companies and facilities achieved this level of performance.

Indicators	Purpose
Crisis Management Preparedness	Member companies must have in place a crisis management plan, which is consistent with the MAC Guidelines for Corporate Crisis Management Planning, March 2007.
Review	Member companies will review and update their crisis management plan to ensure it remains responsive to the needs of the company and its operations, properly reflects risks associated with the company's operations and reflects best practice within the industry.
Training	Crisis management training, including the use of appropriate crisis simulation exercises, will be conducted annually.

Community of Interest (COI) Advisory Panel

The TSM initiative is monitored by the COI Advisory Panel, a group of external stakeholders from different backgrounds. With its collective knowledge and experience, the panel functions as an independent mechanism for assessing the implementation and progress of TSM.

The COI Advisory Panel serves as a direct link with civil society, communities of interest and Aboriginal groups, enabling open dialogue and engagement. Over the years, the panel has come to discuss substantive issues that are not directly part of TSM development but that relate to communities of interest and affect the mining industry.

In 2010 the COI Advisory Panel met twice, on March 10 and September 15, with teleconferences on specific topics between meetings. The panel discussed and advised on a range of issues, including the new rating system for TSM and the design of performance indicators to address mine closure.

Community of Interest Advisory Panel Meeting, March 2011
(left to right): Dan Benoit, Alan Penn, David Mackenzie, Alan Young, Chantal Lavoie, Pierre Gratton, Vicky Weekes, and Julie Gelfand.

TSM COMMUNITY OF INTEREST (COI) ADVISORY PANEL
2010 MEMBERSHIP LIST

Roger Augustine	Assembly of First Nations
Dan Benoit	Metis National Council
Richard Briggs	Mining Council, Canadian Auto Workers
Barrie Ford	Makivik Corporation
Ginger Gibson	Individual member
Larry Haber	Kimberley Community Development Society
Brenda Kelley	Bathurst Sustainable Development
Stephen Kibsey	Caisse de Dépôt et Placement du Québec
Soha Kneen	Inuit Tapiriit Kanatami
David Mackenzie	United Steelworkers of America
Christy Marinig	Timmins Economic Development Corporation
Eric Morris	Assembly of First Nations
Alan Penn	Cree Regional Authority
Alan Young	Canadian Boreal Initiative
Anne Marie Toutant	Suncor Energy Inc.
Craig Ford	INMET Mining Corporation
Chantal Lavoie	De Beers Canada Inc.
Doug Horswill	Teck Resources Limited
Gordon Peeling	Mining Association of Canada
Eira Thomas	Stornoway Diamond Corporation

STATEMENT FROM THE COMMUNITY OF INTEREST ADVISORY PANEL

This annual statement allows us to give external feedback to the mining and minerals industry. We are an independent group of people from across Canada, from civil society, labour groups, Aboriginal organizations and governments. We meet twice a year to consider together how the industry has performed in the area of sustainability. We also offer the industry our advice on the way forward.

Looking back on 2010, we can say that much of our guidance was taken into account. We asked the industry to work hard on closure planning, and a draft protocol for mine closure is on our desks. With this protocol, all companies belonging to MAC will have to report their plans for returning the landscape to a state that is acceptable by today's standards. We also asked the industry to work on applying TSM internationally, and MAC looked at the sorts of international standards currently in place. We will continue to follow these issues.

We have worked hard with the mining sector to develop reporting frameworks. Reporting is an onerous duty for many in the companies; we see that and have considered it in our advice. We think these metrics are practical and relevant to improving the way companies do business. We continue to encourage the industry to bring their numbers to life within the context and stories of their region.

Here are the trends we see from companies' reporting:

- **Tailings Management:** Companies are getting better, with more of them developing policy on tailings and management systems as well as conducting annual reviews. Still, only 50 percent of reporting facilities have a policy. For obvious reasons, this is a critical area for improvement.
- **Energy Use and Greenhouse Gas Emissions:** Reporting requirements are in place, in the sense that energy use is an important cost element that must be tracked. Energy use necessarily evolves as a mine evolves and is subject to a host of factors that the company does not control. Therefore, the relatively low scores mainly reflect technical difficulties with the targets.
- **External Outreach:** Companies are better at identifying the communities they need to be engaged with, but they have a distance to go in the relationships with the parties.
- **Crisis Management Planning:** Companies are adopting crisis management plans and training programs.

It is through reporting, and the narratives that can accompany it, that we feel we are beginning to understand companies and their operations. We call companies to attend MAC meetings and tell us about their work, their reporting and their challenges. In 2010 we met with Breakwater Resources, IAMGOLD and Teck Resources.

We feel that the reporting system we have in place is contributing to internal changes in the industry because it promotes greater awareness of, and management response to, strategic public priorities. Our mandate is to bring challenging issues to industry's attention and to help find practical solutions. However, there are issues that will escape this bar-setting exercise.

Now that Canada supports the United Nations Declaration on the Rights of Indigenous Peoples, we expect to see industry respond. The Assembly of First Nations will quite rightly take a lead on this issue. The industry can encourage Canada to move ahead on implementing this declaration by being a partner with Aboriginal people, and by learning how to bring home the concept of free, prior and informed consent. We expect the coming year to be a turning point for relationships with Aboriginal people on this concept.

In 2011 we expect to see progress in supporting community readiness to engage with mining proponents, as well as progress with biodiversity protocols. Further, pressure is being exerted to streamline regulatory processes in a way that could undermine corporate and government accountability if done without the necessary precautions. We believe there is a need to understand how impact assessments affect environmental decision making about mining projects around the world.

We anticipate that the industry will increasingly be challenged about the ultimate use of mined products. This trend will affect industry both positively and negatively, depending on how companies engage with supply chain issues. In practical terms, the trend will likely introduce a range of issues, including scrutiny of how metal use is managed in consumer products and waste, a hard rethink of energy use, and methods for extracting, processing, transporting and using potentially toxic substances in end products.

The COI Advisory Panel continues to be a forum in which civil society, labour groups, Aboriginal organizations and other mining industry stakeholders can exchange views on such issues and positively influence the industry.

THE COMMUNITY OF INTEREST ADVISORY PANEL

"The importance of sustainable development has increased substantially over the past 10 years. During this period MAC has insisted that its member companies, their workers and their families be familiar with environmental and safety issues, both on the job and off. Gordon Peeling, former President and CEO of MAC, who attended TSM meetings regularly, was adamant that members report to our panel about their workforce and environmental programs."

- Richard Briggs,
Mining Council,
Canadian Auto Workers

As part of the TSM verification system, each MAC member company must have its TSM performance results externally verified every three years.

External Verification

Ten members had their 2010 self-assessments externally verified:

- ArcelorMittal Mines Canada
- Barrick Gold
- De Beers Canada
- Diavik Diamond Mine
- Iron Ore Company of Canada
- Syncrude Canada
- Teck Resources (Duck Pond Operations and Trail Smelter)
- Xstrata Copper Canada
- Xstrata Nickel
- Xstrata Zinc Canada

Each year, following external verification, the Community of Interest Advisory Panel conducts a review of selected companies' verified results. This review is an important part of the TSM verification system. In 2010 the panel chose three companies for post-verification review of 2009 results:

- Breakwater Resources
- IAMGOLD
- Teck Resources (Highland Valley Copper)

A full report on the 2010 post-verification review is available on MAC's website (www.mining.ca).

In 2011 the Community of Interest Advisory Panel will do post-verification reviews of De Beers Canada and the Iron Ore Company of Canada.

Highlights of Company Actions

ArcelorMittal Mines Canada is a leading Canadian supplier of iron ore products to the world steel market, generating close to 40 percent of Canada's total production.

A leader in the mining and primary processing sectors, ArcelorMittal has several large facilities in Quebec. Its mining and concentration sites in Mont-Wright, near Fermont, are linked by a 420-kilometre railway to the company's Port-Cartier industrial complex, which includes a pellet plant, a private port, railway shops and the company's head office.

As a MAC member, ArcelorMittal is working to improve the sustainability of its processes in accordance with TSM. To that end, the company underwent its second external verification in February 2011. As well, the company's environmental management system is certified to the ISO 14001:2004 standard.

In 2008 ArcelorMittal identified the health and safety of employees as a top priority. As a result, since 2009 the number of accidents decreased by 40 percent. The company is committed to obtaining OHSAS 18001 registration before June 2011.

The Port-Cartier pellet plant, already an industry leader in energy consumption per tonne of production, is nonetheless working to improve its overall energy consumption. The aim is to meet future regulatory requirements for reducing GHG emissions while at the same time decreasing production costs.

ArcelorMittal has been actively involved in the community for the past 50 years. In 2010 the company formalized its engagement with communities of interest by establishing a consultation committee that will allow for constructive dialogue.

ArcelorMittal Mines Canada firmly believes in pursuing continuous improvement through the TSM initiative. For more information, please visit the company's website (www.arcelormittal.com/minescanada).

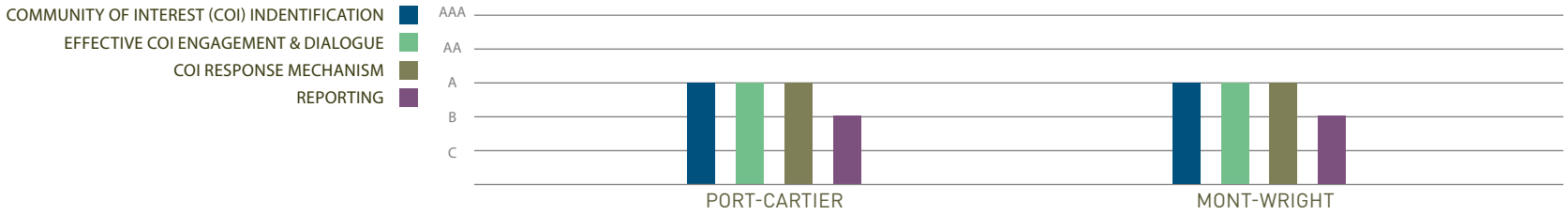
CRISIS MANAGEMENT PLANNING ASSESSMENT

	PREPAREDNESS	REVIEW	TRAINING
CORPORATE	-	-	-
MONT-WRIGHT	-	-	-
PORT-CARTIER	-	-	-

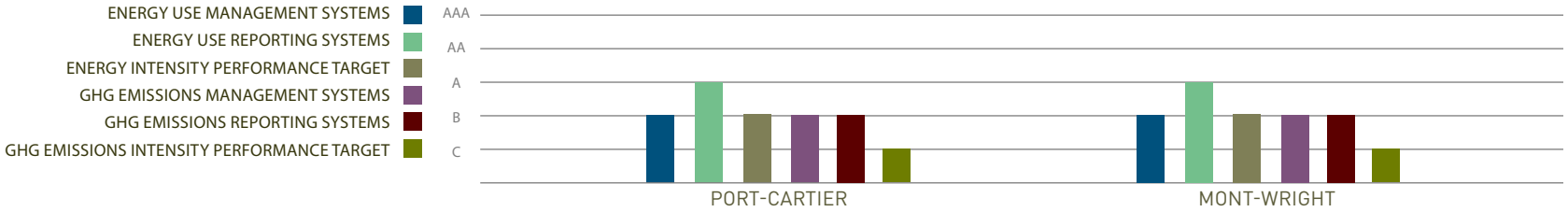
Towards Sustainable Mining
Vers le développement minier durable

HIGHLIGHTS OF COMPANY ACTIONS

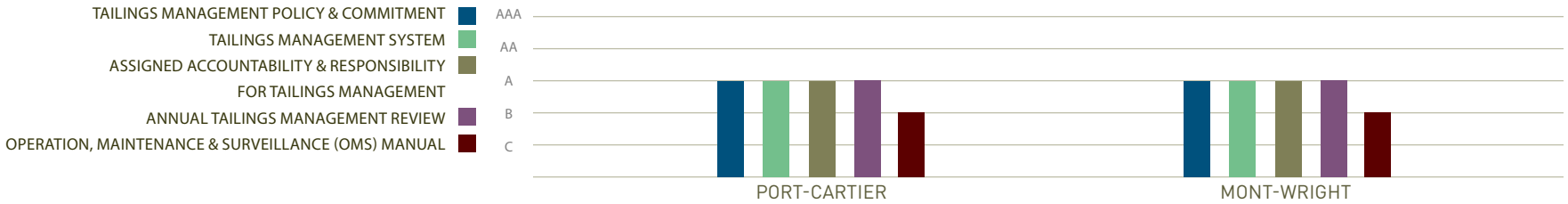
EXTERNAL OUTREACH ASSESSMENT



ENERGY USE AND GHG EMMISSIONS MANAGEMENT ASSESSMENT



TAILINGS MANAGEMENT ASSESSMENT



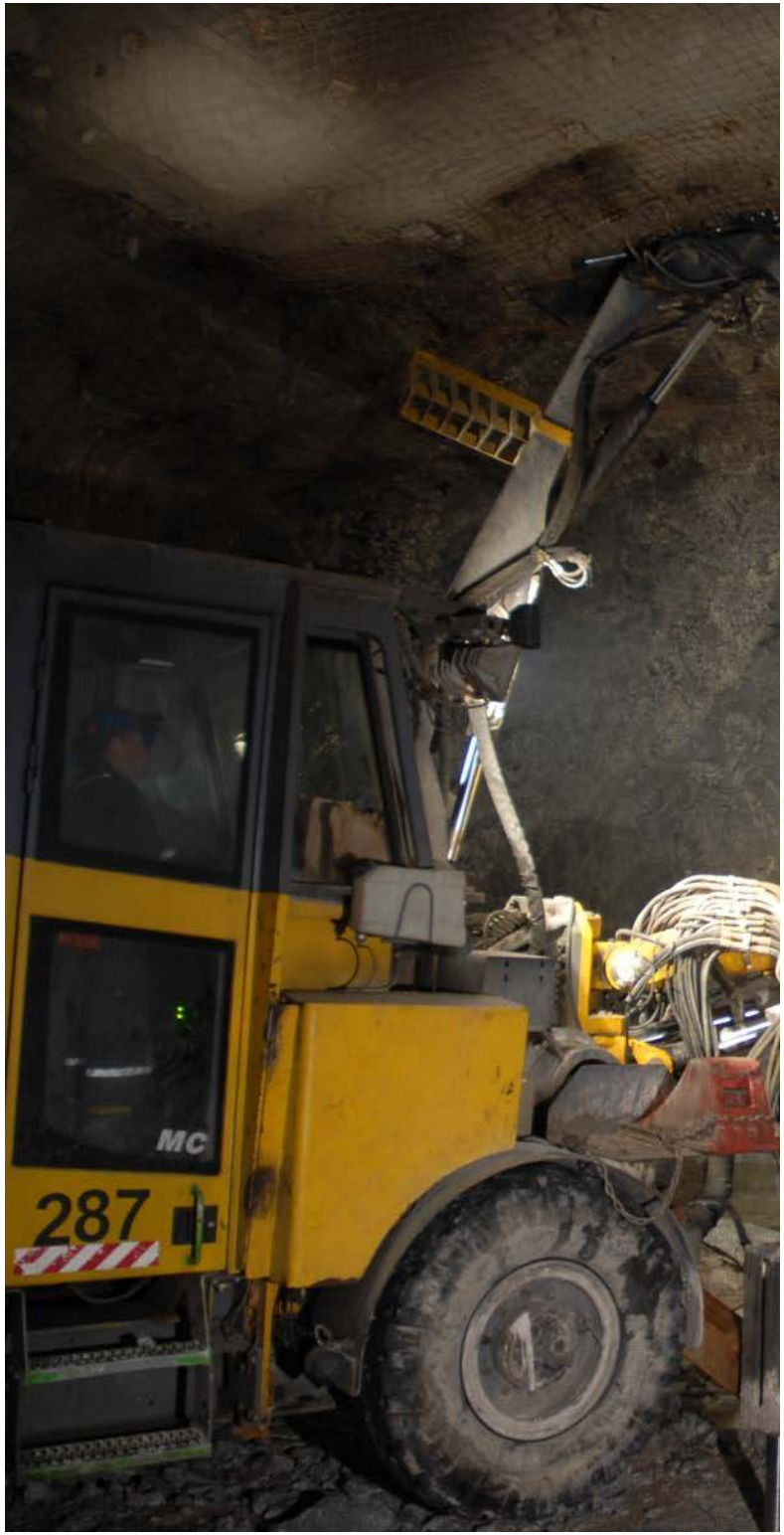
Barrick Gold Corporation is the world's leading gold company, operating 26 mines on four continents, with seven advanced exploration and development projects in North America, South America, Africa, Australia-Pacific and Asia. The company's headquarters are in Toronto.

Barrick's Hemlo operation, 46 kilometres east of Marathon, Ontario, has produced gold continuously since 1985. The operation includes both surface and underground gold mines, as well as a shared processing facility.

The Hemlo operation was a 50-50 joint venture until Barrick acquired full ownership in early 2010. This purchase ushered Hemlo, which was to begin a staged closure in 2010, into a new phase of its 25-year operation. With rising gold prices and the purchase of additional lands increasing the site's minable reserves, the operational mine life has been extended until 2016, and the operation is evaluating opportunities to expand and extend gold production.

Before these developments, Hemlo's TSM goal, given the anticipated short mine life remaining, was to achieve and maintain a minimum of Level A within each performance element. Now the extended mine life provides new opportunities to enhance Hemlo's practices and operating standards. The site is seeking higher rankings by continuing to be diligent and by applying TSM and other international practices and standards.

Hemlo's commitment to improving its performance, in keeping with TSM and other applications, is illustrated by the company's certification under the International Cyanide Management Institute's independent third-party audit. This certification acknowledges that Hemlo meets all performance requirements of the Cyanide Code, which focuses on the safe management and use of cyanide. The code was developed under the guidance of UNEP (United Nations Environmental Programme) and what was then called the International Council on Metals and the Environment.



The Hemlo operation continues to expand its external outreach and sustainability. The site was the first in Canada to take part in the Mining Essentials and Environmental Monitoring Training Program for Aboriginal people. The program enabled 10 members of the Pic River First Nation and the Pic Mobert First Nation to receive training. Barrick is working on several other initiatives with these First Nations and other communities of interest.

Hemlo is proud to have received two TSM awards, for external outreach and crisis management planning, since the program was implemented. The site will continue to focus on improvement by applying the additional TSM performance indicators in the areas of safety and health, biodiversity conservation management, and Aboriginal and community outreach.

Hemlo has been honoured with several other awards for its responsible approach to social, economic and environmental performance. One was a water conservation award for improvements that allow the site to get more than 80 percent of its process water from wastewater. Another award recognized the site's installation of an innovative network of thermal and analog cameras to monitor a tailings pipeline. By combining these technologies through a proprietary computer program, the site can instantly detect minor thermal discrepancies, respond quickly and prevent potential failures, thus protecting environmentally sensitive areas.

Hemlo is committed to continuous improvement in all aspects of its operation, including its engagement of stakeholders and interested parties. For more information, please visit the Barrick website (www.barrick.com).

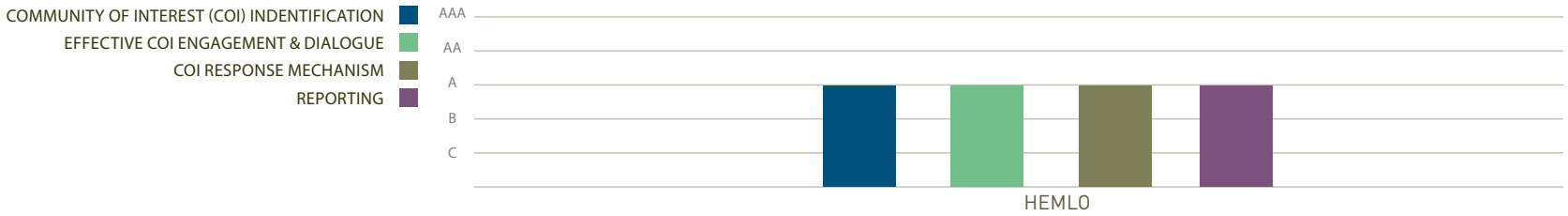
CRISIS MANAGEMENT PLANNING ASSESSMENT

	PREPAREDNESS	REVIEW	TRAINING
CORPORATE	✓	✓	✓
HEMLO	✓	✓	✓

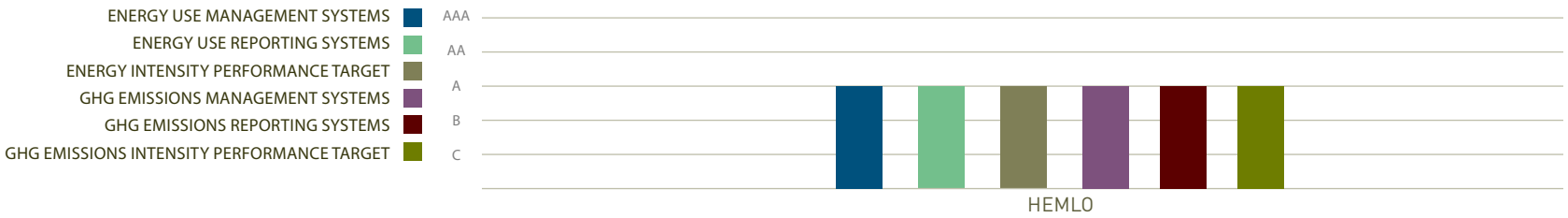
Towards Sustainable Mining
Vers le développement minier durable

HIGHLIGHTS OF COMPANY ACTIONS

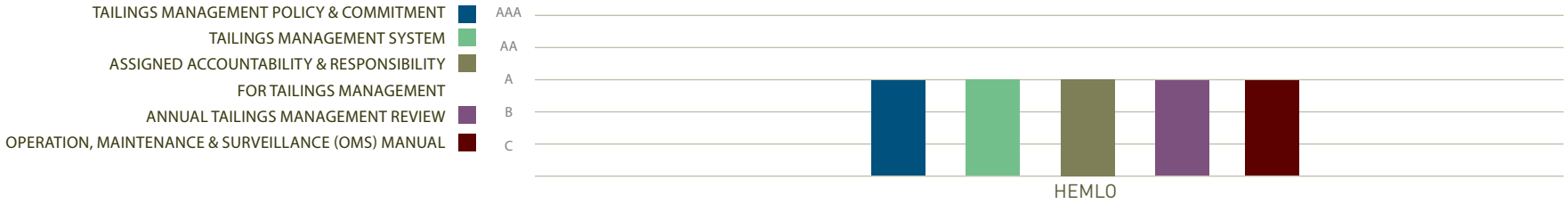
EXTERNAL OUTREACH ASSESSMENT



ENERGY USE AND GHG EMMISSIONS MANAGEMENT ASSESSMENT



TAILINGS MANAGEMENT ASSESSMENT



BHP Billiton Canada Inc. operates the EKATI diamond mine, a joint venture between BHP Billiton (80%) & founding geologists Charles Fipke & Stewart Blusson (10% each).

Located 310 kilometres northeast of Yellowknife, the mine operates in an area of continuous permafrost.

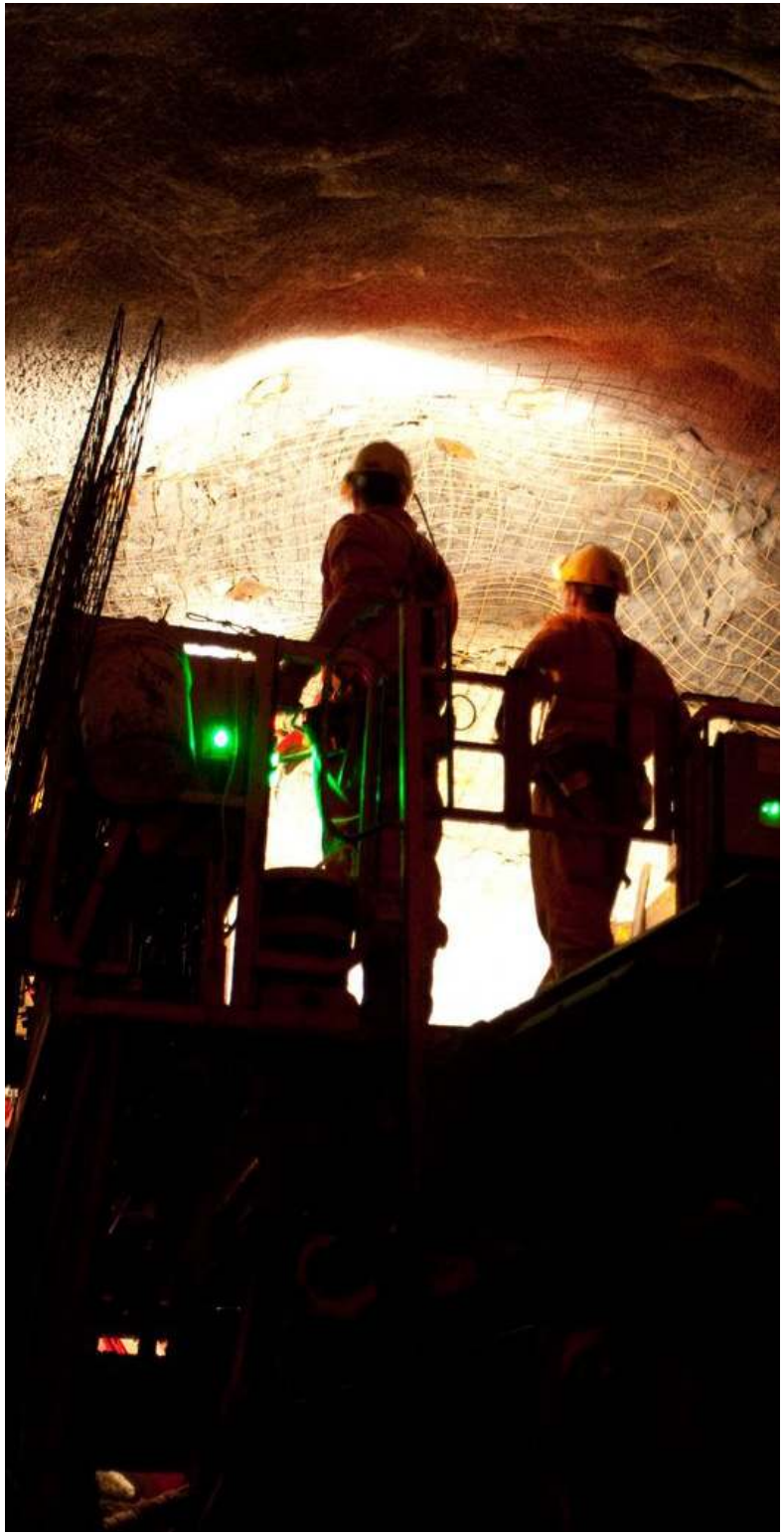
At EKATI performance means delivering sustainable growth by investing in the future. That involves supporting excellence in leadership and, most of all, delivering on the commitment of zero harm: to the company's own people, through consistent and risk-based work practices; to its host communities, through communication and the inclusion of their opinions and concerns in mine plans; and to the environment, through innovative adaptive management and intensive monitoring of the mine's impact.

EKATI will consider itself successful when it achieves zero harm, when it is valued by its host communities and when it provides lasting social, environmental and economic benefits to society.

BHP Billiton uses TSM reporting as part of a suite of tools that drive continuous improvement across the company's operations. There is extensive internal and external monitoring and auditing of all sustainable development practices at EKATI, and the TSM initiative draws many of these processes into a forum for wider reporting across Canada. The extra level of self-regulation adds value because processes are reviewed from a different reporting perspective than would be the case under other HSEC (health, safety, environment and community) and ISO audits.

TSM results for EKATI in 2010 were excellent, highlighting BHP Billiton's commitment to ongoing improvement and the high value it places on heath, safety and sustainable development.

Crisis management planning and external outreach are two areas where the EKATI mine has consistently scored high, and that trend continued in 2010. BHP Billiton meets regularly with stakeholders to share information about EKATI's operations and to hear from them on decisions that may affect them. Management encourages outreach to the mine's stakeholders and communities of interest, including engagement in and



dialogue on sustainable community partnerships. In 2010 BHP Billiton held a stakeholder perception survey, conducted by an independent third party, which solicited anonymous feedback that will influence the company's strategic and sustainable investments.

After substantial efforts in 2010 to improve performance in tailings management, the TSM assessment showed progress in all areas, with an overall excellent result for this key performance element.

EKATI's "In Control" program maps the mine's operational processes, identifies and assesses high-risk jobs and determines the controls needed to guarantee employees' safety when doing those jobs. At EKATI 2010 marked two years without a recordable injury for the underground mining team, over 1,000 total recordable injury-free days for the surface mining team and over three years without lost-time injuries for the process plant team.

BHP Billiton's commitment to the environment, demonstrated through EKATI's "Powerwise" project, has been recognized three times at the company's global HSEC Awards. Most recently, EKATI was honoured in 2010 for its support of the Global Energy Smart project, which delivered GHG emission reductions across the business. Two EKATI teams placed among the 32 finalists at the 2010 HSEC Awards, receiving Merit Awards in both the Safety and Environment categories.

In 2010 EKATI's emergency response team won the Surface Competition and the Underground Competition at the annual Mine Rescue Competition in Yellowknife. The wins qualified the team to compete in the 2011 Western Regional Championships in Fernie, British Columbia.

For more information, please visit the BHP Billiton website (www.bhpbilliton.com).

CRISIS MANAGEMENT PLANNING ASSESSMENT

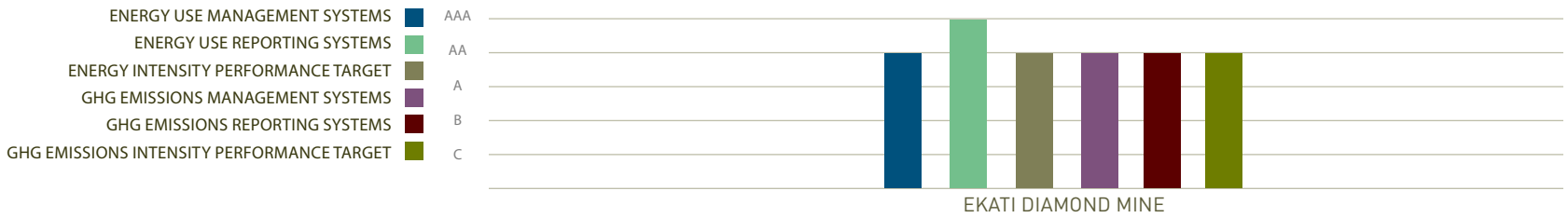
	PREPAREDNESS	REVIEW	TRAINING
CORPORATE	✓	✓	✓
EKATI DIAMOND MINE	✓	✓	✓

Towards Sustainable Mining
Vers le développement minier durable

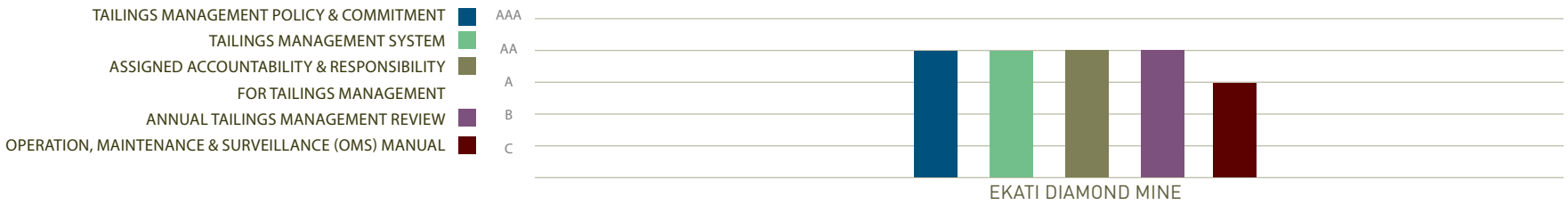
HIGHLIGHTS OF COMPANY ACTIONS

EXTERNAL OUTREACH ASSESSMENT

ENERGY USE AND GHG EMMISSIONS MANAGEMENT ASSESSMENT



TAILINGS MANAGEMENT ASSESSMENT



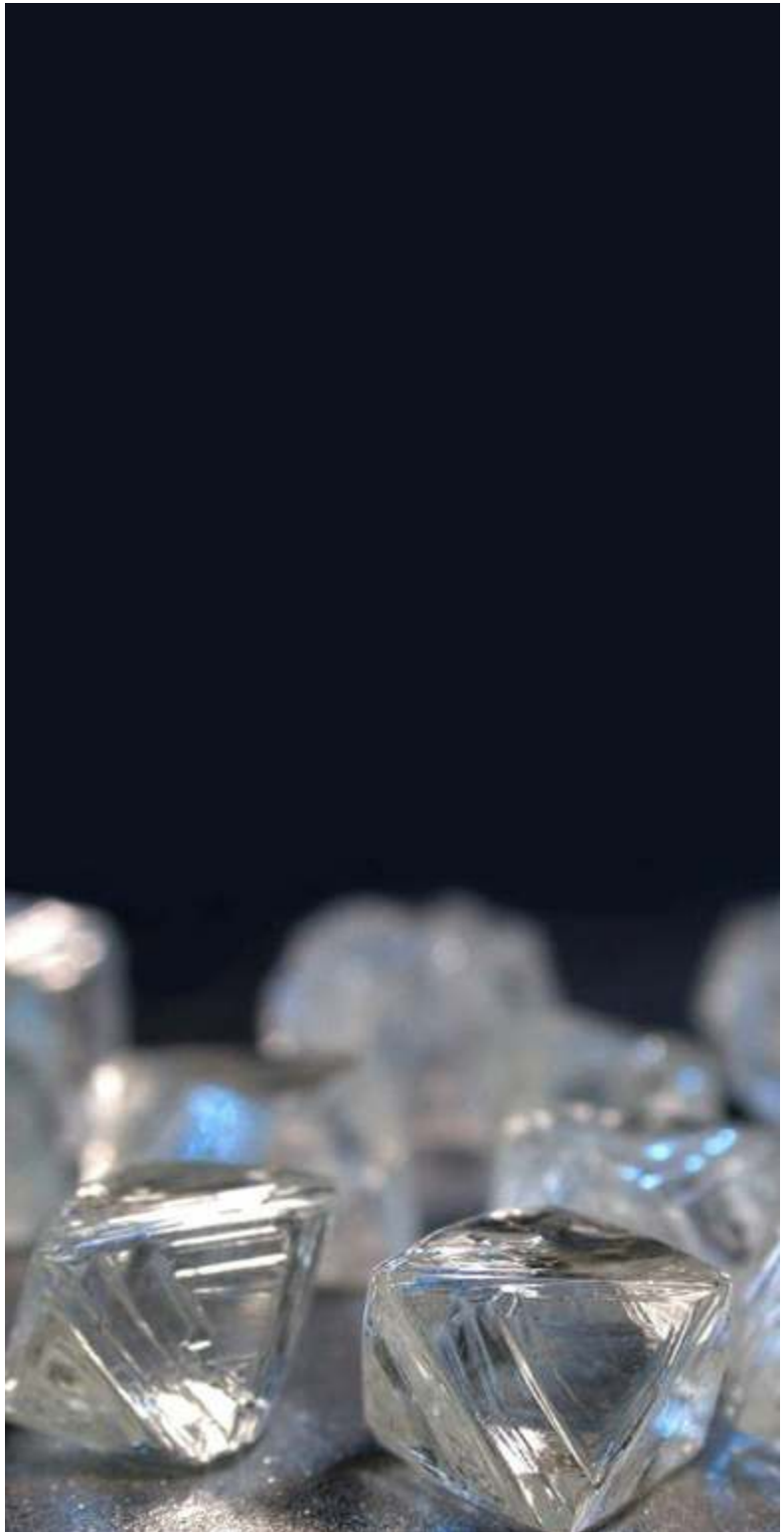
A member of the 123-year-old De Beers family of companies, which has been active in Canada for the last 50 years, De Beers Canada is the only company operating two diamond mines in Canada. The company aims to produce diamonds safely and profitably, without harm to people or the physical, social or cultural environment.

De Beers Canada's Snap Lake mine, the country's only fully underground diamond mine, opened on July 25, 2008, in the Northwest Territories. The next day the company's Victor mine, an open-pit operation, officially opened, becoming Ontario's first and only diamond mine. De Beers Canada is also the majority partner in the Gahcho Kué project in the Northwest Territories, which in future may become the company's third operation.

Both De Beers Canada operations are committed to sustainable development in their communities. The sites were certified to ISO 14001 for their environmental management systems in 2005, during construction, and were re-certified in 2008 when mining began. The company has also signed impact benefit agreements concerning both sites with eight First Nations communities.

De Beers Canada is a member of the Canadian Diamond Code of Conduct and Jewellers Vigilance Canada. As part of the larger De Beers group, the company is also a supporter, participant or signatory of the Global Reporting Initiative, the Responsible Jewellery Council standards, the United Nations Global Compact and the Extractive Industries Transparency Initiative.

Following is a summary of De Beers Canada's verified TSM results for 2010.



Crisis Management Planning

The crisis management plans for the corporate office and the Victor mine conform to all TSM performance requirements. The company's priorities for 2011 include seeking opportunities for improvement at Snap Lake – for example, expanding the crisis risk assessment, conducting more plan testing and engaging with local emergency response authorities on the crisis management plan.

Energy Use & GHG Emissions Management

Both mines have basic management systems in place. In 2011 De Beers Canada plans to develop energy and GHG emission intensity indicators and to fully implement energy information management systems. These activities will lay the foundation for comprehensive energy and GHG management systems as well as ongoing performance measurement.

One challenge is how to account for the greater energy consumption and GHG emissions inherent in mine development, such as the extra fuel needed for increased ore haulage, ventilation and water management. In 2010 Snap Lake completed a scoping study on the use of wind turbines and a number of diesel fuel displacement projects. Follow-up work on the latter will occur in 2011.

Tailings Management

De Beers Canada's commitment to sustainable, responsible management of mineral waste is embodied in its sustainable development policy and in a letter of commitment endorsed by the chief operating officer. Both documents are posted on the company's website (see below).

In 2011 the company will work on expanding the OMS manual for Snap Lake to include all aspects of the MAC guidelines. Both the Victor and Snap Lake mines have comprehensive emergency response plans, which are reviewed by regulatory authorities and during annual management reviews.

External Outreach

De Beers Canada will continue to improve in 2011 by identifying communities of interest (COI) that have issues-based or indirect interest. Other company focuses include applying the COI response mechanisms used at Snap Lake to the Victor mine, and having senior management review the effectiveness of COI engagement processes each year.

For more on De Beers Canada and its commitment to sustainable development, including the annual Report to Society, please visit the company's website (www.debeerscanada.com).

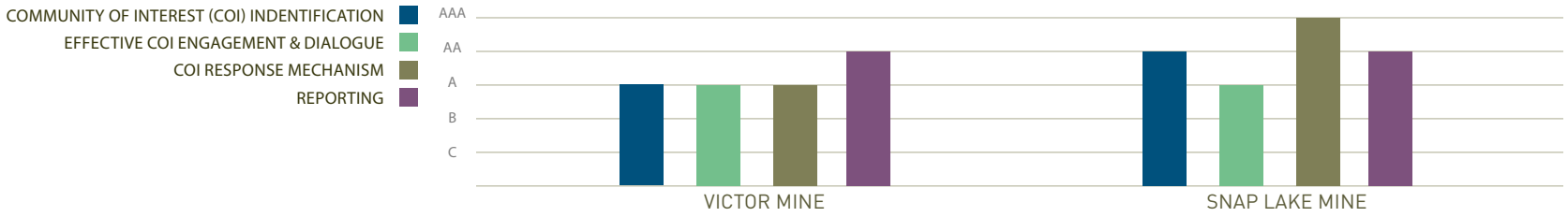
CRISIS MANAGEMENT PLANNING ASSESSMENT

	PREPAREDNESS	REVIEW	TRAINING
DE BEERS CANADA INC.	✓	✓	✓
SNAP LAKE MINE	-	-	✓
VICTOR MINE	✓	✓	✓

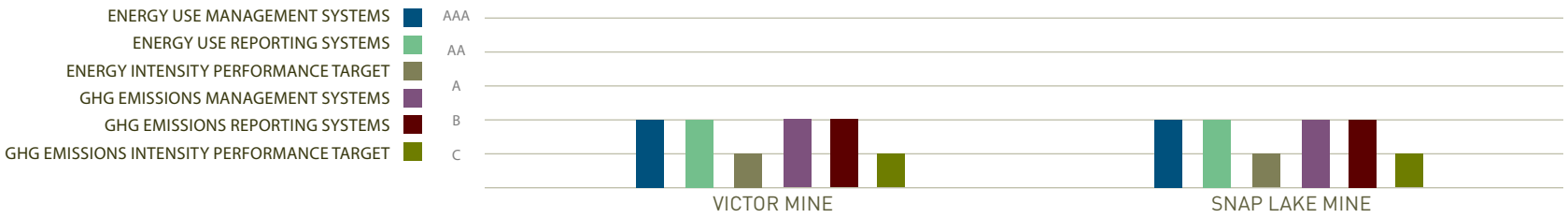
Towards Sustainable Mining
Vers le développement minier durable

HIGHLIGHTS OF COMPANY ACTIONS

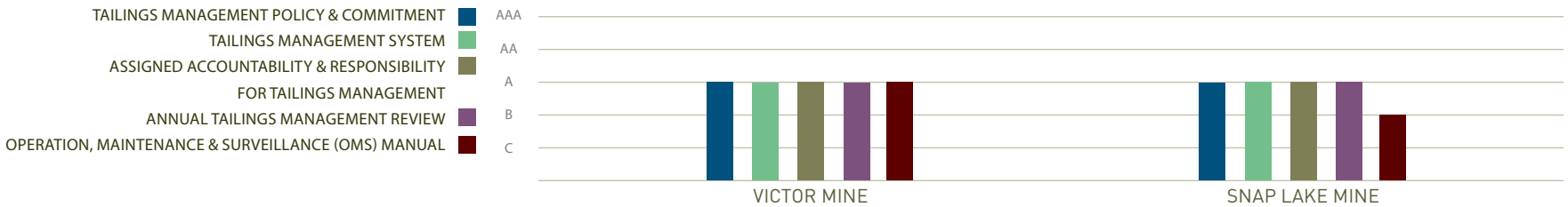
EXTERNAL OUTREACH ASSESSMENT



ENERGY USE AND GHG EMMISSIONS MANAGEMENT ASSESSMENT



TAILINGS MANAGEMENT ASSESSMENT



The Diavik diamond mine, located 300 kilometres northeast of Yellowknife, is an unincorporated joint venture between Diavik Diamond Mines Inc. (60 percent) and Harry Winston Diamond Limited Partnership (40 percent), both headquartered in Yellowknife.

DDMI is a wholly owned subsidiary of Rio Tinto plc of London, England, while Harry Winston Diamond Limited Partnership is owned by Harry Winston Diamond Corporation of Toronto. DDMI is the mine operator.

Diavik's plan, since a pre-feasibility study in the late 1990s, has been to move from surface to underground mining. In the first quarter of 2010, the underground mine began production, opening officially on March 25. Open-pit mining will continue through 2011, with completion planned for 2012, when all remaining mining operations will be underground.

Diavik will provide training and support to the many surface employees who have elected to move into underground positions. Besides offering in-house training, Diavik participated in a pilot program led by the MiHR (Mining Industry Human Resources) Council to attain occupation status for underground mining. In 2010, 10 employees, including the first and only female, received their Underground Miner Level 1 certification.

The apprenticeship program at Diavik continues to be successful. Nine people achieved journeyperson status in 2010, bringing the total to 27 since 2004. As of March 31, 2011, Diavik had 25 apprentices, 17 of them new to apprenticeship in 2011.

In 2010 some changes were made to Diavik's Aboriginal Leadership Program. The program expanded to include two employees from De Beers in addition to four from Diavik. Since its inception, 53 Diavik workers have completed the program. In 2011 the program moved from Diavik to Aurora College, where it forms the basis of the college's Northern Leadership Development Program (NLDP). This transition has opened up the program to all mining companies, the Mine Training Society and other northern

industries. The inaugural NLDP program began in May 2011.

With both its underground and surface mining in operation, Diavik will continue to see increased GHG emissions and energy consumption relative to base year levels. As well, GHG and energy intensity will rise as overall production decreases. In the future, GHG emissions and energy consumption will remain higher because of the extra fuel needed for heating, ventilation, water management, increased haulage and the other requirements of underground operations.

Two projects are being considered that would minimize the increase in GHG emissions by reducing diesel consumption. Installing a small wind farm is one feasible option. Another project that Diavik continues to monitor involves building a transmission line to supply hydroelectric power to the northern diamond mines.

Diavik published two recent documents of interest. The first, Diavik's *Community Legacy Projects*, highlights the investments and other support Diavik has provided over the past decade to help build and improve infrastructure in northern communities. The second, the *2010 Socio-Economic Monitoring Agreement Report*, provides details of Diavik's northern hiring, spending and business participation, as well as its training programs and operational highlights.

More information is available in Diavik's *2010 Sustainable Development Report* and *2009 Environmental Agreement Annual Report*, as well as in the company's newsletter, *Dialogue*.

For general information, please visit the Diavik website (www.diavik.ca).

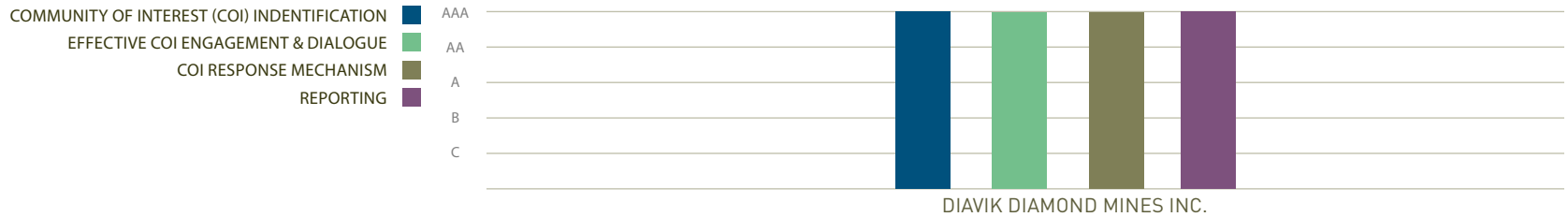
CRISIS MANAGEMENT PLANNING ASSESSMENT

	PREPAREDNESS	REVIEW	TRAINING
CORPORATE	-	-	✓
DIAVIK DIAMOND MINES INC.	-	✓	✓

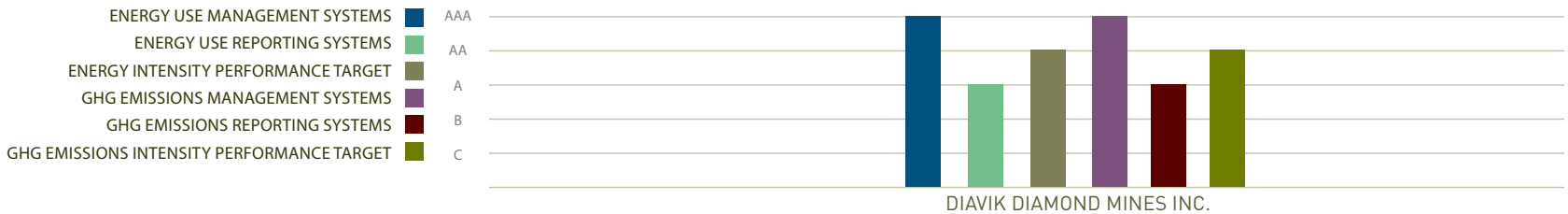
Towards Sustainable Mining
Vers le développement minier durable

HIGHLIGHTS OF COMPANY ACTIONS

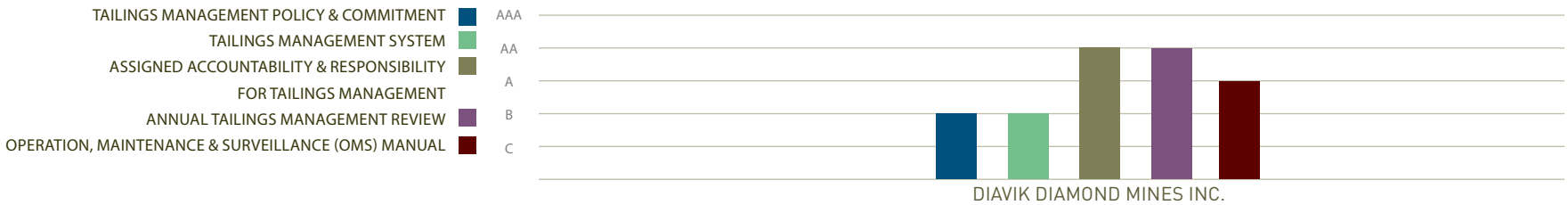
EXTERNAL OUTREACH ASSESSMENT



ENERGY USE AND GHG EMMISSIONS MANAGEMENT ASSESSMENT



TAILINGS MANAGEMENT ASSESSMENT



HudBay Minerals is an exploration, mining and processing company. Its wholly owned subsidiary, Hudson Bay Mining and Smelting Co., Limited (HBMS), operates integrated facilities in Flin Flon and Snow Lake, Manitoba, as well as Zochem, located in Brampton, Ontario. HBMS operations report their TSM data in one integrated facility report.

In 2010 the company maintained its 2009 score of Level AA for all five indicators under tailings management. For most of the year, the tailings facility at Snow Lake was on care and maintenance. During that period, the Snow Lake manual was revised to ensure compliance once the mill restarts.

Results for crisis management planning at both the corporate and facility level stayed the same in 2010. So did the scores for external outreach. However, in the latter area, several Level AA elements have been implemented for Indicators 2 to 4, placing a Level AA rating for this performance area within reach.

The company saw modest improvements in energy use and GHG emissions management during the year, largely because the copper smelting operations permanently closed in June 2010.

The next challenge for HudBay is to maintain or better its performance for the existing TSM protocols, and to report good performance for the new ones, while developing a new mine. Improving energy use and GHG emissions will be particularly difficult because most of the remaining usage is constant. The company will be looking for innovative ideas and hopes to evolve its metrics to gain insight into performance as its mix of facilities and product streams changes.

For more information on HudBay, including annual sustainability reports and details on environmental and social performance, please visit the company's website (www.hudbayminerals.com).

CRISIS MANAGEMENT PLANNING ASSESSMENT

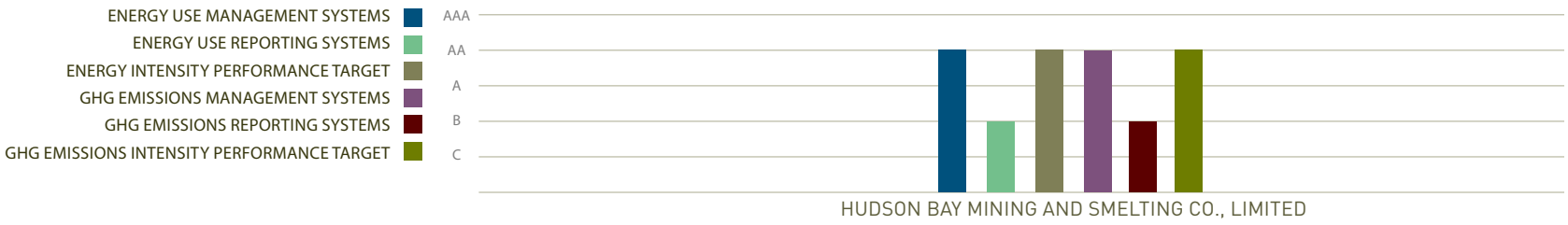
	PREPAREDNESS	REVIEW	TRAINING
CORPORATE	✓	✓	✓
HUDSON BAY MINING AND SMELTING CO., LIMITED	✓	✓	✓

Towards Sustainable Mining
Vers le développement minier durable

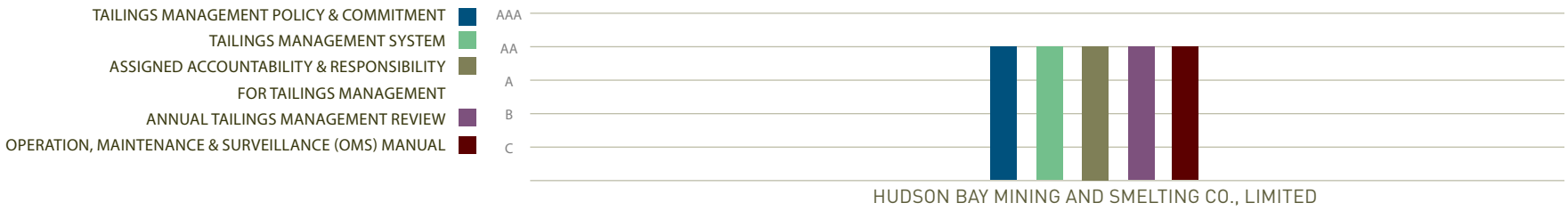
HIGHLIGHTS OF COMPANY ACTIONS

EXTERNAL OUTREACH ASSESSMENT

ENERGY USE AND GHG EMMISSIONS MANAGEMENT ASSESSMENT



TAILINGS MANAGEMENT ASSESSMENT



IAMGOLD is a leading mid-tier Canadian gold mining company that produces about one million ounces a year from eight mines on three continents.

Thanks to a strong financial position and extensive management and operational expertise, IAMGOLD is positioned to grow, with its pipeline of development and exploration projects and its continued assessment of acquisition opportunities. The company's growth plans are focused on West Africa, select countries in South America and the provinces of Ontario and Quebec (the latter being the location of an IAMGOLD niobium mine).

This is the first year of TSM reporting for IAMGOLD's Essakane gold mine in Burkina Faso, which went into commercial production on July 16, 2010. There is no report this year for Quebec's Doyon mine, which ended operations in December 2009. However, IAMGOLD is reporting for the Westwood project, which is located two and a half kilometres east of the Doyon mine and will use some Doyon infrastructure.

"Zero harm" expresses IAMGOLD's commitment to several goals: striving for the highest standards in human health, minimizing the company's impact on the environment and working cooperatively with host communities. TSM reporting is part of a suite of tools that the company uses to improve its operations.

IAMGOLD has received two awards for corporate social responsibility. The company was recognized by Ottawa's Algonquin College for its "zero harm" vision and for establishing over 28 community and NGO partnerships in Botswana, Burkina Faso, Ecuador, French Guiana, Suriname and Canada. As well, PDAC (Prospectors and Developers Association of Canada) chose IAMGOLD to receive the Environmental and Social Responsibility Award for commitment to excellence in environmental stewardship, community engagement, and health and safety, particularly during exploration.

IAMGOLD's frameworks for health and safety management and sustainability, which are guided by international standards and good practices (including PDAC's e3 Plus), help create performance criteria and measurable results for all the company's operations. IAMGOLD was the

top extractive company, and third overall, in the Globe and Mail's 2010 ranking of the environmental, social and governance performance of Canada's largest companies in the S&P/TSX 60 Index.

During 2010 IAMGOLD made steady progress under all TSM performance elements except for energy use and GHG emissions management, which stayed consistent. Key highlights follow.

Tailings Management

By developing a more detailed, comprehensive self-assessment tool for tailings management in late 2009, IAMGOLD was able to implement MAC's tailings management guides more effectively in 2010. The company introduced action plans at all its sites to improve management and to measure improvements using TSM scoring, and as a result saw great progress at all facilities. Essakane is still developing its tailings management system and is working on implementation of its OMS manual, which explains the facility's lower results for 2010.

External Outreach

In 2010 IAMGOLD formed a working group to develop a community relations handbook and audit tool. Better guidance will improve transparency regarding the issues raised by communities of interest and the ways in which the company resolves those issues. IAMGOLD's efforts in engagement and community development continue to evolve and improve.

Crisis Management Planning

For this performance element, the Rosebel mine in Suriname and corporate head office both scored "yes" for all indicators. IAMGOLD regularly conducts emergency response exercises, including desktop and site-wide simulations, to make sure all personnel are properly trained and tested. The company expects to improve its TSM performance in the future.

Energy Use & GHG Emissions Management

This area shows the weakest performance overall and is an area for future focus. IAMGOLD continued to take part in the Carbon Disclosure Project in 2010 and plans to do so again in 2011.

For more on IAMGOLD's sustainability and engagement programs and progress, including the 2010 Health, Safety and Sustainability Report, please visit the company's website (www.iamgold.com).

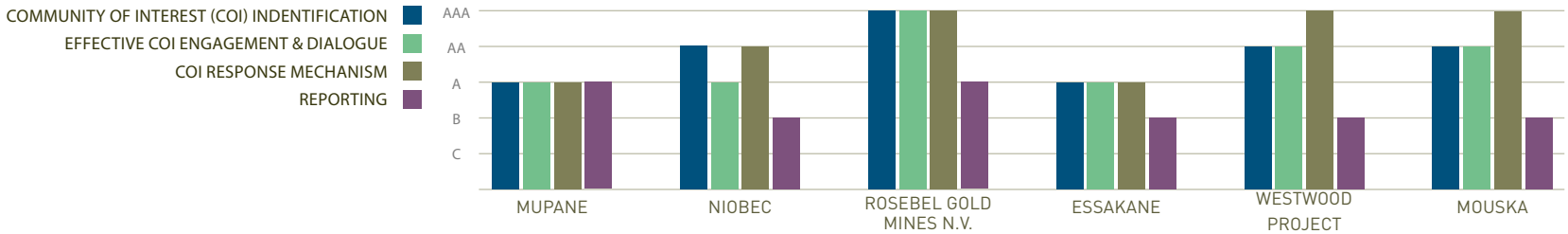
CRISIS MANAGEMENT PLANNING ASSESSMENT

	PREPAREDNESS	REVIEW	TRAINING
CORPORATE	✓	✓	✓
ESSAKANE	-	✓	-
MOUSKA	✓	-	-
MUPANE	-	-	-
NIOBEC	✓	-	-
ROSEBEL GOLD MINES N.V.	✓	✓	✓
WESTWOOD PROJECT	-	-	-

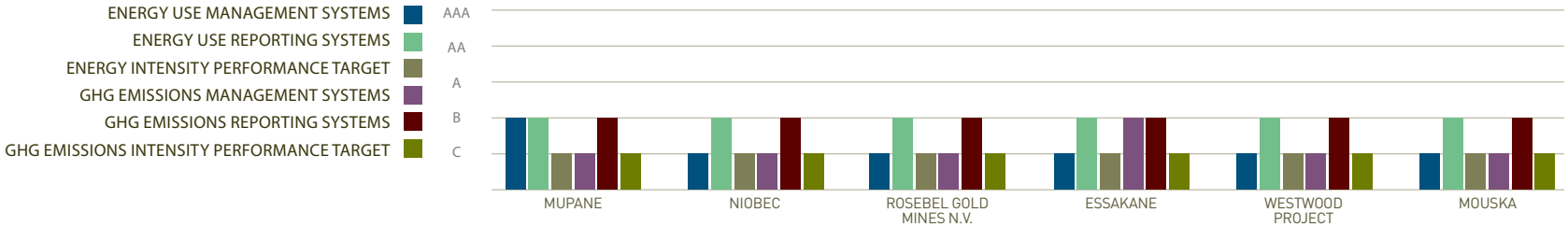
Towards Sustainable Mining
Vers le développement minier durable

HIGHLIGHTS OF COMPANY ACTIONS

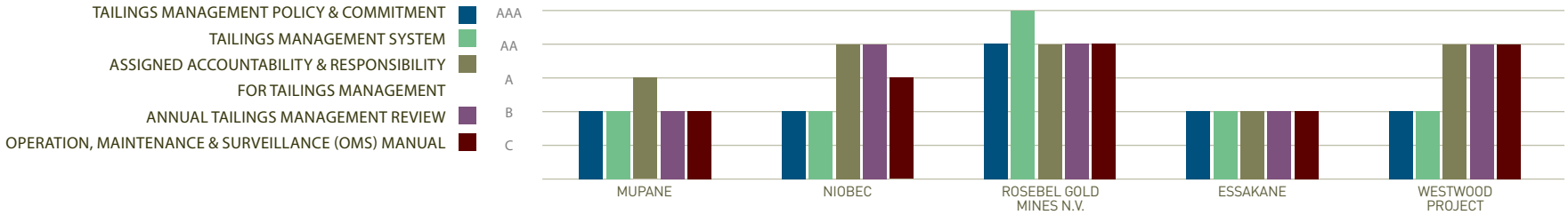
EXTERNAL OUTREACH ASSESSMENT



ENERGY USE AND GHG EMMISSIONS MANAGEMENT ASSESSMENT



TAILINGS MANAGEMENT ASSESSMENT



Inmet's focus is on managing risks prudently and being good stewards. The company, recognizing that the social and environmental challenges of development are greater than it can address alone, works with customers and suppliers and in cooperation with industry peers, NGOs, governments and communities to make a positive difference at its operations.

TSM is one of the tools Inmet uses to manage risk. The company's six closed sites and active operations in Finland and Turkey continue to complete yearly TSM self-assessments. The newest operation, Cobre Las Cruces, conducted self-assessments for the first time this year as it ramped up to commercial production. Although not yet reporting, the team in Panama also did self-assessments in order to identify gaps and improve risk management at this evolving development site.

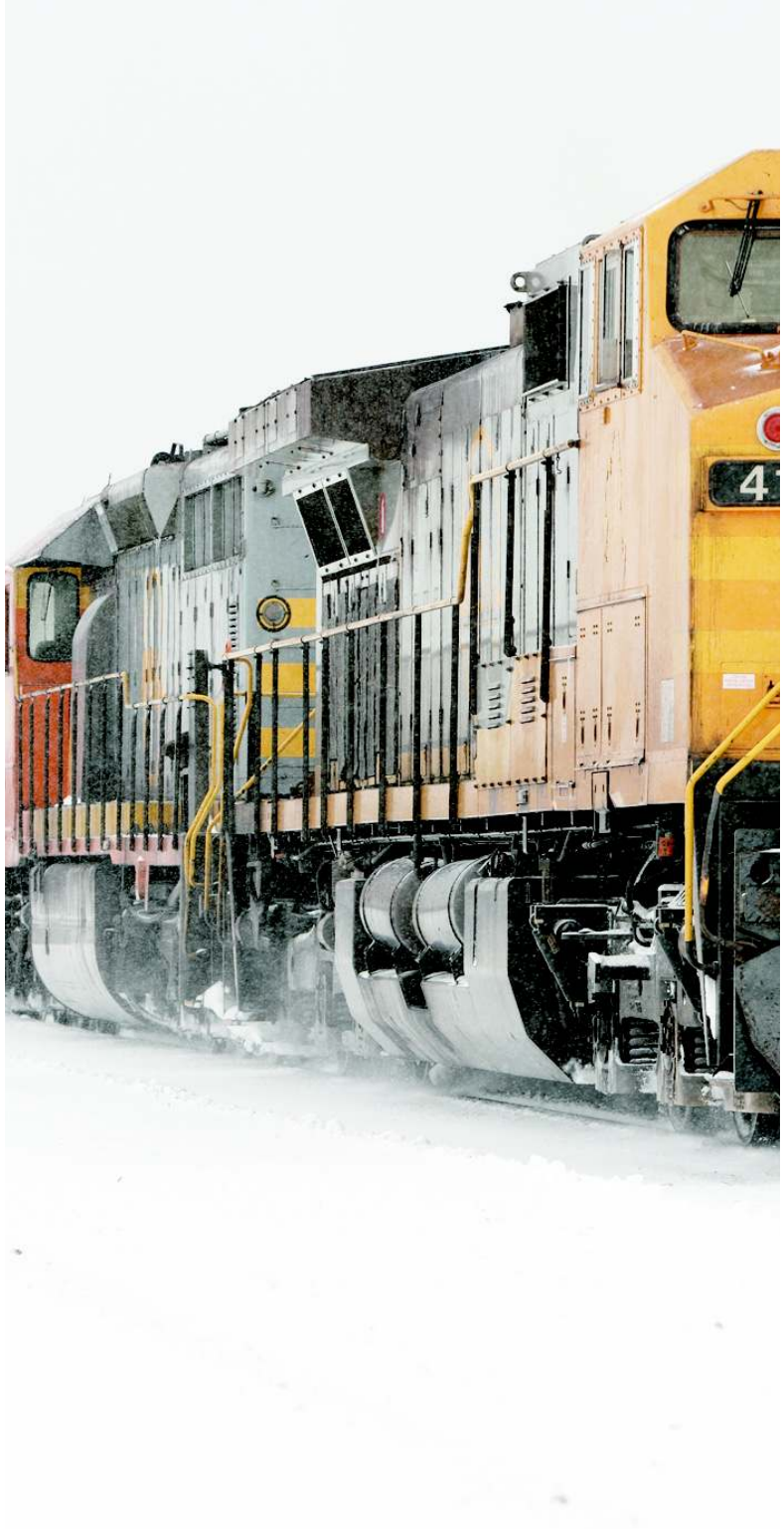
Inmet again scored well on crisis management and external outreach, and its tailings management scores have begun to improve. The sites in Spain and Turkey plan to implement their tailings OMS manuals in 2011. Their operations and closed sites are also reviewing performance in the new TSM areas – safety and health, biodiversity conservation management, and Aboriginal and community outreach – to identify common areas for improvement across the company.

Tailings Management

Inmet's Finland operation and its closed properties have OMS manuals in place that are reviewed once a year. The company made modest improvements in tailings management performance at its operations in Turkey and Spain this year, but was unable to complete TSM-compliant manuals. Plans are in place for all sites to have their manuals completed and implemented by the end of 2011.

External Outreach

All of Inmet's active operations and closed properties have systems for identifying and communicating with communities of interest. In



Panama Inmet is concentrating on building skills and capacity in local communities; actively engaging nearby residents; defining the structure, scope and approach for an effective community foundation; and finalizing a community grievance process. Inmet's operations in Turkey and Spain and their closed sites continue to use Anglo American's Socio-Economic Assessment Toolbox (SEAT) framework for community engagement. Inmet has approved a new human rights policy that will be introduced in 2011.

Crisis Management Planning

In 2010 Inmet completed crisis simulation exercises at all of its majority-owned sites and closed properties, and at its corporate office. The corporate office and the operation in Spain both identified ways of improving crisis plans that will be implemented in 2011.

Energy Use & GHG Management

Inmet's operations in Finland and Turkey are leading the company in energy conservation. However, energy use was high in Spain in 2010 because of the ramp-up to commercial production and continued open-pit development. These activities affected the company's overall score for intensity. In 2011 Las Cruces expects to establish a baseline for normal energy use and identify opportunities to conserve. Inmet continues to participate in the Carbon Disclosure Project.

For more information about corporate responsibility at Inmet, please visit the company's website (www.inmetmining.com) or see the UN Global Compact's 2010 Communication on Progress (www.unglobalcompact.org).

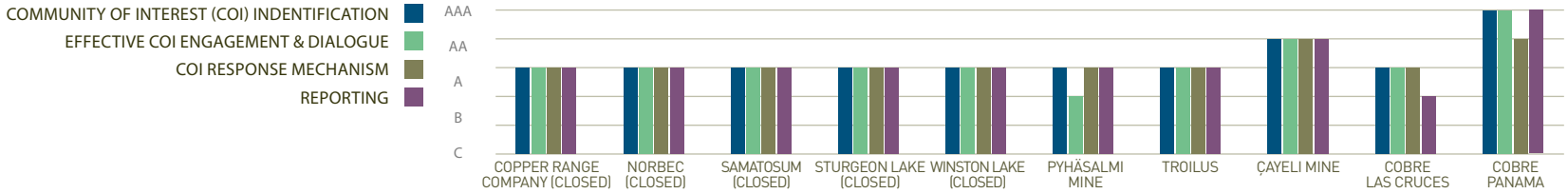
Towards Sustainable Mining
Vers le développement minier durable

HIGHLIGHTS OF COMPANY ACTIONS

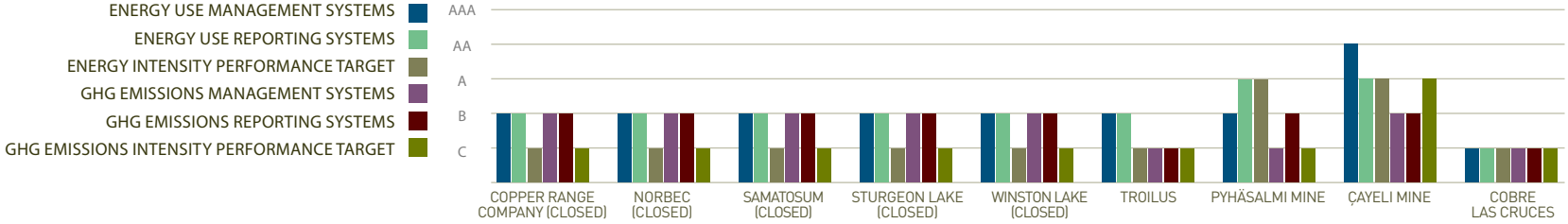
CRISIS MANAGEMENT PLANNING ASSESSMENT

	PREPAREDNESS	REVIEW	TRAINING
ÇAYELI MINE	✓	✓	✓
COBRE LAS CRUCES	✓	✓	✓
COBRE PANAMA	✓	✓	✓
COPPER RANGE COMPANY (CLOSED)	✓	✓	✓
CORPORATE	✓	✓	✓
NORBEC (CLOSED)	✓	✓	✓
PYHÄSALMI MINE	✓	✓	✓
SAMATOSUM (CLOSED)	✓	✓	✓
STURGEON LAKE (CLOSED)	✓	✓	✓
TROILUS	✓	✓	✓
WINSTON LAKE (CLOSED)	✓	✓	✓

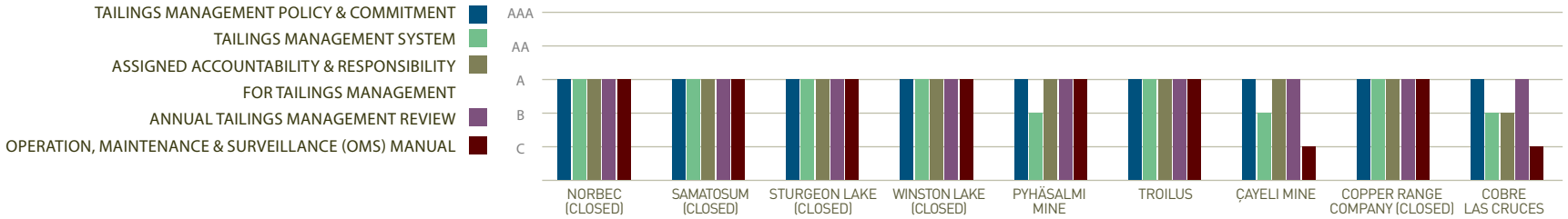
EXTERNAL OUTREACH ASSESSMENT



ENERGY USE AND GHG EMMISSIONS MANAGEMENT ASSESSMENT



TAILINGS MANAGEMENT ASSESSMENT



IOC is the largest producer of iron ore pellets in Canada and one of the leading producers of iron ore pellets and concentrate in the world.

The company employs over 2,000 people in its mine, milling and pelletizing facility in Labrador City, Newfoundland and Labrador; its deep-water port facility in Sept-Îles, Quebec; and the 418-kilometre rail corridor that connects the two.

MAC's TSM principles are aligned with IOC's sustainable development principles and the standards and policies of Rio Tinto, IOC's major shareholder and operator.

In 2010 IOC performed an internal audit to evaluate the company's TSM performance. While most areas showed progress, there is still work to do to improve management system – based performance in tailings management as well as some crisis management indicators.

External Outreach

Over the past several years IOC has greatly improved its performance in the area of stakeholder engagement. The company is committed to engaging stakeholders in the communities where it operates. IOC identifies community issues with the help of the Community Advisory Panel (CAP) and is committed to being a neighbour of choice, working with those potentially affected to better understand and address any concerns.

The CAP, which is made up of key community stakeholders, met in 2010 in both the Labrador City and Sept-Îles facilities. Topics discussed included IOC's operations, matters of common concern, and issues and opportunities in each community. However, the response mechanisms at the Sept-Îles facility were not as well maintained in 2010 as in 2009, leading to a lower score. This issue is being addressed for 2011.

Crisis Management Planning

IOC's business resilience and reporting plan meets the intent of the TSM crisis management planning element at the company's three work sites: corporate (Montreal), Labrador City and Sept-Îles. In the Montreal office,

the disaster management and recovery plan established in 2009 was well maintained in 2010. Both the Labrador City and Sept-Îles sites still have strong crisis management plans in place.

Although the company noted improvements at all sites, there remains a training issue at the Labrador City site. This issue is being addressed for 2011.

Tailings Management

There were improvements in some tailings management indicators in 2010, such as IOC's adoption of the "Guiding Principles for Tailings Management." However, scores are still not reflective of the work being done.

IOC is committed to better management of its chemically inert tailings, and has established step-by-step improvements for its tailings management. A two-day workshop in April 2010 helped identify issues and develop an action plan to bring tailings management to a better performance level. Regular meetings are being held to continue that plan's forward motion.

At Sept-Îles the tailings area is classified as a closure issue because the infrastructure has been removed and a decision has been made not to reactivate the concentrator and pelletizing plant. There are no operational or maintenance activities associated with the Sept-Îles tailings area, which will be rehabilitated over the next few years.

Energy Use and GHG Management

IOC met energy and GHG performance targets for Labrador City and Sept-Îles and continued to improve its performance overall in 2010. The internal audit verified that in the area of managing energy use and greenhouse gas, high standards are still in place and still a priority at IOC.

The company's Energy and Environmental Projects Chief Engineer continues to identify and act on initiatives for reducing GHG emissions and energy use. As in 2009, IOC met or exceeded its intensity targets in 2010.

For more information on IOC's sustainable development activities, please visit the company's website (www.ironore.ca).

CRISIS MANAGEMENT PLANNING ASSESSMENT

	PREPAREDNESS	REVIEW	TRAINING
CORPORATE	✓	✓	✓
LABRADOR CITY	✓	✓	-
SEPT-ILES	✓	✓	✓

Towards Sustainable Mining
Vers le développement minier durable

HIGHLIGHTS OF COMPANY ACTIONS

EXTERNAL OUTREACH ASSESSMENT

ENERGY USE AND GHG EMMISSIONS MANAGEMENT ASSESSMENT

TAILINGS MANAGEMENT ASSESSMENT

North American Palladium (NAP) is a Canadian precious metals company focused on increasing its production of palladium and gold in mining-friendly jurisdictions.

NAP has two wholly owned mines in Canada. The flagship, the Lac des Iles mine, is one of the world's two primary palladium producers. NAP also has a growing gold business in Quebec's Abitibi region, where the company operates the Sleeping Giant mine. NAP has extensive land holdings next to both mines, as well as a number of advanced exploration projects.

NAP strives for excellence in all areas of operation and pursues sustainable growth as a key part of daily activities. In upholding the TSM guiding principles, the company is committed to the environment and to neighbouring communities. NAP continuously works to improve its systems and procedures and to make social responsibility a top priority.

At NAP, monitoring environmental performance involves testing to identify areas that need improvement. The company aims to meet or surpass regulatory requirements and legislated environmental standards. In 2010 NAP hired Innotain Inc. to develop an energy management plan for the Lac des Iles mine. The company continues to assess energy use and GHG emissions at Sleeping Giant and other exploration projects.

NAP communicates with First Nations communities and other interested parties, and is a proud sponsor of various community organizations. These include the University of Quebec in Abitibi-Témiscamingue and the Abitibi-Témiscamingue CEGEP in Rouyn-Noranda.

In 2011 NAP will continue to improve by implementing a corporate crisis management plan that is consistent with the MAC guidelines.

For more information, please visit the company's website (www.nap.com).

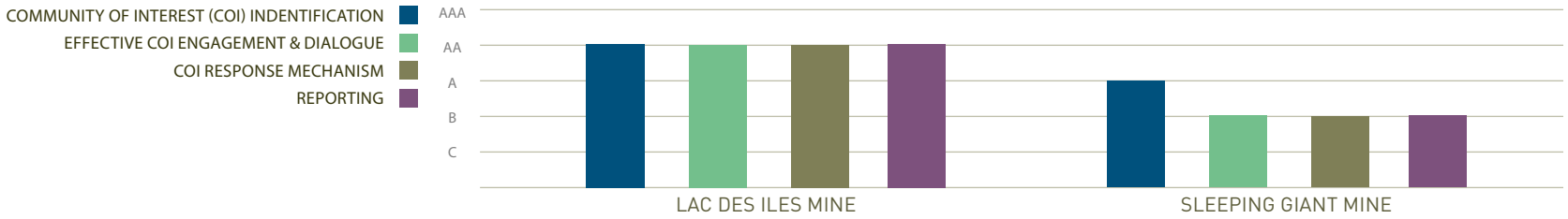
CRISIS MANAGEMENT PLANNING ASSESSMENT

	PREPAREDNESS	REVIEW	TRAINING
CORPORATE	-	-	-
LAC DES ILES MINE	✓	✓	✓
SLEEPING GIANT MINE	✓	✓	✓

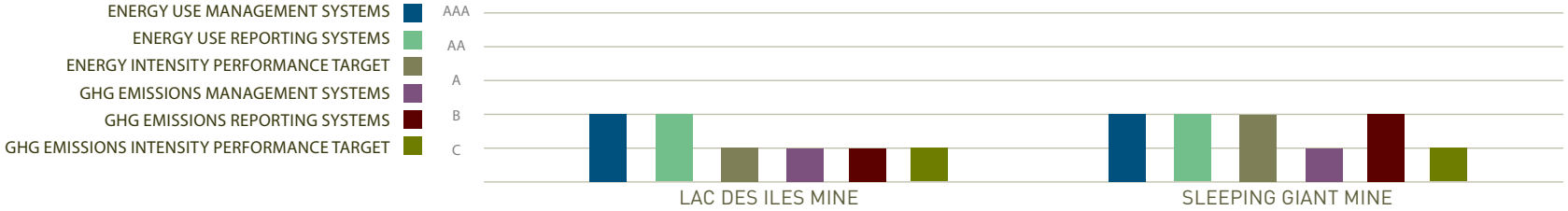
Towards Sustainable Mining
Vers le développement minier durable

HIGHLIGHTS OF COMPANY ACTIONS

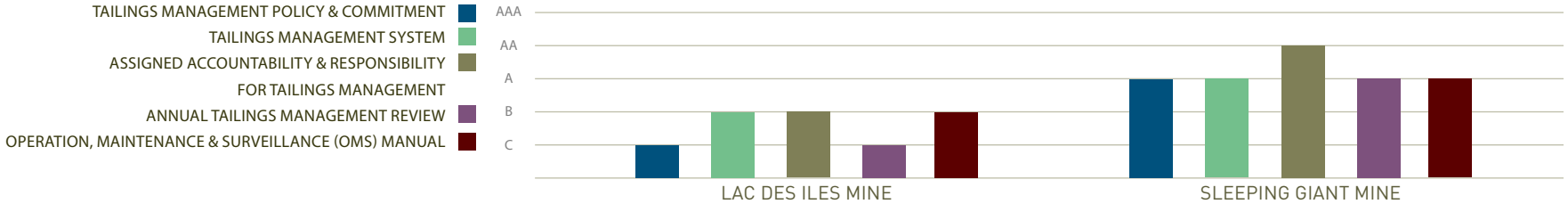
EXTERNAL OUTREACH ASSESSMENT



ENERGY USE AND GHG EMMISSIONS MANAGEMENT ASSESSMENT



TAILINGS MANAGEMENT ASSESSMENT



Shell Canada Energy (Shell) operates the Muskeg River mine, 75 kilometres north of Fort McMurray, Alberta, on behalf of the owners of the Athabasca Oil Sands Project: Shell Canada Limited (60%), Chevron Canada Limited (20%) and Marathon Oil Sands LP (20%).

Shell supports environmental and social projects that benefit not only its business but also the social and environmental needs of its communities.

Economic Sustainability

Shell spends about $663 million a year with companies in the Regional Municipality of Wood Buffalo, where it operates, and over $185 million on business with Aboriginal suppliers, many from the nearby Aboriginal community of Fort McKay.

The company's offices in Fort McKay and downtown Fort McMurray allow Shell people to keep in close contact with the community and to engage with stakeholders daily. Some 70 percent of those who work at the Muskeg River mine live in the Regional Municipality of Wood Buffalo.

Environmental Sustainability

Shell takes a "best in class" approach to environmental management. In 2004 the Muskeg River mine became the first oil sands operation to be certified to the ISO 14001:1996 standard. The mine maintained its certification and in 2005 met the requirements of the new ISO 14001:2004 standard. The facility has renewed its three-year certificate twice, most recently in 2010. The ISO standard, though voluntary, is externally audited and recognized as the top international standard for EMS (environmental management systems).

In 2010 the Alberta government again recognized the Muskeg River mine as an EnviroVista leader. A voluntary program, EnviroVista acknowledges facilities that have at least five years of exemplary environmental performance, an audited EMS and five or more years of compliance with Alberta's environmental legislation.

Proven management systems continue to allow Shell to meet its environmental goals even as the company grows. Shell pursues responsible mining by maximizing its use of wastewater, managing the cumulative effects of oil sands development and applying new technology.

Ongoing, meaningful involvement with multi-stakeholder groups is an important part of Shell's environmental management strategy. The company is an active member of the Cumulative Environmental Management Association, the Wood Buffalo Environmental Association and the Regional Aquatics Monitoring Program.

To meet environmental challenges, Shell uses technology in innovative ways. One example is the proposed joint-venture carbon capture and storage project at the company's Scotford upgrader in Fort Saskatchewan. Shell, along with the European Space Agency, is also part of the Earth Observation Project. This project uses satellite imagery to establish baseline land use in order to map reclamation areas and changes in the region.

Social Sustainability

Shell operates in a rapidly growing region, and the company is helping to manage the infrastructure impacts of that growth. For example, in Fort McMurray Shell has teamed up with Keyano College on several educational and community projects, including investing significantly in Keyano's Sport and Wellness Centre, a recreational facility open to the entire community.

Shell has also been a champion supporter of Keyano College's environmental technology program and a lead contributor to the Aboriginal entrepreneurship certificate program. In 2010 Shell and its Athabasca Oil Sands Project partners announced a more than $2 million investment in Keyano College. This donation, the largest Shell has made in the Regional Municipality of Wood Buffalo, will support education programs and new initiatives at the college.

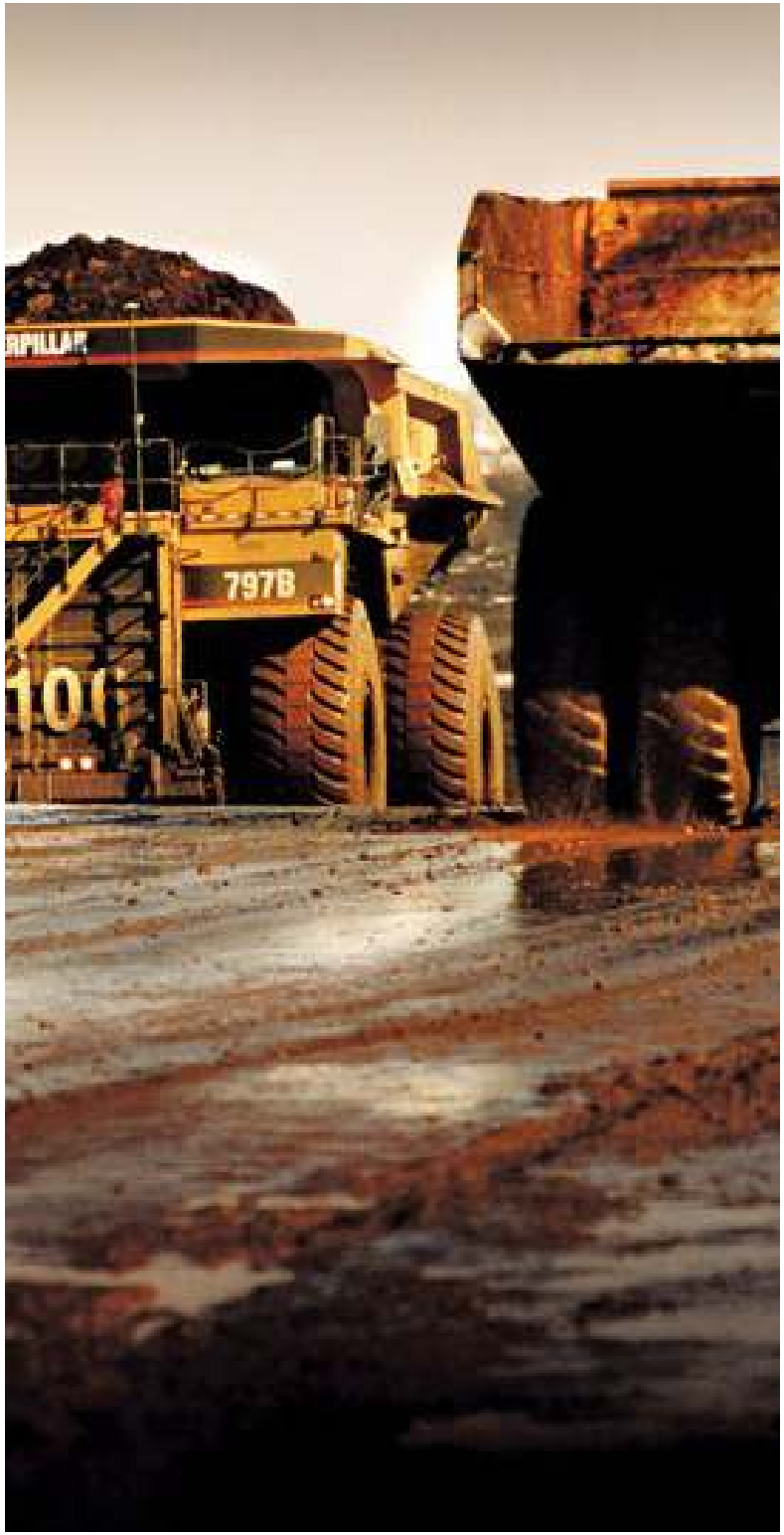
Shell is a principal supporter of Leadership Wood Buffalo, a community-focused program that identifies and develops future leaders in the region. Shell and its employees are also strong supporters of the United Way of Fort McMurray, raising funds for programs that address community priorities.

Over 2,000 full-time Shell employees live and work in the community. They are active volunteers in and supporters of organizations and events as diverse as the Northern Lights Health Foundation Festival of Trees and the annual spring cleanup of the Birchwood Trails.

TSM Annual Facility Review

Shell continues to maintain high standards in the TSM performance elements of crisis management planning and external outreach, with management programs in place that are reviewed, tested and documented. The company is working extensively on community of interest engagement and dialogue, including consulting within communities and hosting community members at the facility. Shell informs communities about its environmental performance through an annual environment report. It also meets with each community and gives a presentation to allow for open dialogue.

Shell's tailings management initiatives continued in 2010 with the company's health, safety, security and environment policy, which is site-specific but also aligned with Royal Dutch Shell's global policy and business practices. The company's policy, introduced in last year's TSM Progress Report, includes components that address items within the tailing management guidelines, as well as other region-specific standards and requirements. In 2010 the facility's OMS



(operation, maintenance and surveillance) manual was updated to integrate all three aspects into tailings management. The OMS manual was completed and underwent formal third-party document review.

GHG management and reporting continue to improve as Shell adopts more automatic systems to improve its data reporting in order to meet regulatory requirements. Energy management programs continue to be embedded within the company and are captured in the EMS. Shell launched several projects in 2010 to reduce energy use in specific areas of the operation.

In September 2010 Shell's Jackpine mine, a newly constructed oil sands facility, started production. With the new site and the Muskeg River mine both in operation, Shell continues to focus on safety, people, environment and social performance as it helps develop Canada's oil sands resources.

For more information, please visit the Shell Canada Energy website (www.shell.ca/oilsands).

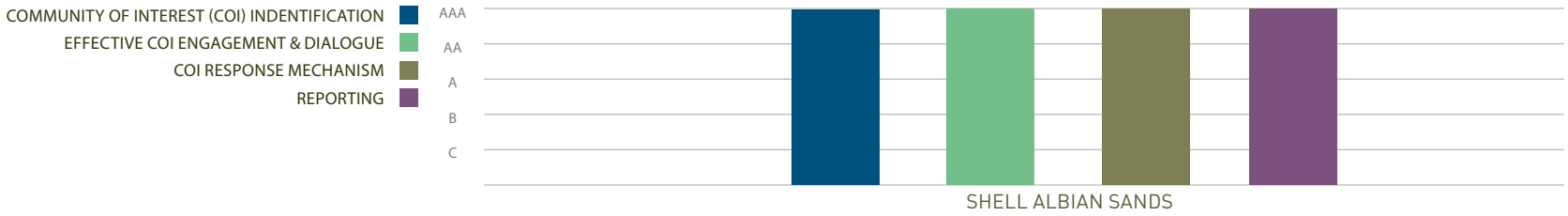
CRISIS MANAGEMENT PLANNING ASSESSMENT

	PREPAREDNESS	REVIEW	TRAINING
CORPORATE	✓	-	✓
SHELL ALBIAN SANDS	✓	-	✓

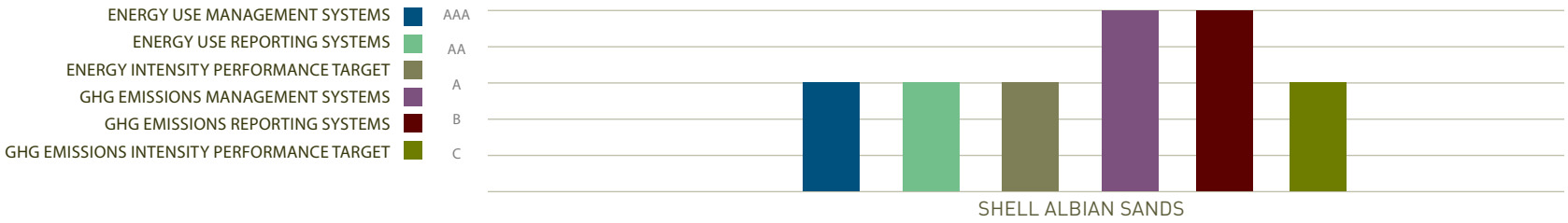
Towards Sustainable Mining
Vers le développement minier durable

HIGHLIGHTS OF COMPANY ACTIONS

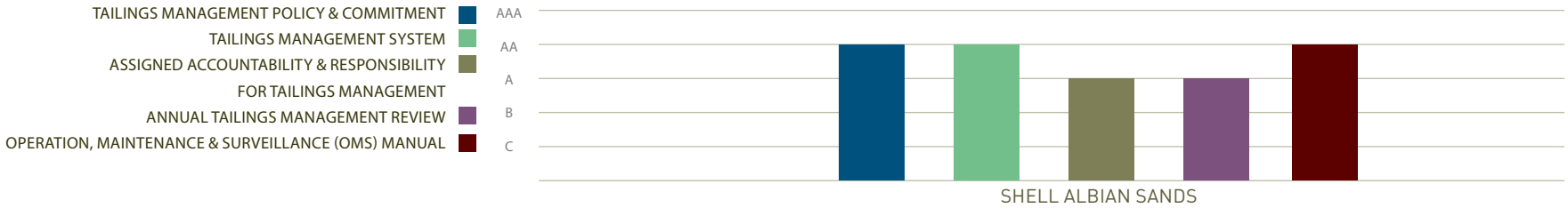
EXTERNAL OUTREACH ASSESSMENT



ENERGY USE AND GHG EMMISSIONS MANAGEMENT ASSESSMENT



TAILINGS MANAGEMENT ASSESSMENT



Suncor Energy recovers bitumen from oil sands near Fort McMurray, Alberta, and upgrades it to refinery-ready feedstock and diesel fuel. With production capacity of about 300,000 barrels per day and enough reserves to sustain production for the next 50 years, Suncor remains a leader in oil sands development.

In 2009 Suncor merged with Petro-Canada to become Canada's largest energy company. The merger will result in a second oil sands mining operation for Suncor in the region.

Suncor's 2010 TSM results were internally verified. They were generally on a par with previous results, including the company's externally verified results from 2009.

Crisis Management Planning

Crisis management planning is vital to a facility the scope and size of the Fort McMurray mining and upgrading operations. For this performance element, Suncor met the criteria for all indicators.

Energy Use & GHG Emissions Management

Energy efficiency and GHG management are critical to an oil sands operation. In 2010 Suncor's results improved marginally in the area of energy use reporting but dropped a similar amount for GHG emissions management. Although Alberta has GHG regulations, the lack of a formal federal GHG emissions policy means there is no clear direction on emission management tools. Nonetheless, Suncor's internal goal of 10 percent improvement in energy use is helping to drive change in this area.

Tailings Management

Oil sands tailings ponds have come under increased public scrutiny in the past few years. That is part of the reason why higher levels of regulatory

oversight, through new regulations and guidelines, are now in place. Suncor has developed new tailings management technologies but is still working on providing the necessary documentation to support its tailings management planning for TSM purposes.

External Outreach/Aboriginal & Community Engagement

For Suncor external outreach has always been a key part of maintaining a social licence to operate. The company regularly reviews its communities of interest (including several Aboriginal communities) and its interaction with them. Communities of interest have an important say in how the company does business, and Suncor's success depends on earning the trust and consent of residents in the communities where it operates.

Suncor has a stakeholder relations policy that outlines the company's commitment to collaboration, transparency and respect for all views. The policy guides Suncor as it develops long-term relationships with those affected by its business, including employees, community members, shareholders, customers, organizations and governments.

For more information, please visit Suncor's website (www.suncor.com).

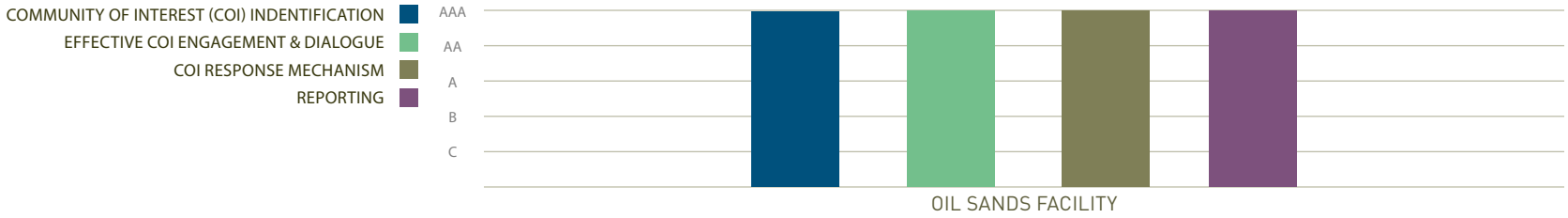
CRISIS MANAGEMENT PLANNING ASSESSMENT

	PREPAREDNESS	REVIEW	TRAINING
OIL SANDS FACILITY	✓	✓	✓

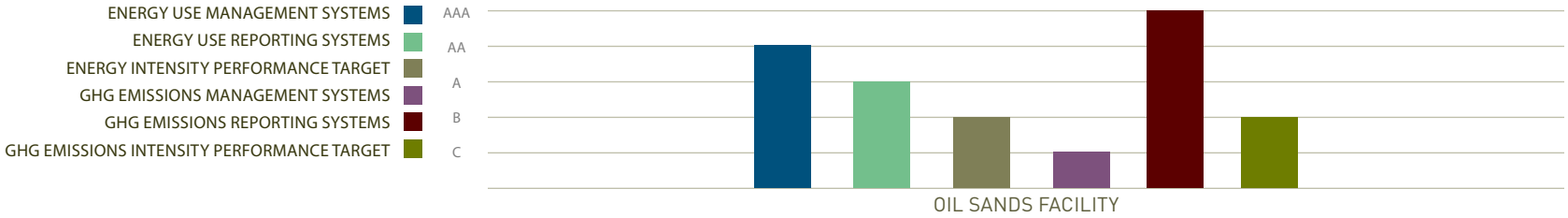
Towards Sustainable Mining
Vers le développement minier durable

HIGHLIGHTS OF COMPANY ACTIONS

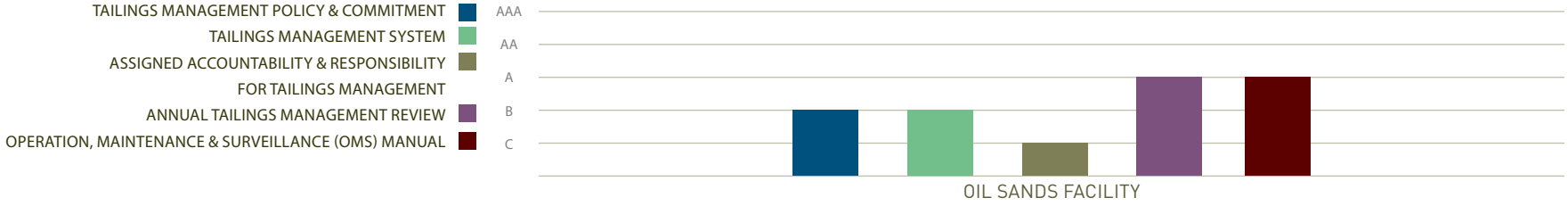
EXTERNAL OUTREACH ASSESSMENT



ENERGY USE AND GHG EMMISSIONS MANAGEMENT ASSESSMENT



TAILINGS MANAGEMENT ASSESSMENT



Syncrude is a leader in Canada's oil sands industry, producing 15 percent of the nation's crude oil requirements. It operates technologically advanced oil sands mines, extraction and upgrading facilities, and utilities plants at its two sites north of Fort McMurray, Alberta. Syncrude's current production capacity is 350,000 barrels of crude oil per day.

Syncrude's commitment to superior environmental, health and safety performance, as well as excellence in community relations, has been strengthened by participating in TSM. In fact, Syncrude was the first ever to receive a TSM award for meeting performance standards in all categories.

Syncrude's performance stayed consistent for 2010 except for not meeting its energy intensity target because of a production shortfall. Some highlights follow.

A major project to reduce emissions is underway at Syncrude. When complete, it will bring sulphur dioxide emissions down by 60 percent and particulate emissions by 50 percent.

Syncrude maintained Level A scores in all areas of tailings management. The current focus is to regularly update the OMS manuals for all tailings facilities. Syncrude regularly monitors all on-site dams, undergoes external technical reviews and has emergency plans in place to respond to any incidents involving these facilities.

Despite steady progress resulting from a global energy management system that will improve overall energy performance, Syncrude did not meet its energy intensity target in 2010. The resulting Level B score was due to lower than anticipated production, which affected Syncrude's overall performance. Syncrude sets aggressive performance targets each year and will concentrate on improving this performance and reducing energy and GHG impacts in 2011.

Syncrude continued its strong corporate performance in the management system areas of energy and GHG usage, scoring Level AAA in these areas.

Syncrude has consistently achieved Level AAA for external outreach. In 2010, for the fifth time, Syncrude earned the Gold Level Progressive Aboriginal Relations Award from the Canadian Council for Aboriginal Business. An Aboriginal employee advisory committee supports the work of the Aboriginal Steering Committee, a management-level group that oversees Syncrude's strategic plan for Aboriginal engagement.

Syncrude works extensively with regional stakeholders to manage the social and environmental effects of oil sands development. It is involved in three multi-party organizations and industry associations that deal with socio-economic impacts and policy issues at the local level.

In the crisis management planning area, Syncrude scored "yes" for all indicators. Syncrude regularly conducts emergency response exercises, including desktop and site-wide simulations, to ensure that all personnel are properly trained and tested. Pre-plans exist for all medium- and high-level risks.

For more information, please visit Syncrude's website at www.syncrude.com.

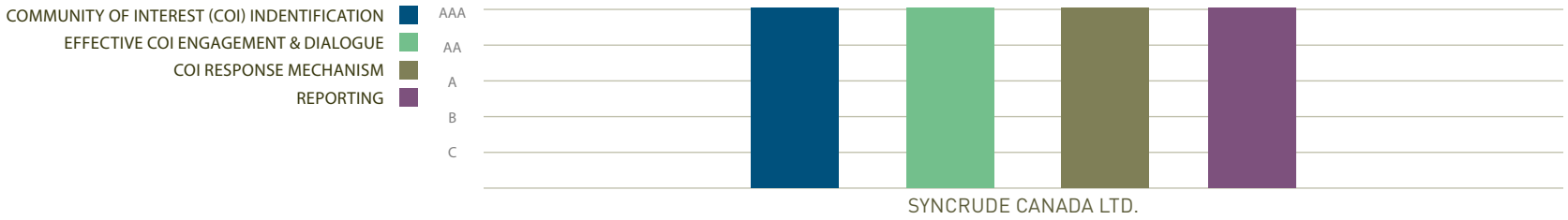
CRISIS MANAGEMENT PLANNING ASSESSMENT

	PREPAREDNESS	REVIEW	TRAINING
SYNCRUDE CANADA LTD.	✓	✓	✓

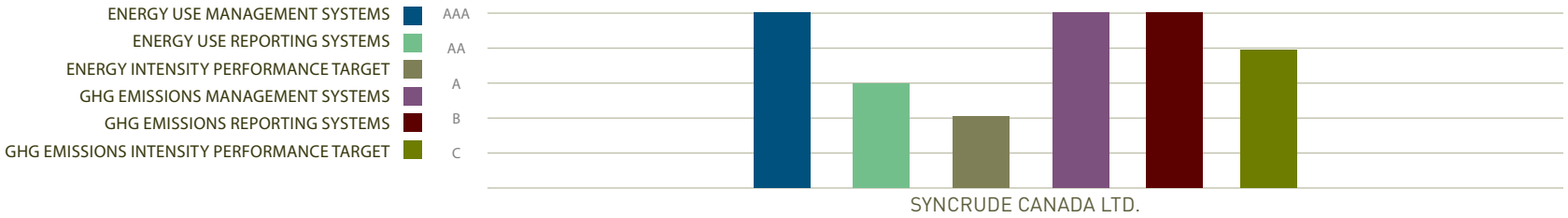
Towards Sustainable Mining
Vers le développement minier durable

HIGHLIGHTS OF COMPANY ACTIONS

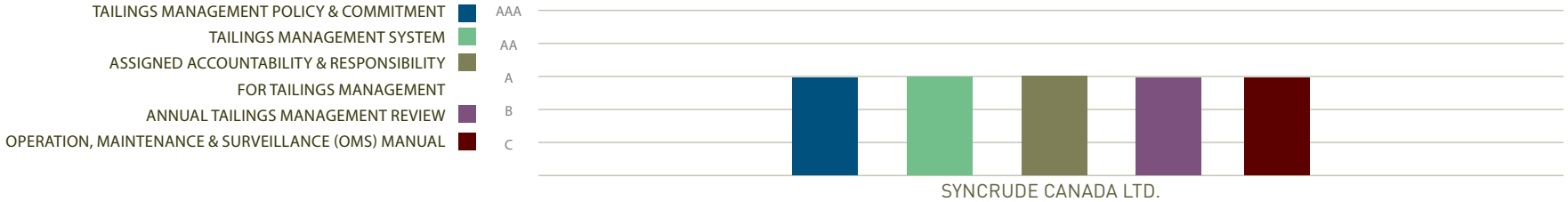
EXTERNAL OUTREACH ASSESSMENT



ENERGY USE AND GHG EMMISSIONS MANAGEMENT ASSESSMENT



TAILINGS MANAGEMENT ASSESSMENT



Teck Resources is a diversified resource company committed to responsible mining and mineral development.

Through the company's interests in mining and processing operations in Canada, the United States and South America, Teck's expertise spans the full range of mining activities. The company is managed along commodity lines, focusing on copper, metallurgical coal, zinc and energy. Worldwide, Teck is an important producer of copper, the second-largest producer of seaborne metallurgical coal and the second-largest producer of zinc concentrate.

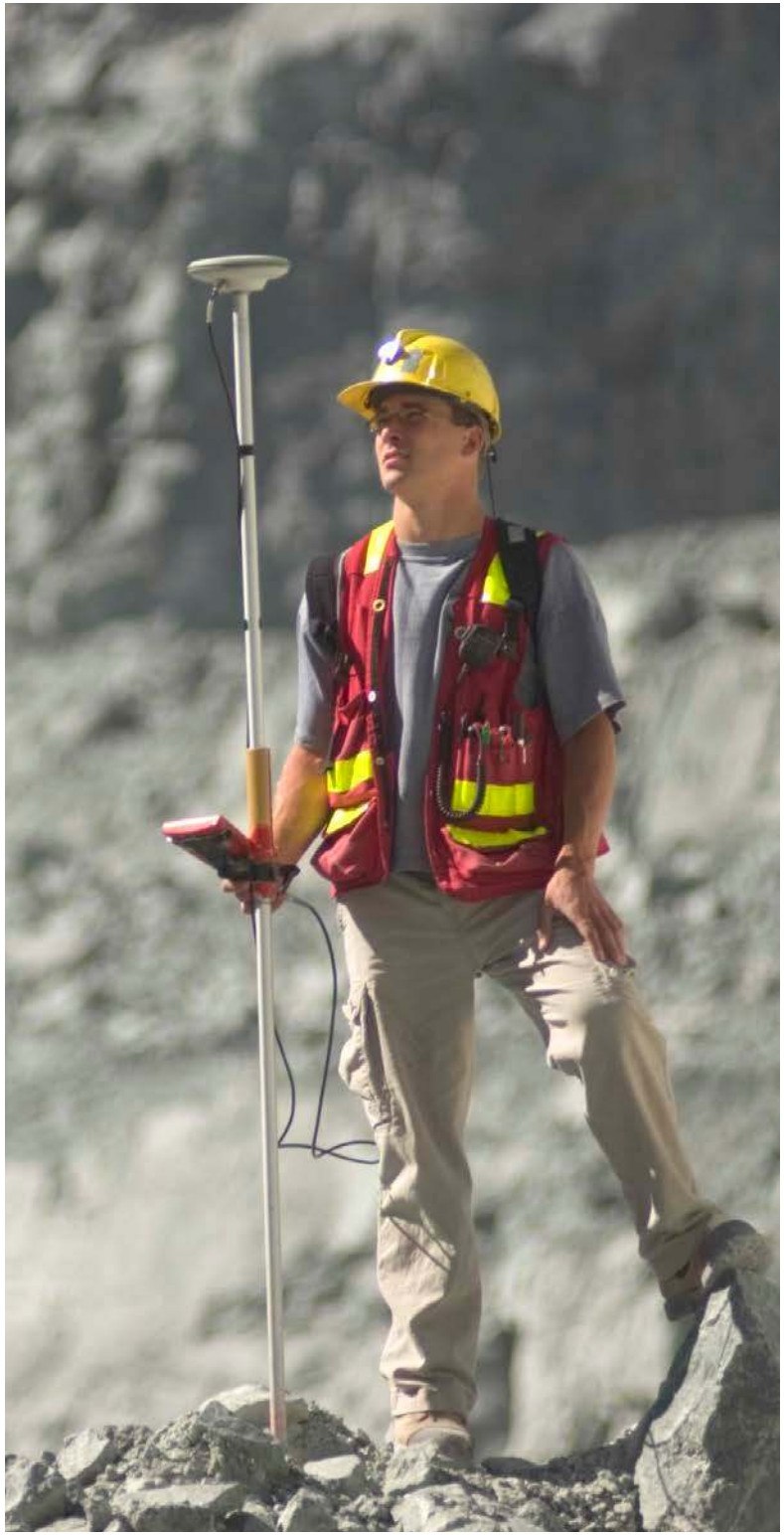
TSM Results

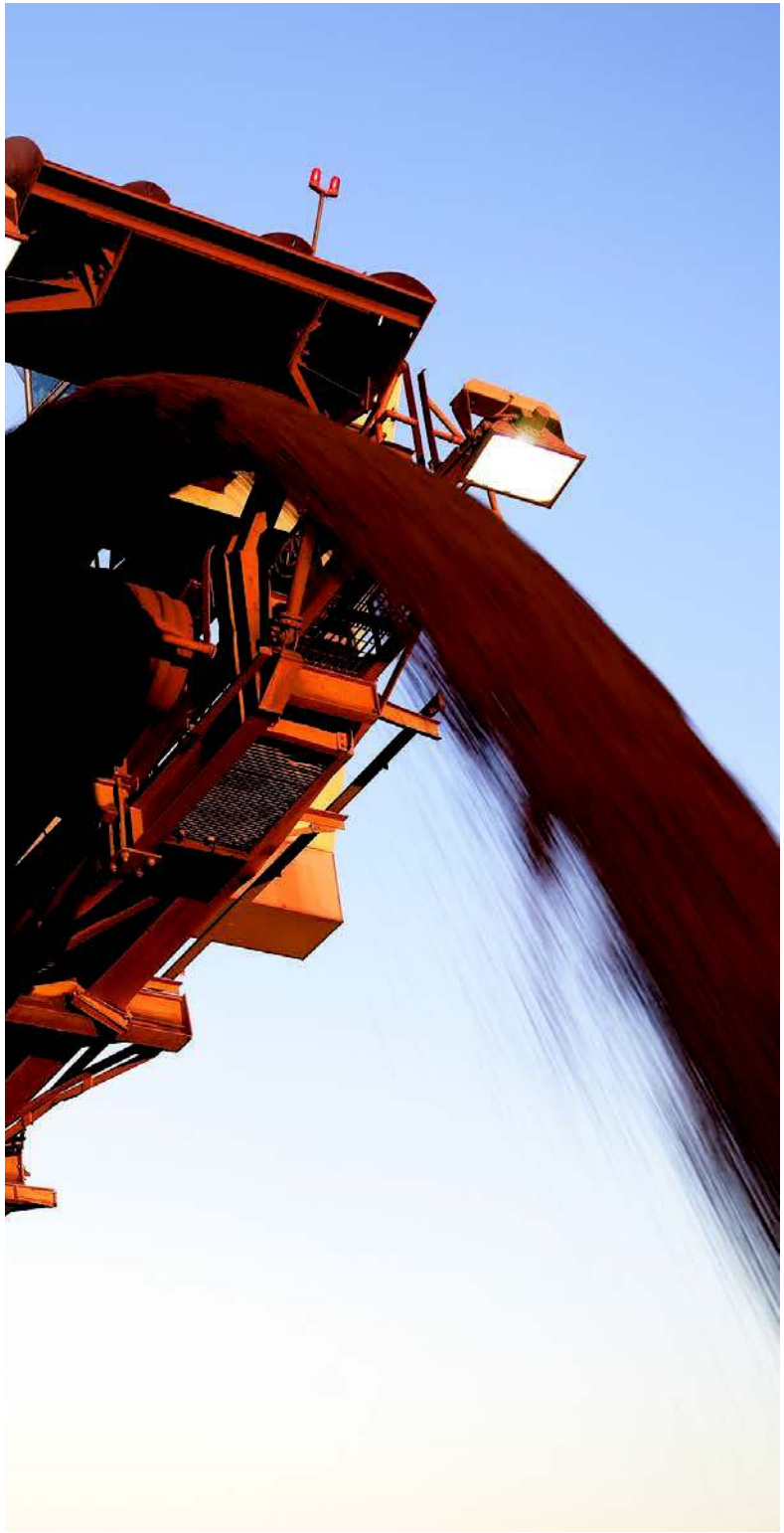
Seven of Teck's nine operations that participate in TSM publicly reported their results for the second time in 2010. They are the Duck Pond operation along with six Teck Coal operations: Cardinal River, Coal Mountain, Elkview, Fording River, Greenhills and Line Creek. Highland Valley Copper and the Trail operations have also participated in TSM since 2005.

During the year the Duck Pond and Trail operations underwent third-party verification, which identified successes and gaps that will influence performance in the coming years. It was Duck Pond's first time undergoing verification, and Teck was pleased to see strong results, particularly in the areas of tailings management and crisis management planning. Trail continues to perform well in crisis management planning and external outreach.

Performance scores improved somewhat over the year, but with most operations being fairly new to TSM, Teck expects more improvement in the years to come – especially with its new TSM Performance Improvement Plan (more below). Teck is addressing the challenges commonly experienced by MAC members in tailings management as well as energy and GHG management.

At the end of 2010, Teck's international operations committed to participating in TSM. They will report their 2011 results in 2012. For these operations, 2011 will be a year of developing knowledge and capacity around TSM protocols, identifying gaps and opportunities, and planning for improvement.





TSM Improvement Plan

In January 2011 Teck introduced the TSM Improvement Plan to its operations. The plan, based on findings and recommendations from the company's 2009 verification, is designed to support Teck operations as they move forward with TSM implementation. The plan is built around four approaches that will drive improvement:

- Develop knowledge and capacity
- Assign accountability
- Set the commitment
- Drive implementation

To support this plan, Teck has taken action in all four areas. For example, the company held two TSM training workshops with participation from its operations, MAC and the TSM verifiers. The workshop was also held in Spanish in Chile for Teck operations there. Teck has asked its sites to designate TSM coordinators and protocols to ensure clear accountability and to help with communication and planning.

Teck has set a target for all sites: to achieve Level A in crisis management planning, external outreach, tailings management, and energy and GHG management. Moving forward, the company will continue to work with its operations, supporting them with a new gap assessment tool and with action planning.

For more information, please visit Teck's website (www.teck.com).

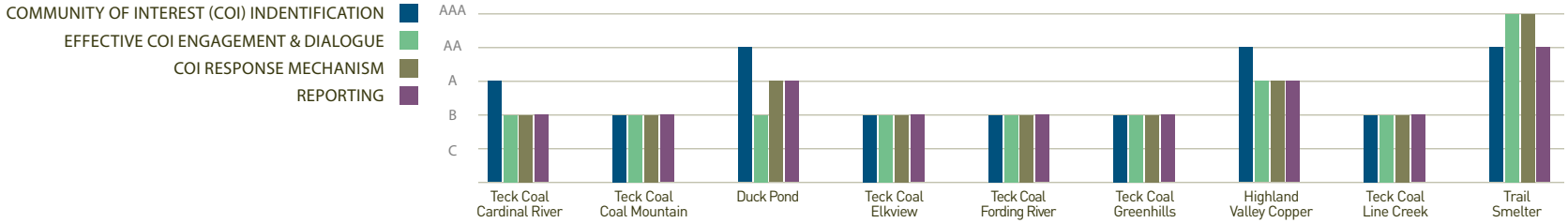
CRISIS MANAGEMENT PLANNING ASSESSMENT

	PREPAREDNESS	REVIEW	TRAINING
DUCK POND OPERATIONS	✓	✓	✓
HIGHLAND VALLEY COPPER	✓	✓	✓
TECK COAL - CARDINAL RIVER OPERATIONS	-	-	-
TECK COAL - COAL MOUNTAIN OPERATIONS	-	-	-
TECK COAL - ELKVIEW OPERATIONS	-	✓	✓
TECK COAL - GREENHILLS OPERATIONS	-	-	-
TECK COAL - LINE CREEK OPERATIONS	-	-	-
TRAIL SMELTER	✓	✓	✓
VANCOUVER CORPORATE	✓	✓	✓

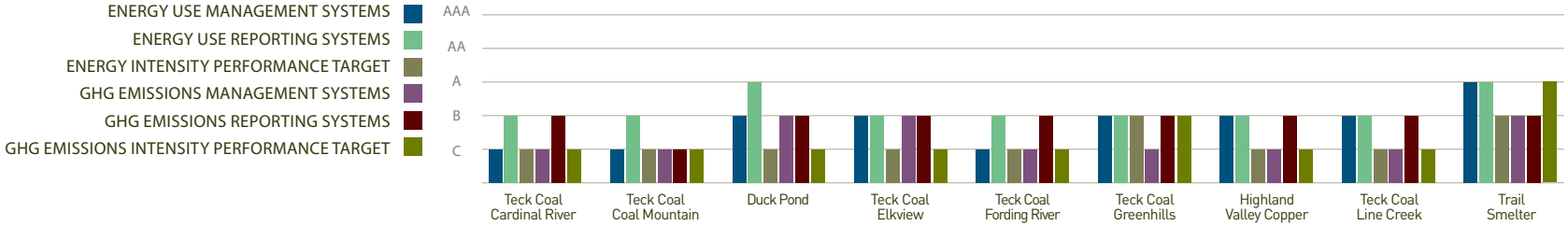
Towards Sustainable Mining
Vers le développement minier durable

HIGHLIGHTS OF COMPANY ACTIONS

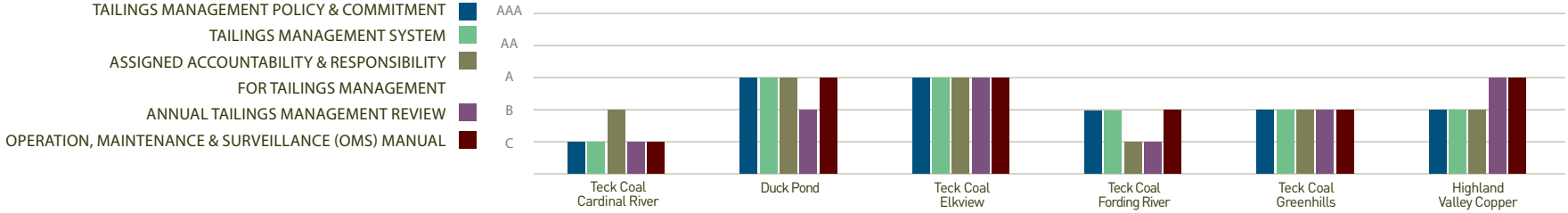
EXTERNAL OUTREACH ASSESSMENT



ENERGY USE AND GHG EMMISSIONS MANAGEMENT ASSESSMENT



TAILINGS MANAGEMENT ASSESSMENT



Vale is a global mining pioneer that discovers and transforms the minerals that are essential ingredients in the products people use every day.

Vale is the world's second largest producer of nickel, with significant operations based in Canada. Canadian operations also produce copper, cobalt, platinum group metals, gold and silver. In Sudbury, Ontario and Thompson, Manitoba, Vale operates mine, mill, smelter and refinery operations; in Voisey's Bay, Newfoundland and Labrador Vale's assets include mine and mill operations. Vale employs about 6,000 people in Canada.

Vale also has a number of development projects underway, including the Long Harbour nickel processing plant in Newfoundland and Labrador, scheduled to start-up in 2013, the Totten Mine in Sudbury, Ontario, scheduled to re-open in 2012 and the Kronau Project, in Saskatchewan, expected to start up in 2015 and produce 2.8 million metric tons of potash per year.

Vale is committed to operating sustainably – accomplishing this vision when its activities balance the generation of value for shareholders with a responsible approach to management, voluntary corporate actions and partnerships with a range of stakeholders. At all times the company strives to leave a positive social, economic and environmental legacy in the areas where it operates.

Vale's TSM report includes information on each of its Canadian sites. 2010 was a year of many developments for Vale. As the global economy rebounded, the company announced a major investment plan for Canada over 5 years; more than $10 billion will be spent on reducing emissions in Sudbury, upgrading production facilities in Sudbury, completing the Long Harbour processing plant in Newfoundland, exploration in Manitoba, and a potash development in Saskatchewan. All of these projects will accrue considerable benefits to Vale's communities and to Canada. Of note on the sustainability side is the clean AER project (Atmospheric Emissions Reduction). At an estimated cost of $1.5 to $2 billion, this project is designed to reduce emissions of sulphur dioxide more than 80 per cent over current levels. The company was also successful in resolving its labour dispute in Sudbury by coming to a new 5 year collective bargaining agreement with the United Steel Workers that provides competitive benefits while securing the company's competitiveness in the longer

term. The year also brought challenges such as the difficult decision to transition operations in Thompson Manitoba from smelting and refining to a purely mining and milling operation by 2015.

External Outreach

The Manitoba Operations held both its regular open houses within the city of Thompson and within First Nations communities as well as Public Liaison Committee meetings and a number of specific external outreach activities. These activities included engagement on upgrades to our tailings management area and mill, snowmobile safety in our tailings management area and introducing our SafeProduction model to the City of Thompson. In 2010, the company prepared the groundwork for a consultation process with government, its employees, and the Thompson community to ensure a successful transition of operations to mining and milling. The 2010 announcement provides time to plan an orderly facility shutdown, a sound strategy for workforce planning, and the opportunity to adjust the closure plan accordingly. The consultation process also includes a commitment to formulate a multi-stakeholder working group with a mandate to focus on the economic diversification of the City of Thompson.

In Sudbury, the company broadened its annual Copper Cliff Open House to include a second day where stakeholders from the entire city of Greater Sudbury and beyond are invited to learn about the company's sustainability performance, provide feedback, and express their views or any concerns about the operation.

In Port Colborne, the Community Based Risk Assessment (Public Liaison Committee and Information Open-Houses) continued its work to engage the community with regards to concerns related to legacy and other impacts.
2010 was a challenging year for the Labrador Operations team. A protracted labour dispute involving our production and maintenance employee was a significant factor that affected both production and site life. Despite this, Vale continued to meet its commitments to aboriginal people and communities with successes in a number of areas. Employees worked hard, worked safe, and worked smart through the year and we finished the year without a single lost-time accident, an excellent result of which everyone can be proud. The Long Harbour Community Liaison Committee, composed of members representing local governments, community groups, area businesses, and regulatory agencies, has provided valuable input on local issues that have arisen during the Long Harbour construction program.

Energy and GHG Emissions Management

In 2010, the company had a facility level Energy Leader and an investment fund designated to drive energy performance improvements. The energy professionals have been active in identifying short and long-term opportunities to save energy and to shift the energy mix to cleaner technologies. Work continues in the development of an energy management program that meets the TSM standard.

In 2008, Vale launched its Corporate Guideline on Climate Change and Carbon. On a global basis, Vale participates voluntarily in the Carbon Disclosure Project and in the Global Reporting Initiative. Through this policy commitment and these activities, the company has developed a stronger understanding of its carbon footprint and its exposure to Climate Change related risks and opportunities. In 2010, Vale Canada Limited supported these initiatives and will continue to work with the Corporate Sustainability group to identify and implement opportunities for improved performance.

Tailings Management and Crisis Management Planning

Vale Canada Limited maintained its performance in the area of crisis management planning.

In 2010, the company continued to improve its Tailings Management Systems to meet the TSM standard. All three Canadian facilities have Tailings Management Policies that have been reviewed with communities of interest. The Ontario and Manitoba sites have also improved their operation, maintenance and surveillance manuals. Both Ontario and Newfoundland and Labrador have initiated a Management Review process with senior leadership. Work to improve our tailings management program will continue in 2011.

For more information, please visit the company's website (www.nickel.vale.com).

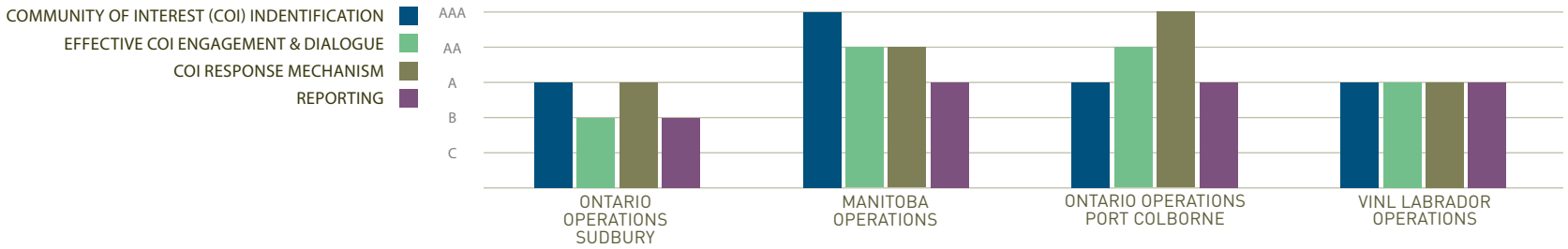
CRISIS MANAGEMENT PLANNING ASSESSMENT

	PREPAREDNESS	REVIEW	TRAINING
CORPORATE	✓	✓	✓
MANITOBA OPERATIONS	✓	✓	✓
ONTARIO OPERATIONS - PORT COLBORNE REFINERY	✓	✓	✓
ONTARIO OPERATIONS - SUDBURY	✓	✓	✓
VINL LABRADOR OPRERATIONS	✓	✓	✓

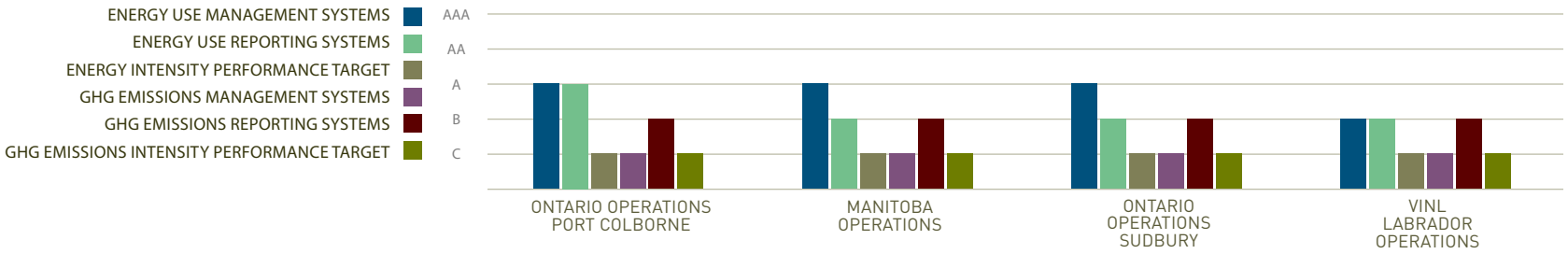
Towards Sustainable Mining
Vers le développement minier durable

HIGHLIGHTS OF COMPANY ACTIONS

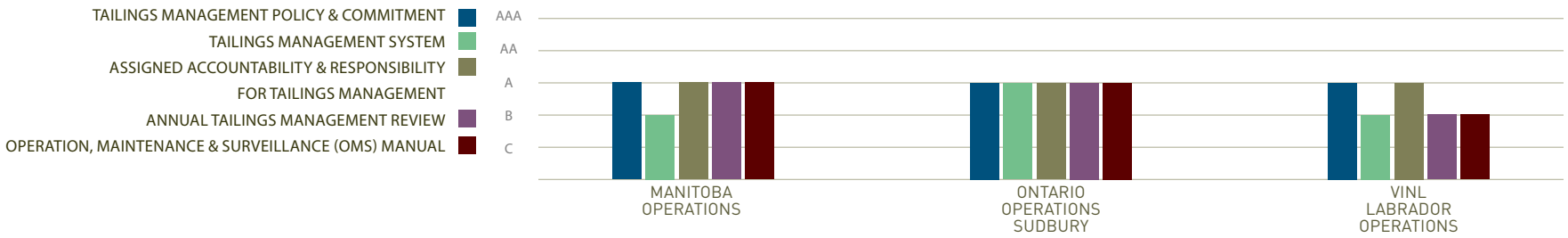
EXTERNAL OUTREACH ASSESSMENT



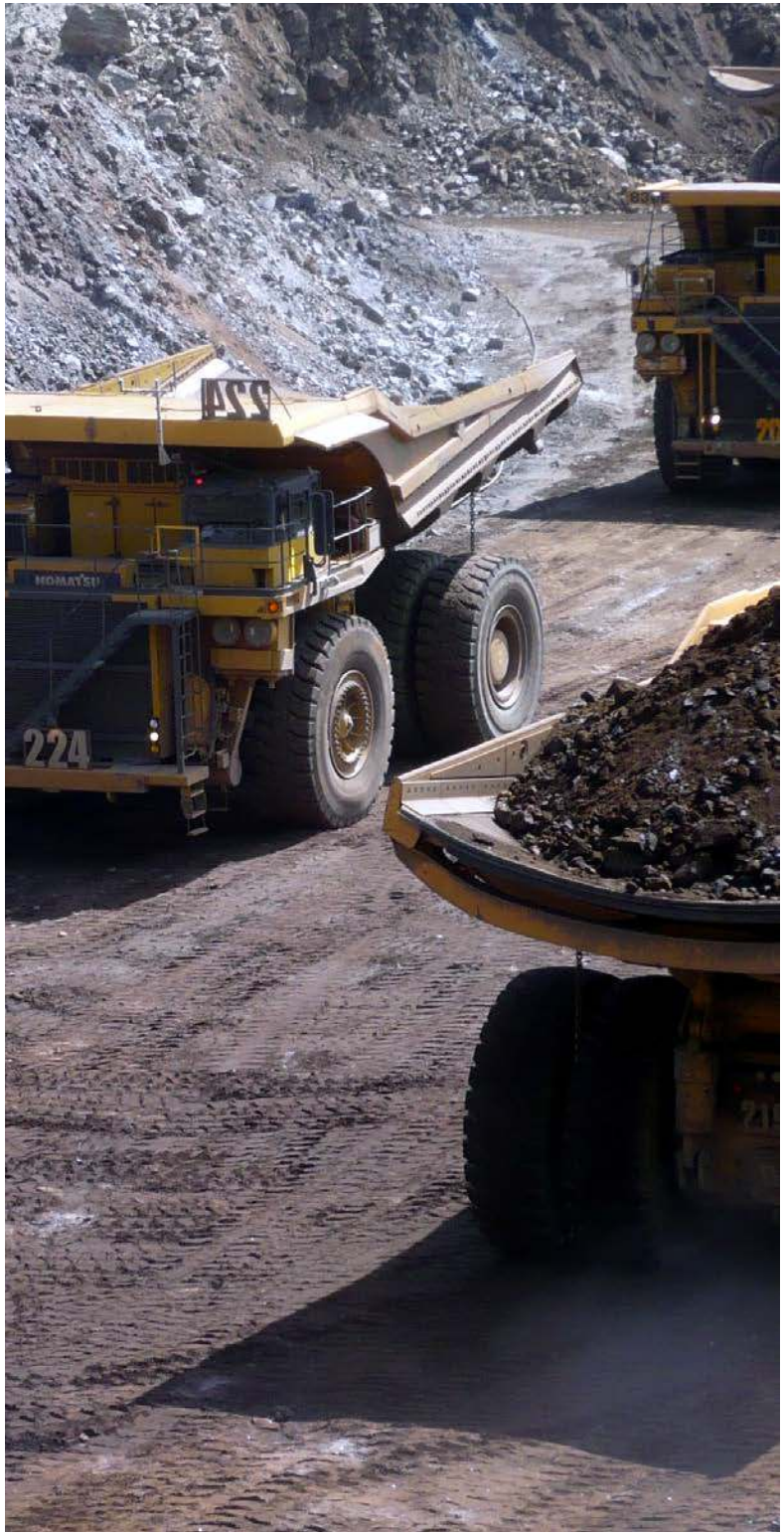
ENERGY USE AND GHG EMMISSIONS MANAGEMENT ASSESSMENT



TAILINGS MANAGEMENT ASSESSMENT



Xstrata Copper Canada is a division of the Xstrata Copper business unit headquartered in Brisbane, Australia, the fourth-largest copper producer in the world. The company produces mainly copper and precious metals, marketed primarily in North America, Europe and Asia. Sulphuric acid is produced at the Horne smelter, the only remaining copper smelter in Canada.



Close to 3,000 people are employed at the company's Kidd operations (Timmins, Ontario), Horne smelter (Rouyn-Noranda, Quebec), CCR refinery (East Montreal, Quebec), recycling operations, 16 closed sites and the division office in Toronto.

In 2010 Xstrata Copper Canada restructured to become a smaller, more robust regional business. This involved rationalizing and consolidating the Canadian metallurgical operations and permanently closing the Kidd copper and zinc metallurgical plants on June 1. All copper concentrate from the Kidd mine is now sent to the Horne smelter, thus eliminating lower-margin concentrate feeds from offshore. The company improved its financial performance and re-established the division as a viable long-term business.

The closure of the Kidd copper and zinc plants, along with better toxicity test results (Daphnia magna) at the Horne smelter, led to significant improvements in environmental compliance. Regulatory exceedances dropped from 21 in 2009 to 7 in 2010.

As well, the 35 percent reduction in copper smelting capacity contributed to a decrease in energy consumption, and air emissions generally declined or remained stable. After GHG emissions, Xstrata Copper Canada's primary air emission is sulphur dioxide from the metallurgical operations. The company met its goal of capturing and treating over 95 percent of sulphur dioxide at the Horne smelter and Kidd facilities in 2009, and maintained capture rates near or above those levels in 2010.

Energy use at the Kidd mine decreased by 4 percent thanks to initiatives such as improving the energy efficiency of ventilation fans and repairing compressed air leaks in the system. One challenge of this exceptionally

deep mine is that the deeper the mining occurs, the greater the energy requirements, offsetting efficiency improvements in other areas. At the same time, indirect GHG emissions are declining because Ontario Power Generation, the electricity supplier, is relying less on fossil-fuel-generated electricity and more on hydroelectricity and other technologies.

Other initiatives contributed to the company's more favourable performance in 2010. In previous years the amount of natural gas that the CCR refinery received during peak winter periods was fixed, and the site paid a high penalty whenever it exceeded the limit. The refinery would therefore use bunker C oil to meet its extra steam requirements, which added costs and GHG emissions. In 2010 the refinery modified its fee schedule with Gaz Métro and can now buy natural gas in peak winter periods for less than the previous penalty or the cost of bunker C oil. The resulting GHG reductions are significant: in January and February alone, they amounted to some 304 CO2-equivalent tonnes.

At the Horne smelter, a multi-year plan is underway to reduce arsenic concentrations in ambient air. In 2010 the company finished installing a secondary anode furnace gas collection hood. A first hood, installed in 2008, reduced arsenic emissions by as much as 33 percent. The company is collecting data to measure the effectiveness of the second hood and will discuss results with the local citizens committee in 2011.

Xstrata Copper Canada is a pioneer and world leader when it comes to recycling metallic copper scrap and electronic waste, including circuit boards, chips and cell phones. From this material, the Horne smelter extracts metals for smelting and refining. In 2010 the quantity of recycled material processed at Horne rose by 16 percent to 127,630 tonnes, yielding 35,500 tonnes of metal.

The company reached a key milestone during the year with the completion of reclamation work at the Murdochville mine-smelter site and near the port facilities in Gaspé. All contaminated surface soils on- and off-site were removed and replaced. When required, dams and water ditches were modified to make long-term environmental management of the site easier. The company is present on the site full-time to monitor dams, water treatment equipment and site security.

To strengthen its community engagement in 2010, Xstrata Copper Canada held meetings with First Nations peoples who live near exploration projects in Ontario and British Columbia to discuss plans and answer questions. The meetings were an important first step in developing long-term, mutually beneficial relationships. The company also conducted community needs analyses to make sure its donations and resources are focused on local priorities.

In 2011 Xstrata Copper Canada will continue to work on several fronts related to sustainable development and TSM.

For more information, please visit the Xstrata Copper website (www.xstratacopper.com).

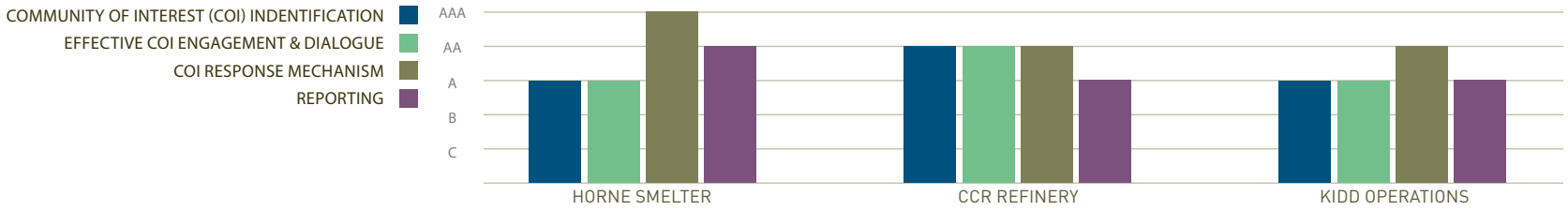
CRISIS MANAGEMENT PLANNING ASSESSMENT

	PREPAREDNESS	REVIEW	TRAINING
CCR REFINERY	✓	-	-
CORPORATE	✓	✓	-
HORNE SMELTER	✓	-	-
KIDD OPERATIONS	✓	✓	✓

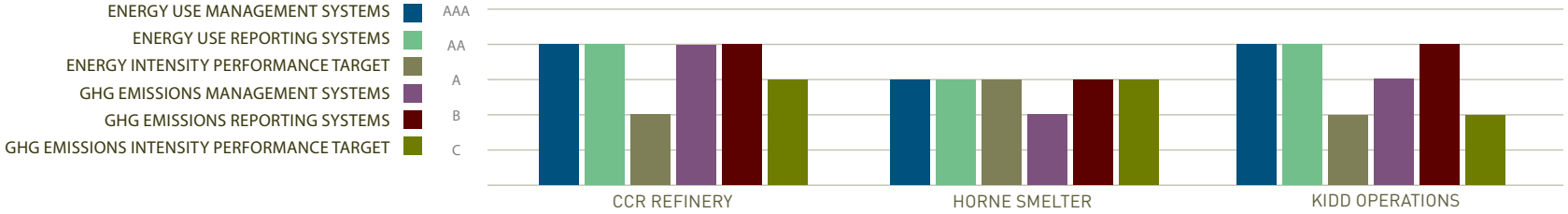
Towards Sustainable Mining
Vers le développement minier durable

HIGHLIGHTS OF COMPANY ACTIONS

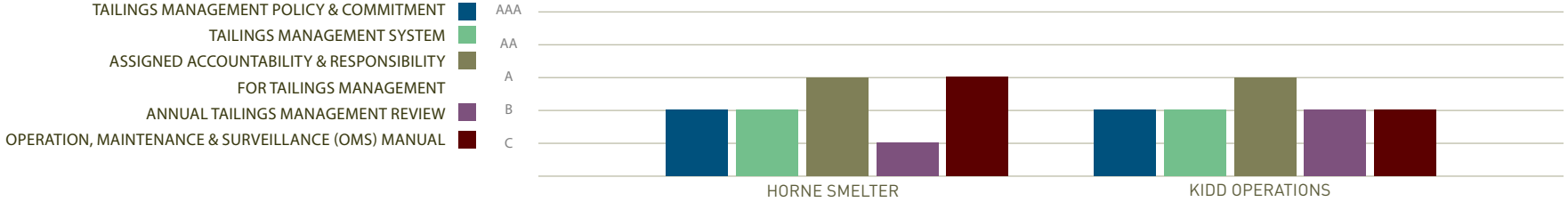
EXTERNAL OUTREACH ASSESSMENT



ENERGY USE AND GHG EMMISSIONS MANAGEMENT ASSESSMENT



TAILINGS MANAGEMENT ASSESSMENT



Xstrata Nickel is the world's fifth-largest nickel producer, with annual managed production of 92,000 tonnes of refined nickel. It is also one of the world's largest recyclers and processors of nickel and cobalt-bearing materials. A commodity business unit within Xstrata plc, a major global mining group, Xstrata Nickel is headquartered in Toronto.

Xstrata Nickel's Canadian mining operations and processing facilities are located in Ontario and Quebec, and the company also has facilities in the Dominican Republic, western Australia and Norway. Xstrata Nickel has a promising portfolio of growth projects in Canada, New Caledonia, Tanzania and Brazil.

Sustainability lies at the foundation of Xstrata Nickel's business strategy and activities. Sustainability requires meaningful engagement with communities of interest. At the same time, it requires maintaining the highest regard for environmental stewardship, social responsibility, corporate governance and transparent reporting, while delivering superior shareholder returns. These values underlie the company's support for TSM.

Xstrata Nickel's Sudbury operations and Raglan mine both had their 2010 TSM performance verified. Compared with verified results from 2007, both operations showed improvement in the TSM performance elements of energy use and GHG management, external outreach and tailings management.

The Sudbury operations saw significant improvement in all external outreach indicators. This is mainly due to effective community engagement planning and activities with, for example, the Falconbridge Citizens' Committee and the neighbouring Wahnapitae First Nation. Clear accountability for engagement, with support from site management, and formal processes to address concerns have helped create transparent, open dialogue.

At the Raglan mine, performance improved notably for the indicators under energy use and GHG management. The mine now has an energy management system embedded in its operations that includes monitoring by energy source and major process activity. Energy is integrated at the operational level, which is the case at all Xstrata Nickel sites. Responsibility for energy management and GHG reduction is assigned, and performance is reviewed regularly.

At the root of Xstrata Nickel's improved TSM performance are the 17 sustainable development standards that guide Xstrata plc. These standards itemize intent and performance requirements for core areas such as planning and leadership, biodiversity conservation, communication and engagement, risk and incident management, and community. The TSM performance elements complement Xstrata's standards and assurance program.

For more information on Xstrata Nickel's sustainability performance, please visit the company's website (www.xstratanickel.com).

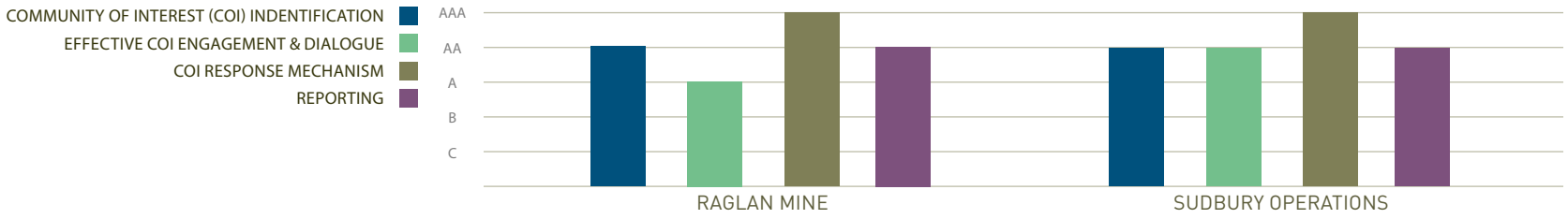
CRISIS MANAGEMENT PLANNING ASSESSMENT

	PREPAREDNESS	REVIEW	TRAINING
CORPORATE	✓	✓	✓
RAGLAN MINE	✓	-	✓
SUDBURY OPERATIONS	✓	✓	✓

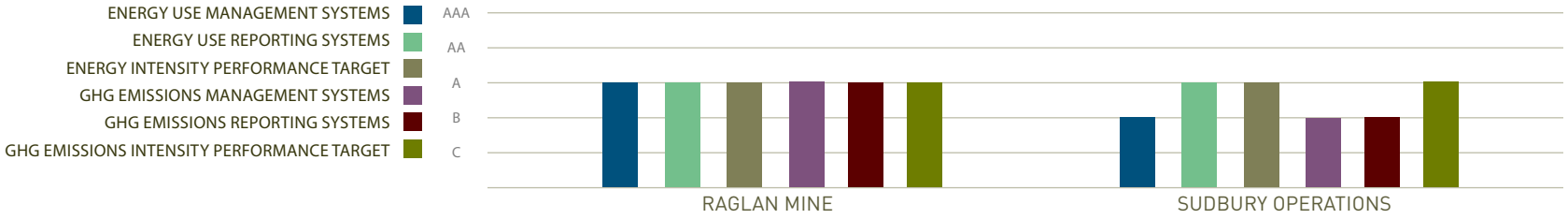
Towards Sustainable Mining
Vers le développement minier durable

HIGHLIGHTS OF COMPANY ACTIONS

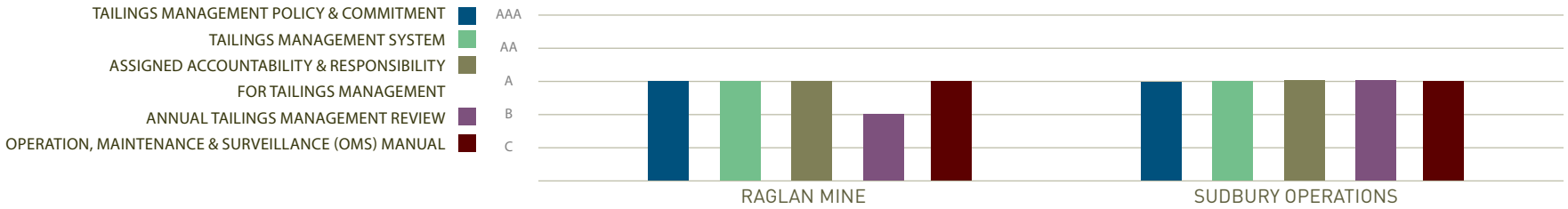
EXTERNAL OUTREACH ASSESSMENT



ENERGY USE AND GHG EMMISSIONS MANAGEMENT ASSESSMENT



TAILINGS MANAGEMENT ASSESSMENT



Xstrata Zinc Canada manages the North American operations of Xstrata plc's zinc business unit and includes mining and metallurgical operations in eastern Canada.

The following facilities have implemented TSM:

- Brunswick mine, Bathurst, New Brunswick
- Brunswick smelter, Bathurst, New Brunswick
- Noranda Income Fund, CEZ refinery (25% interest), Valleyfield, Quebec

The Perseverance mine in Matagami, Quebec, came on line in late 2008. TSM implementation began there recently and will be reported on in the future.

Xstrata plc has a stringent sustainable development framework that consists of 17 functional areas and is considered world-class. All facilities must implement the framework and must have their implementation externally verified. (For more detail, see www.xstrata.com/sustainability.)

Several of Xstrata's framework standards apply directly to TSM indicators. For example, communication and engagement (Standard 4) and social and community engagement (Standard 12) relate directly to TSM's external outreach performance element. Xstrata Zinc has performed optimally in these areas, as shown by third-party auditing. As the Brunswick mine nears the end of its mine life, this performance area is increasingly important. The company is applying significant resources to minimize, as much as possible, the impact on employees and the local community.

Tailings dam management is a vital environmental concern. A tailings dam failure would be considered a catastrophic hazard under the Xstrata sustainable development framework (Standard 6). The Brunswick mine has a very strong management system in place because of the risk inherent in this type of facility. The management system, as well as the site's OMS manual, is subject to regular third-party audits and internal audits. No further work on the management system is anticipated at the Brunswick mine, as the priority now is effective closure planning.

Greenhouse gas and energy conservation remains an important metric at all Xstrata Zinc facilities, where the focus is on energy reduction.

At Xstrata, the top priority is to prevent crises from occurring. As a result, crisis communications planning has taken a secondary role. This is an area the company will consider in the coming year.
For more information, please visit the Xstrata Zinc Canada website (www.xstrata.com).

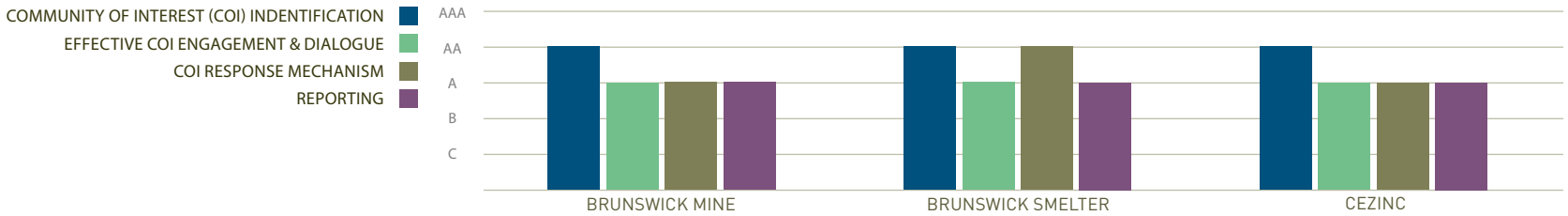
CRISIS MANAGEMENT PLANNING ASSESSMENT

	PREPAREDNESS	REVIEW	TRAINING
BRUNSWICK MINE	✓	-	-
BRUNSWICK SMELTER	✓	-	-
CEZINC	✓	✓	-
CORPORATE	-	-	-

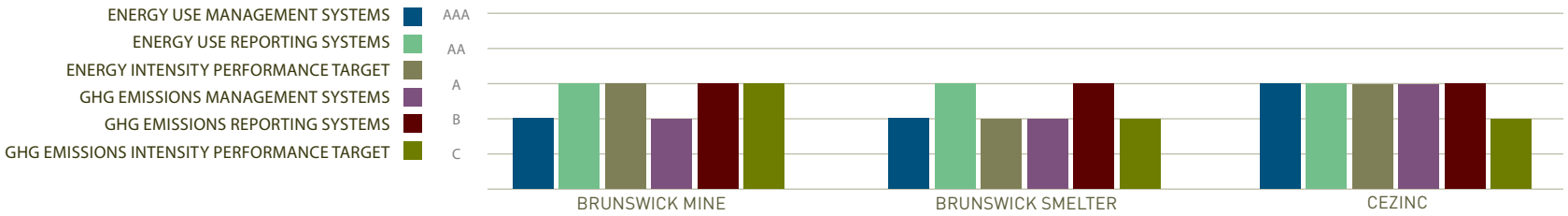
Towards Sustainable Mining
Vers le développement minier durable

HIGHLIGHTS OF COMPANY ACTIONS

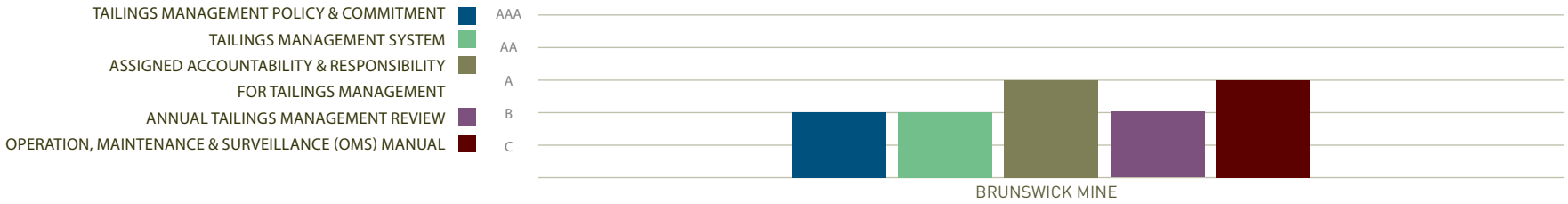
EXTERNAL OUTREACH ASSESSMENT



ENERGY USE AND GHG EMMISSIONS MANAGEMENT ASSESSMENT



TAILINGS MANAGEMENT ASSESSMENT



Award Winners

MAC celebrates members' achievements at an annual awards ceremony. This year we honoured a number of facilities (see below). The award winners achieved Level A or better for all indicators in a performance area (for tailings management, energy use and GHG emissions management, and external outreach) or reported "yes" for all indicators under crisis management planning. The results must have been externally verified for a facility to receive this recognition.

Special recognition goes to Barrick Gold's Hemlo operation for achieving a Level A or higher for all indicators in all four performance areas.

TSM Leadership Award

Barrick Gold, Hemlo

Tailings Management

Barrick Gold, Hemlo
De Beers Canada, Victor Mine
Syncrude Canada, Syncrude Canada
Xstrata Nickel, Sudbury Operations

Energy Use & GHG Emissions Management

Barrick Gold, Hemlo
Diavik Diamond Mine
Iron Ore Company of Canada, Labrador City
Iron Ore Company of Canada, Sept-Îles
Xstrata Nickel, Raglan Mine

External Outreach

Barrick Gold, Hemlo
De Beers Canada, Snap Lake
De Beers Canada, Victor Mine
Diavik Diamond Mine
Iron Ore Company of Canada, Labrador City
Iron Ore Company of Canada, Sept îles
Syncrude Canada
Teck Resources, Trail Smelter
Xstrata Copper, Horne Smelter
Xstrata Copper, CCR Refinery
Xstrata Copper, Kidd Mining
Xstrata Nickel, Sudbury Operations
Xstrata Nickel, Raglan Mine
Xstrata Zinc, Brunswick Mine
Xstrata Zinc, CEZinc
Xstrata Zinc, Brunswick Smelter

Crisis Management Planning

Barrick Gold, Hemlo
Barrick Gold, Corporate
De Beers Canada, Corporate
De Beers Canada, Victor Mine
Iron Ore Company of Canada, Labrador City
Iron Ore Company of Canada, Sept îles
Iron Ore Company of Canada, Corporate
Syncrude Canada
Teck Resources, Trail Smelter
Teck Resources, Duck Pond
Teck Resources, Corporate
Xstrata Copper, Kidd Mining
Xstrata Nickel, Sudbury Operations
Xstrata Nickel, Corporate

Towards Sustainable Mining
Vers le développement minier durable

The Mining Association of Canada

For more information on MAC partnerships, company releases to the environment and specific TSM results for each company, please visit:

WWW.MINING.CA