TOWARDS SUSTAINABLE MINING
PROGRESS REPORT 2013

The Mining Association of Canada

ADVOCACY STEWARDSHIP COLLABORATION

ABOUT TOWARDS SUSTAINABLE MINING

Towards Sustainable Mining (TSM) is the Mining Association of Canada's (MAC) commitment to responsible mining. It is a set of tools and indicators to drive performance and ensure that key mining risks are managed responsibly at our members' facilities. By adhering to the principles of TSM, our members demonstrate leadership by:

- **Engaging with communities**
- **Implementing world-leading environmental practices**
- **Committing to the safety and health of employees and surrounding communities**

Established in 2004, TSM's main objective is to enable mining companies to meet society's needs for minerals, metals and energy products in the most socially, economically and environmentally responsible way. TSM's core strengths are:

Accountability: Participation in TSM is mandatory for all MAC members. Assessments are conducted at the facility level where the mining activity takes place – the only program in the world to do this in our sector. This provides local communities with a meaningful view of how a nearby mine is faring.

Transparency: Members commit to a set of guiding principles and report their performance against the program's 23 indicators annually in MAC's *TSM Progress Reports*. Each facility's results are publicly available and are externally verified every three years.

Credibility: TSM includes ongoing consultation with a national Community of Interest (COI) Advisory Panel. This multi-stakeholder group helps our members and communities of interest foster dialogue, improve the industry's performance and shape the program for continual advancement.

TSM GUIDING PRINCIPLES

As members of the Mining Association of Canada, our role is to responsibly meet society's needs for minerals, metals and energy products. To achieve this we engage in the exploration, discovery, development, production, distribution and recycling of these products. We believe that our opportunities to contribute to and thrive in the economies in which we operate must be earned through a demonstrated commitment to sustainable development.[1]

Accordingly, our actions must demonstrate a responsible approach to social, economic and environmental performance that is aligned with the evolving priorities of our communities of interest[2]. Our actions must reflect a broad spectrum of values that we share with our employees and communities of interest, including honesty, transparency and integrity. And they must underscore our ongoing efforts to protect our employees, communities, customers and the natural environment.

We will demonstrate leadership worldwide by:

- Involving communities of interest in the design and implementation of our Towards Sustainable Mining initiative
- Proactively seeking, engaging and supporting dialogue regarding our operations
- Fostering leadership throughout our companies to achieve sustainable resource stewardship wherever we operate
- Conducting all facets of our business with excellence, transparency and accountability
- Protecting the health and safety of our employees, contractors and communities
- Contributing to global initiatives to promote the production, use and recycling of metals and minerals in a safe and environmentally responsible manner
- Seeking to minimize the impact of our operations on the environment and biodiversity, through all stages of development, from exploration to closure
- Working with our communities of interest to address legacy issues, such as orphaned and abandoned mines
- Practicing continuous improvement through the application of new technology, innovation and best practices in all facets of our operations

In all aspects of our business and operations, we will:

- Respect human rights and treat those with whom we deal fairly and with dignity
- Respect the cultures, customs and values of people with whom our operations interact
- Recognize and respect the unique role, contribution and concerns of Aboriginal peoples (First Nations, Inuit and Métis) and indigenous peoples worldwide
- Obtain and maintain business through ethical conduct
- Comply with all laws and regulations in each country where we operate and apply the standards reflecting our adherence to these Guiding Principles and our adherence to best international practices
- Support the capability of communities to participate in opportunities provided by new mining projects and existing operations
- Be responsive to community priorities, needs and interests through all stages of mining exploration, development, operations and closure
- Provide lasting benefits to local communities through self-sustaining programs to enhance the economic, environmental, social, educational and health care standards they enjoy

1 MAC draws on the 1987 Brundtland Commission definition of Sustainable Development: "Development that meets the needs of the present without compromising the ability of future generations to meet their own needs."

2 We use the term Communities of Interest to include all of the individuals and groups who have or believe they have an interest in the management of decisions about our operations that may affect them. This includes: employees, contractors, Aboriginal or indigenous peoples, mining community members, suppliers, customers, environmental organizations, governments, the financial community, and shareholders.

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INTRODUCTION

Towards Sustainable Mining
Vers le développement minier durable

MESSAGE FROM THE PRESIDENT & CEO

Welcome to the *2013 TSM Progress Report*. This report takes a detailed look at our members' environmental and social performance for 2012. This past year was truly an inspiring year for us at MAC. Not only did we see a significant improvement in TSM results across the membership, we were also recognized with the Prospectors and Developers Association of Canada's Environmental and Social Responsibility Award for our success in helping Canadian mining companies improve their performance in several areas, including biodiversity conservation management, and Aboriginal and community outreach.

TSM EXTENDS ITS REACH

We are proud that application of TSM principles and standards continues to extend beyond Canada's borders. This year, Excellon Resources joined MAC so it could apply TSM at its international operations. (Excellon currently does not have any Canadian operations.) IAMGOLD, Inmet Mining (now First Quantum Minerals) and Agnico Eagle Mines have implemented TSM at their foreign operations and are helping MAC communicate the benefits of TSM to national associations around the globe. In 2012, MAC's Vice President of Sustainable Development travelled to Finland to present TSM to Finnish mining companies at the invitation of Agnico Eagle Mines and with the support of Inmet Mining. MAC presented at the Canada-Finland Modern Mining Seminar and was also invited to speak with representatives from the Finnish Mining Association about the initiative. Debswana -- A 50/50 joint venture partnership between De Beers and the Government of the Republic of Botswana – is in the process of implementing TSM at its diamond operations in Botswana.

Application of TSM has also extended beyond the MAC membership. In 2011, the Mining Association of British Columbia (MABC) formally committed to adopting TSM for its members. MAC continues to work with MABC to provide training for their members and prepare them for implementation and public reporting. MAC also continues to encourage other provincial associations to follow the same path.

WORKING WITH THE FINANCIAL SECTOR

Increasingly, the financial sector is recognizing the value of TSM as a tool for evaluating risk. MAC is also hearing from members of the investment community that TSM offers a unique tool for assessing some of the most challenging-to-quantify social and environmental risks that can, and should, factor into investment decisions. In recognition that building investor awareness presents an important opportunity to increase the uptake of TSM within the industry, investor outreach has been a priority for MAC in 2013.

EVOLUTION OF TSM

This past year marked a year of change for the initiative. MAC's COI Advisory Panel held its first meeting with a renewed mandate. Over the years, the Panel has provided invaluable advice to MAC members, from the drafting of the guiding principles to amending the external outreach protocol to specifically address relations with Aboriginal Canadians. The Panel has also helped advance the adoption of the new protocols for biodiversity and safety and health. Collectively, both new and long-serving Panel

members bring extensive knowledge of the sector's physical, social, environmental and regulatory responsibilities, and understand the challenges associated with mining in Canada. We are confident that this group will continue to challenge the industry on critical issues.

The Panel now includes representation from new communities of interest, including social and faith-based and international development organizations. The Panel's new mandate also extends the range of issues for engagement from a sole focus on TSM to all issues relevant to the Canadian mining industry. This new mandate offers an unprecedented level of transparency and engagement from a Canadian industry association.

In the spirit of continuous improvement, MAC revamped the energy use and greenhouse gas emissions management protocol to better address this important issue in the mining sector. Amendments were made to the protocol to ensure that it remains relevant and reflects the current state of energy management and climate change mitigation practices. Members will begin reporting their performance using the revised protocol in 2014.

REPORTED RESULTS

MAC members continue to demonstrate progress towards fulfilling their commitments under the TSM guiding principles. I am pleased to report that performance across all TSM performance areas has improved over last year. The percentage of facilities reporting a Level A or higher across the 18 original indicators showed an average increase of 10% from 2011 to 2012. The most impressive results, however, are in the area of tailings management, with 92% of facilities assessed reporting implementation of an operation, maintenance and surveillance manual that adheres to industry best practices. This is an increase of 18% from 2011.

This year, for the first time, performance data for biodiversity conservation management, and safety and health—TSM's two new protocols—are presented in the report. Next year, these results will be published on a facility-by-facility basis.

This year has also reinforced MAC's confidence that TSM is taking the Canadian mining industry in the right direction. When we first embarked on TSM, the membership set out to change the culture of one of Canada's oldest industries by raising the bar for both environmental and social performance. Now, after nine years of applying the guiding principles and reporting against the protocols, we can proudly say we are doing so.

TSM is a journey towards a more sustainable and responsible mining industry, and we are committed to working with our members and communities of interest to further improve both environmental and social performance at mines across Canada and beyond.

I hope you enjoy the *2013 TSM Progress Report*. As always, it is intended to provide you with detailed information about our members' progress and our goals for the future.

PIERRE GRATTON
President & CEO
Mining Association of Canada

MESSAGE FROM THE CHAIR OF THE TSM GOVERNANCE TEAM

As the newly-appointed chair of the TSM Governance Team, I would like to stress the importance of the commitment made by member companies to sustainable development through the TSM initiative. As an industry we will always be judged by the performance of our weakest link. It is, therefore, important that we support each other in this continuous improvement process and that we work together to make a strong statement for mining.

TSM is a framework for:

- doing the right thing in areas where potential consequences are high (tailings management and crisis management protocols);
- placing the health and safety of our employees first (health and safety protocol);
- responding to societal concerns over climate change and biodiversity (energy and greenhouse gas emissions management and biodiversity protocols); and
- seeking social acceptability (Aboriginal and community outreach protocol).

As pointed out by Pierre, TSM is getting some traction internationally and this can only be good for the Canadian mining industry. Over the past year, MAC members have also engaged in dialogue around strengthening TSM, particularly around how we measure our performance. This will no doubt lead to more improvements as we enter TSM's 10th year.

I am looking forward to working with such a distinguished group of leaders who will continue down the path traced by their predecessors on the road to sustainable and responsible mining.

LOUISE GRONDIN
Chair of the TSM Governance Team
Agnico Eagle Mines Limited

MESSAGE FROM THE COMMUNITY OF INTEREST ADVISORY PANEL

INTRODUCTION

MAC created the COI Advisory Panel in 2004 to support its TSM initiative. The Panel includes some 20 members, and is made up of representatives from the mining industry and individuals outside of the industry, who provide a variety of community and non-industry perspectives. This statement follows the practice of previous years in offering to MAC a brief statement on progress, as well as on significant activities and issues, from the non-mining industry Panel representatives.

2012 marked a significant year for the Panel – with respect to changes in its membership composition as well as changes to its goals and interests. Looking forward, the mining industry is changing and major restructuring and consolidation is underway. The effects of these changes on society and the environment will be of continuing interest to the Panel.

TRACKING AND EVALUATING THE TSM INITIATIVE

The Panel currently meets twice a year – once at the time of the annual Prospectors and Developers Association of Canada Convention in Toronto and again in the fall, usually at a location which provides some opportunity for contact and exchange with a selected minerals sector. In 2012, this sector was the oil sands industry, and the meeting was in Fort McMurray, hosted by both Suncor and Syncrude. In addition, the Panel maintains working groups to address selected issues, one of them being the external verification of the TSM scores reported by individual MAC member companies and, thus, providing feedback on the effectiveness and interpretation of the scores reported by MAC.

In 2012, Cameco and Inmet (First Quantum Minerals) presented and discussed their verification experience with the Panel, giving it an opportunity to become more familiar with the Canadian uranium mining sector, and Inmet's diverse overseas presence in Turkey, Finland and Panama. For the MAC membership, the level of performance as reflected in the TSM scores is steadily improving, with the qualified exception of indicators based on energy use and biodiversity. However, the TSM scores themselves are quite complex, and their computation requires significant effort from the companies. Their interpretation and application in relation to company operations is a subject of continuing discussion by panel members.

FORT MCMURRAY

The visit to Fort McMurray was instructive. The Panel as a whole was introduced to the substantial practical and technical challenges involved in managing the tailings and other waste materials generated in the extraction and processing of bitumen. Equally revealing, but very different, were the accounts of the many social and economic issues being faced in a large, rapidly expanding but nevertheless remote industrial community. Housing and social support services related to housing, as well as – somewhat surprisingly – traffic congestion and the movement of the labour force in relation to plant operating schedules illustrate these issues. There is much to be learned from the experience being acquired in Fort McMurray, and the Panel will have a continuing interest in this subject.

THE INTERNATIONAL DIMENSION

Many of MAC's member companies are international in scope and operate mines overseas, or participate in such operations. The TSM initiative was initially directed to Canadian mines, but the Panel has been exploring the issues involved in extending the TSM program to overseas operations

and, consequently, has begun the process of acquiring an understanding of the nature of the Canadian mining industry in this broader social, economic and political context. There are challenges ahead and they reflect widely differing governance and consultation capacities and expectations at the international level. However, there is a growing, and welcome, commitment at the level of the Panel as a whole – both mining industry and non-industry - to a more international approach to the analysis of community relations and obligations in the minerals and metals sector.

A CHANGING REGULATORY CONTEXT

Back in Canada, the regulatory environment in which mining takes place is changing. This is taking place in federal environmental impact assessment as well as in the language of the Fisheries Act, itself a major driver of impact assessment in Canada. But changes are also taking place in provincial and territorial policies and legislation. To understand the practical consequences of these changes (be they positive or negative), how industry is responding, and how this affects key aspects of community relations – including relationships with Aboriginal communities – is in itself a major challenge for the Panel, industry and non-industry members alike. Since a number of these changes are at an early stage of implementation, this is expected to be a continuing area of interest and concern to the Panel.

The Panel has also been paying attention to the growing emphasis on 'impact and benefit agreements' and their role in addressing social, economic and environmental issues in new mining projects – involving mainly, but not exclusively, Aboriginal communities. This also is an area of continuing interest, and raises some major questions about the future role of social and economic impact assessment.

MINE CLOSURE AND BIODIVERSITY

The Panel has also engaged in critical discussions about the extension of the existing TSM indicators to include the ways in which companies address the complex concept of 'biodiversity', as well as mine closure and site restoration (often related topics). Again, the regulatory setting is changing, but the Panel sees both corporate responsibilities for biodiversity conservation as well as ecologically, and culturally, appropriate strategies for mine closure as a priority for the coming years.

CONCLUSIONS

The Canadian mining industry is in transition in many respects, both internally and externally. At the same time, it is also responding and adjusting to strong fluctuations in commodity prices. The COI Panel is also changing, and new members are providing increasingly diverse perspectives on the Canadian mining industry and related social and environmental responsibilities. The non-industry members have a strong and continuing commitment to pursuing a diverse range of objectives, as illustrated in this brief's snap-shot of activities and discussions that took place in 2012.

For more information on the COI Advisory Panel, please see *How TSM Works* in this report, or visit **www.mining.ca.**

THERE'S A RIGHT WAY.
AND IT'S CANADA'S WAY.

Mining companies in Canada were the first in the world to develop an externally-verified performance system for sustainable mining practices.

Our TSM* program reflects a deep commitment to environmental protection, safety, and transparency about how we operate.

* Towards Sustainable Mining is the Mining Association of Canada's program of environmental assurance.

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HOW TSM WORKS

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Vers le développement minier durable

WHAT WE MEASURE

To translate commitments into action at the mine-site level, MAC has developed performance protocols to help companies build and evaluate their systems and processes for key aspects of mining activity. The performance protocols are designed to show Canadians what the industry's current environmental and social performance is and how it can be improved.

PROTOCOLS AND INDICATORS

PROTOCOLS	COMMUNITIES & PEOPLE			ENVIRONMENTAL FOOTPRINT		ENERGY EFFICIENCY
	Aboriginal and Community Outreach	**Crisis Management Planning**	**Safety and Health**	**Tailings Management**	**Biodiversity Conservation Management**	**Energy Use and Greenhouse Gas (GHG) Emissions Management**
INDICATORS	Community of Interest (COI) Identification	Crisis Management Preparedness	Policy, Commitment and Accountability	Tailings Management Policy and Commitment	Corporate Biodiversity Conservation Policy Accountability and Communications	Energy Use and GHG Management Systems
	Effective COI Engagement and Dialogue	Review	Planning, Implementation and Operation	Tailings Management System	Facility-Level Biodiversity Conservation Planning and Implementation	Energy Use and GHG Emissions Reporting Systems
	COI Response Mechanism	Training	Training, Behavior and Culture	Assigned Accountability and Responsibility for Tailings Management	Biodiversity Conservation Reporting	Energy and GHG Emissions Performance Targets
	Reporting		Monitoring and Reporting	Annual Tailings Management Review		
			Performance	Operation, Maintenance and Surveillance (OMS) Manual		

Each performance protocol is made up of a set of indicators that focus on a different component of a management system. MAC members are required to assess their management practices against the indicators for six performance areas: Aboriginal and community outreach, crisis management planning, safety and health, tailings management, biodiversity conservation management, and energy use and greenhouse gas (GHG) emissions management.

Detailed assessment protocols for each of the six performance areas provide guidance to assist companies in their self-assessments and to facilitate consistent application of TSM across companies and their facilities.

For each indicator, companies receive one of five scores based on which criteria they meet. The scores are described below.

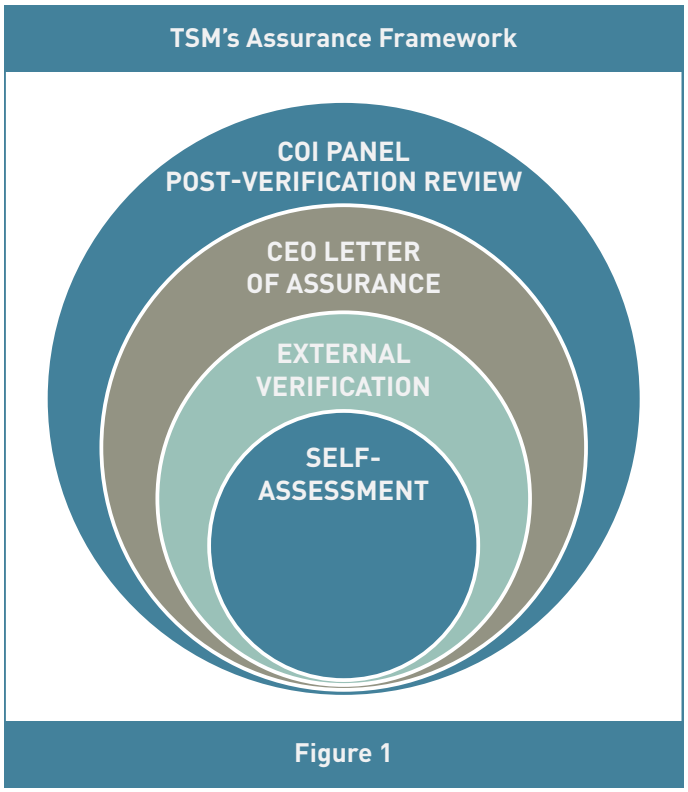
TSM's overarching goal is for all mining companies to achieve a Level A or higher, which means companies have fully implemented management systems to address Aboriginal and community outreach, safety and health, tailings management, biodiversity conservation management, and energy use and greenhouse gas (GHG) emissions management. For crisis management planning, head offices and facilities are assessed based on a "yes" or "no" rating scale.

REPORTING & EXTERNAL VERIFICATION

TSM's primary objectives are to drive performance improvement and, through demonstration of this improvement, to build trust with communities of interest. This means that communities need to understand TSM and trust the performance results that MAC members report. To build this trust, the program includes a number of checks and balances to ensure that reported results present an accurate picture of each facility's management systems and performance. Figure 1 identifies the different layers of assurance embedded in TSM.

Self-Assessment—Companies annually self-assess their performance against each of the program's 23 indicators across six protocols. For each indicator, they assign a letter grade that reflects their performance ranging from Level C to Level AAA. These grades are made public for each facility. New members have three years to start publicly reporting, which allows them the opportunity to train employees for full implementation. In 2012, 60 facilities reported their TSM performances.

External Verification—Every three years, a trained verifier critically reviews a company's self-assessments to determine if there is adequate evidence to support the performance ratings the facility has reported. The verifiers are experienced auditors who are independent of the company being verified. The verifiers rigorously apply the protocols and, where required, can change the ratings to ensure they accurately reflect the facility's management practices and performance.



This report includes externally verified results for 10 facilities.

CEO Letter of Assurance—In the year of external verification, the company's CEO, or most senior executive in Canada, submits a letter to MAC that confirms the external verification has been conducted in accordance with the Terms of Reference for Verification Service Providers. The letter is then posted on the MAC website (www.mining.ca).

COI Panel Post-Verification Review—Each year, MAC's independent COI Advisory Panel selects two companies to appear before the Panel to present and discuss their TSM results. Through these discussions, the Panel tests to see whether and how facility systems are leading to performance improvement.

COMMUNITY OF INTEREST ADVISORY PANEL

The COI Advisory Panel is an independent, multi-stakeholder group, which, at the end of 2012, included 13 individuals from Aboriginal groups, communities in which the industry is active, environmental and social NGOs, and labour and financial organizations. Select members of the MAC Board of Directors also sit on the Panel to provide a mining industry perspective to the discussions.

The COI Panel was formed in 2004 when the TSM initiative was established and played a key role in the program's design from the very beginning. Today, the Panel continues to be integral to TSM's evolution and implementation. The Panel serves as a platform for communities of interest and MAC members to discuss and collaborate on issues of mutual concern.

In 2012, the COI Panel's Terms of Reference were renewed to ensure it remains relevant, dynamic and a place for rich dialogue between the industry and its communities of interest. This led to a renewed mandate for the Panel, expanding its role from solely overseeing TSM to providing perspectives on all emerging issues or concerns of relevance to the mining sector. The renewal also introduced several new members to the Panel, which added new perspectives from areas such as international development, social NGOs and communications.

COI PANEL FUNCTIONS:

- Meets twice a year to provide support and advice for the TSM program
- Conducts a yearly review of a sample of companies' verified results to analyze company systems and practices
- Provides critical perspectives by raising emerging issues of concern beyond those covered under TSM

Over the last year, the Panel has provided MAC members with interesting perspectives on issues related to biodiversity conservation management and international social responsibility, contributing to the work of MAC's International Social Responsibility Committee.

In October 2012, representatives from Cameco and Inmet Mining (First Quantum Minerals) presented their verified results to the Panel. Each company had the opportunity to present an overview of their operations and a summary of their TSM performance. The Post-Verification Review presentations initiated discussions on company practices related to tailings deposition, community engagement, mine closure and uranium extraction methods. Results of the Post-Verification Review are available on the MAC website (www.mining.ca).

The fall Panel meeting was held in Fort McMurray, Alberta, and included an oil sands tour conducted by Suncor and Syncrude. During the Panel's visit, members had an opportunity to meet and hear from the community. The Panel continues to take a regional approach when planning meetings. It has been invited by Glencore and Vale to visit Sudbury in the fall of 2013.

TSM COMMUNITY OF INTEREST (COI) ADVISORY PANEL
2012-2013 MEMBERSHIP LIST

COI PANEL CATEGORY	NAME
Social Non-Governmental Organization	Joy Kennedy
Media / Communications	Claudine Renauld
Aboriginal Peoples	Dan Benoit
	Barrie Ford
	Chief Earl Klyne
Environmental Non-Governmental Organizations	Alan Young
	Nathan Lemphers
	Maya Stano (alternate)
International Development	Dr. Philip Oxhorn
Economic / Community Development	Alan Penn
	Victor Goodman
Finance / Investment	Stephen Kibsey
Labour / Workplace	Doug Olthuis
Expert Category	Mark Podasly
	Vacant
	Vacant
Industry Representatives	Craig Ford*
	Pierre Gratton
	Louise Grondin
	Ian Pearce*
	Anne Marie Toutant*
	Peter Read**
	Glen Koropchuk**
Exploration Representative	Leanne Hall**

* Left the COI Advisory Panel in 2013
** Joined the COI Advisory Panel in 2013

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INDUSTRY PERFORMANCE

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UNDERSTANDING THE RESULTS

TSM assessments are conducted at the facility level, where they are most meaningful. The number of companies reporting TSM performance continues to grow. In 2006, 15 companies reported facility-level performance, and in 2012, this number grew to 23 companies. This report includes externally verified results for five companies (Hudbay Minerals, Teck Resources, Nyrstar, Vale and Shell).

It is MAC's goal to help members ultimately achieve a Level A performance for all indicators, including tailings management, energy use and GHG emissions management, Aboriginal and community outreach, biodiversity conservation, and safety and health. For crisis management planning, head offices and facilities achieve good performance when they answer "yes" for each indicator.

This year's TSM scores demonstrate the single largest increase that MAC has seen to date across the original 18 indicators, with an average 10% increase above 2011 performance scores.

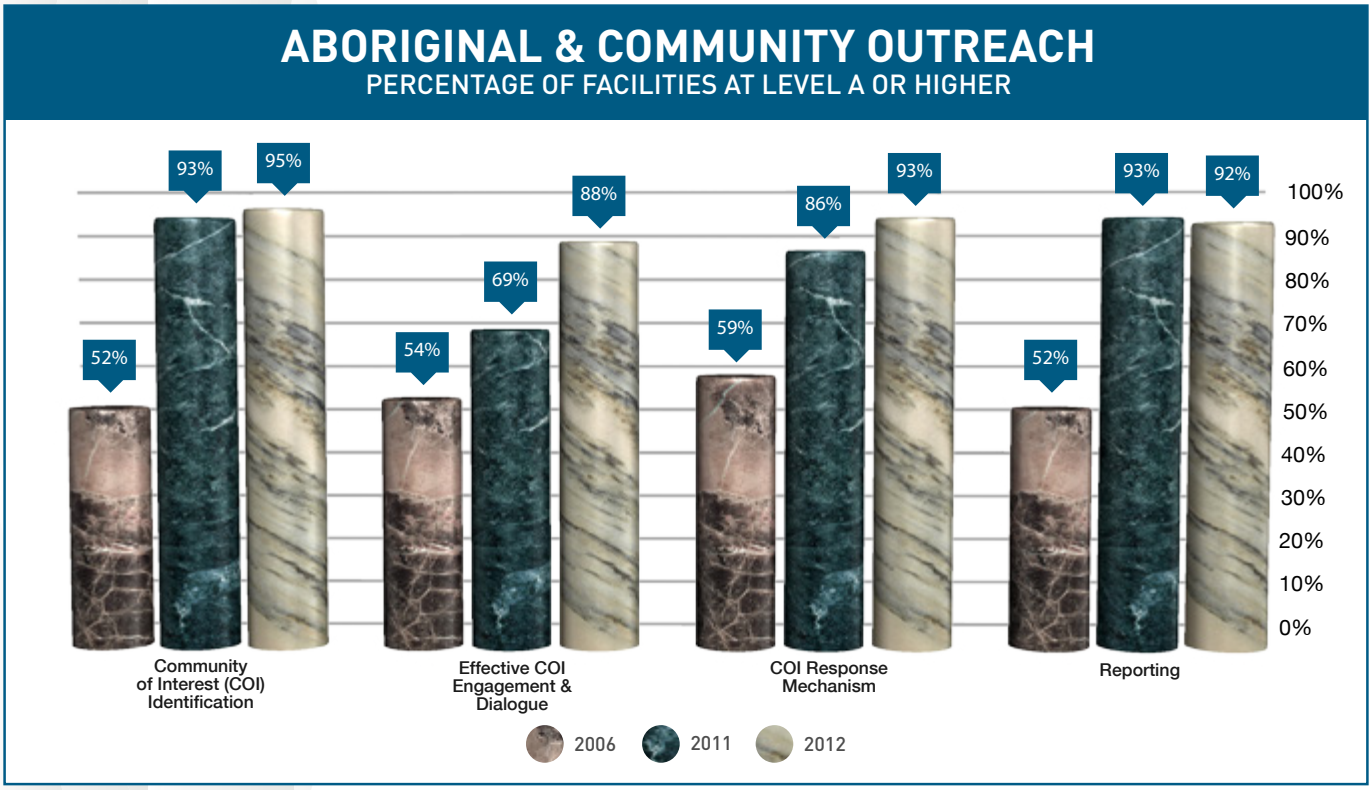
In 2006, all reporting MAC members went through external verification of their TSM performance. The graphs that follow compare the percentage of facilities achieving a Level A or higher in 2006 to the percentage of facilities achieving good performance in 2011 and 2012. The graph for crisis management planning shows the percentage of companies and facilities that answered "yes" for each indicator.

For detailed facility-level results, please see *Measuring Company Performance* in this report.

COMMUNITIES & PEOPLE

Building strong relationships with the people whose lives we impact is a fundamental component of TSM. Working with our communities and employees, we have improved our understanding of the public's interests and priorities and, at the same time, created a safe work environment for our people. This section highlights the membership's performance in Aboriginal and community outreach, safety and health management, and crisis management planning.

ABORIGINAL AND COMMUNITY OUTREACH



The Aboriginal and community outreach protocol consists of four performance indicators that seek to confirm that mining facilities have developed and implemented formal processes for engaging with communities of interest, including Aboriginal communities and organizations. Mining facilities engage with communities that are affected or perceived to be affected by mining operations or which have a genuine interest in the performance of a facility.

The protocol also seeks to ensure that facilities are engaging in meaningful dialogue with communities of interest and that their feedback is being considered in decision making. Facilities must also be able to demonstrate that there is a clear mechanism for receiving complaints and concerns from communities, and ensuring they are effectively responded to.

Indicator 1: Community of Interest Identification
The first indicator in this protocol is designed to ensure that mining companies have established and implemented formal systems to identify individuals or organizations that are affected or perceived to be affected by a facility's operations. When MAC members first began reporting against the TSM performance protocols, many companies had informal processes for identifying communities of interest. Now 95% of the membership is able to demonstrate that, at a minimum, they meet all Level A requirements for this indicator.

Indicator 2: Effective Community of Interest Engagement and Dialogue
The second indicator is designed to confirm that facilities have established processes to communicate with their communities of interest. The purpose of this indicator is to ensure that facilities understand the viewpoint of the communities and that those communities are informed of the company's activities and performance. Results for this indicator are also quite impressive, with 88% of the membership reporting a Level A or higher.

Facilities that report a Level A for this indicator are able to demonstrate that they are actively engaged with their communities of interest in meaningful dialogue. In order for engagement and dialogue to be meaningful to both the facility and their communities of interest, a facility must have processes in place to ensure that communications are written in a language that is clear and understandable to all parties involved, that facility staff are trained on Aboriginal consultation requirements, and that, among other requirements, information is provided to communities of interest in a timely manner.

Indicator 3: Community of Interest Response Mechanism
The third indicator seeks to ensure that facilities have processes in place to receive feedback from their communities of interest and ensure that they consider and respond to community complaints and concerns. In 2012, 93% of the membership reported a Level A or higher. This means that facilities have a good understanding of the concerns of their communities and have established processes to respond and track issues. Facilities that achieve a Level A will also be able to demonstrate that input from their communities is incorporated into their decision-making processes.

Among the facilities that reported a Level A or higher, 54% achieved a Level AAA rating for this indicator. Facilities rated at this level collaborate with the community to establish and achieve common community goals.

Indicator 4: Reporting
The fourth indicator requires facilities to establish formal systems to report on concerns raised by communities of interest.

In 2012, 92% of the membership reported a Level A or higher for this indicator. A large portion of the facilities above a Level A are actually reporting Level AA and Level AAA performance for this indicator, with 27% of the membership at Level AA and 32% at Level AAA. Companies that go beyond the Level A requirements demonstrate excellence and leadership by publicly reporting concerns raised by their communities, providing opportunities for communities of interest to provide feedback on public reporting, and actively seeking feedback on engagement, dialogue and consultation processes.

In 2012, the following facilities achieved a Level A or higher for all Aboriginal and community outreach indicators:

- Agnico Eagle Mines, Lapa
- Agnico Eagle Mines, Pinos Altos
- ArcelorMittal Mining Canada G.P., Mont-Wright
- ArcelorMittal Mining Canada G.P., Port-Cartier
- Barrick Gold Corporation, Hemlo
- BHP Billiton Canada Inc., EKATI Diamond mine
- Cameco Corporation, Key Lake operation
- Cameco Corporation, McArthur River operation
- Cameco Corporation, Rabbit Lake operation
- De Beers Canada Inc., Snap Lake mine
- De Beers Canada Inc., Victor mine
- Rio Tinto, Diavik Diamond mine
- HudBay Minerals Inc., Hudson Bay Mining and Smelting Co.
- IAMGOLD Corporation, Mouska
- IAMGOLD Corporation, Niobec
- IAMGOLD Corporation, Rosebel Gold Mines N.V.
- IAMGOLD Corporation, Essakane
- IAMGOLD Corporation, Westwood project
- Inmet Mining Corporation*, Çayeli mine
- Inmet Mining Corporation*, Troilus
- Inmet Mining Corporation*, Copper Range Company
- Inmet Mining Corporation*, Norbec
- Inmet Mining Corporation*, Samatosum
- Inmet Mining Corporation*, Sturgeon Lake
- Inmet Mining Corporation*, Winston Lake
- Inmet Mining Corporation*, Cobre Las Cruces
- Inmet Mining Corporation*, Cobre Panama
- Rio Tinto, Iron Ore Company of Canada, Labrador City
- Rio Tinto, Iron Ore Company of Canada, Sept-Iles
- Shell Canada Energy, Shell Albian Sands
- Suncor Energy Inc., Oil Sands Facility
- Syncrude Canada Ltd., Oil Sands Facility
- Teck Resources Ltd., Highland Valley Copper
- Teck Resources Ltd., Trail Smelter
- Teck Resources Ltd., Duck Pond operations
- Teck Resources Ltd., Cardinal River operations

- Teck Resources Ltd., Coal Mountain operations
- Teck Resources Ltd., Elkview operations
- Teck Resources Ltd., Fording River operations
- Teck Resources Ltd., Greenhills operations
- Teck Resources Ltd., Line Creek operations
- Vale, Manitoba operations
- Vale, Port Colborne refinery
- Vale, Sudbury operations
- Vale, VNL operations
- Glencore Copper Operations, Horne smelter
- Glencore Copper Operations, CCR refinery
- Glencore Nickel Operations, Raglan mine
- Glencore Nickel Operations, Sudbury operations
- Glencore Zinc Operations, CEZinc
- Glencore Zinc Operations, Brunswick smelter
- Glencore Zinc Operations, Kidd operations

**Now First Quantum Minerals*

Village school near IAMGOLD's Essakane project in Burkina Faso.

CRISIS MANAGEMENT PLANNING

In times of crisis, the first few hours are critical. In addition to mitigating the cause of the crisis, the company must also continuously communicate how it is managing and resolving the situation. Doing this effectively takes considerable planning, organization and practice well before a crisis hits.

The crisis management planning protocol is intended to provide mining companies with the tools needed to effectively plan for communications in the unfortunate event of a crisis at one of their facilities or at the corporate level. Where the crisis is caused by a physical emergency, such as a fire or flood, the tools offered in this protocol are intended to work in conjunction with emergency response plans at the facility.

The protocol requires both head offices and facilities to develop crisis management plans, as well as establish crisis communications teams to support the execution of these plans. Facilities must be able to demonstrate, among other requirements, that they have crisis communications programs in place to effectively alert employees and the public of a crisis, its development and resolution. They must also be able to demonstrate that their crisis management plan is regularly tested and updated.

The crisis management planning protocol has a different rating scale from the other TSM protocols and is the only protocol to require assessments at both the corporate and facility level. Member companies assess their crisis management planning performance using a "yes" or "no" rating scale. Each of the three indicators includes a list of criteria that must be met before a corporate office or a facility can answer "yes."

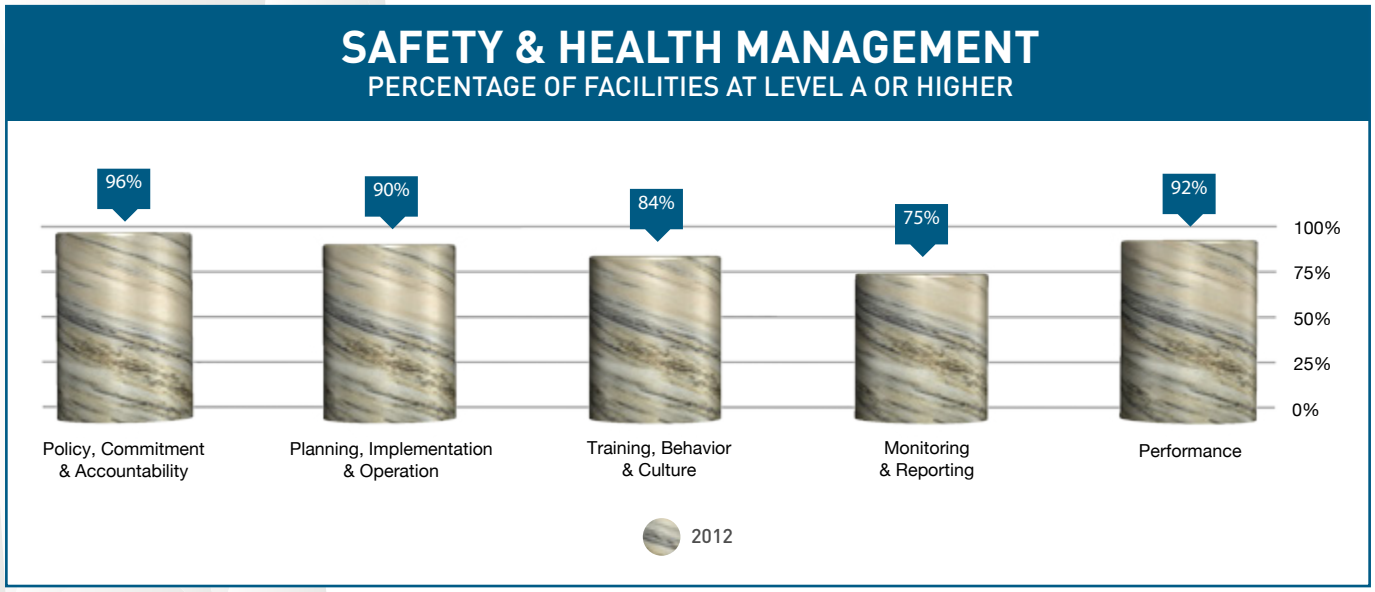
On an aggregate basis, we have seen steady improvement across the membership in this area.

Indicator 1: Crisis Management Preparedness
The first indicator in this protocol requires both corporate offices and their facilities to demonstrate crisis management preparedness through the development of a crisis management plan, the establishment of a crisis management team and the implementation of crisis communications programs to effectively alert employees in the event of a crisis. There has been a steady increase in the percentage of corporate offices and facilities answering "yes" for this indicator over the past few years. In 2006, only 53% reported adherence to all criteria for this indicator. Since then, we have seen that percentage increase to 86%.

Indicator 2: Review
The second indicator requires corporate offices and facilities to regularly review and update their plans. This review ensures that crisis management plans remain responsive and relevant to the needs of the company and its operations. In order to meet the industry's standard, a test of the plan's notification systems must be conducted every two years, and new members of the crisis team must be familiar with the plan within their first two months of joining the team. Overall, the results in this area have improved from 59% reporting "yes" in 2006 to 73% in 2012.

Indicator 3: Training
The third indicator seeks to confirm whether crisis management training is being conducted at both the corporate and facility level. Each year, both levels of the company are required to conduct a table-top simulation exercise. This exercise typically involves a facilitator presenting the crisis management team with a scenario that includes a series of escalations they must analyze and respond to. At the facility level, a full crisis simulation must also be conducted every three years. The results in this area have also demonstrated a positive trend over the past few years, rising from 40% in 2006 to 80% in 2012.

SAFETY AND HEALTH



Protecting the safety and health of employees and contractors is a fundamental component of TSM and is deeply engrained in the Canadian mining industry's culture.

The safety and health protocol includes five indicators that concern occupational safety and health management at the facility level. These indicators are designed to confirm whether facilities have established clear accountability for safety and health management and performance, that processes have been established to prevent the occurrence of all incidents, that all employees and contractors are engaged in the appropriate training to identify hazards, that performance is reported both internally and externally, and that facilities set targets for continuous improvement.

Safety and health is one of TSM's newest protocols, and this is the first year we are publishing results on an aggregate basis. Overall, the membership's performance is quite impressive across all five indicators.

Indicator 1: Policy, Commitment and Accountability
The first indicator in this protocol seeks to confirm that there is accountability for safety and health management and performance at the facility level, which includes the implementation of policy commitments that are consistent with the intent of MAC's *Safety and Health Policy Framework*. In 2012, 96% of the reporting companies achieved a Level A or higher for this indicator. Facilities that achieve this rating are able to demonstrate that policy commitments have been endorsed by senior management and communicated to employees and contractors.

Indicator 2: Planning, Implementation and Operation
The second indicator concerns the development and implementation of a safety and health management system to prevent the occurrence of all incidents. In 2012, 90% of facilities were assessed at a Level A or higher for this indicator. Facilities rated at Level A have a formal and documented management system that includes elements such as documented safety standards and procedures, defined roles and responsibilities and dedicated resources to implement the management system.

Indicator 3: Training, Behaviour and Culture
The third indicator relates to effectively training employees and contractors on safety and health to ensure that they are competent in identifying hazards and preventing incidents. A training program that is consistent with TSM requirements includes training needs analysis, risk-based training and orientation for all employees, contractors and visitors. The aggregate results for this indicator are strong, with 84% of reporting facilities assessed at a Level A or higher. Facilities rated at a Level A or higher demonstrate that training is designed to implement hazard identification and reporting programs with a focus on prevention and proactive measures.

Indicator 4: Monitoring and Reporting
The fourth indicator is designed to ensure that safety and health performance is regularly monitored, and that internal and external reporting takes place. Facilities assessed at a Level A for this indicator will have implemented a fully functional safety and health monitoring program to facilitate both internal and public reporting. A comprehensive monitoring program will track performance against leading and lagging indicators, safety and health inspections, health surveillance and incident investigations. The membership's performance in this area has been positive, with 75% of the facilities assessed at a Level A or higher.

Indicator 5: Performance
Zero harm is our members' goal when it comes to employee safety and health. The fifth indicator is designed to ensure that facilities are setting targets to work towards this goal. In order to achieve a Level A, facilities must establish performance targets, and site management must be involved in setting and reviewing these targets. For this indicator, if a facility experiences a fatality during the reporting year, it is not eligible for a Level A or higher rating. In 2012, 94% of the reporting facilities were assessed at a Level A or higher, showing the membership's strength in this area.

COLLABORATING WITH THE COMMUNITY IN THE ELK VALLEY

The Elk Valley of southeastern British Columbia is home to five of our steelmaking coal operations. For decades, we have been a proud community partner in the Crowsnest Pass, Elkford, Fernie and Sparwood area. We value the relationships that we have developed with local governments and businesses, First Nations, recreational groups, seniors, youth and other community groups and families. It is important to us that these individuals and groups are better off as a result of our presence in the community.

In March 2012, we invited representatives from the community to join an advisory panel created to foster dialogue and communications about our operations and their areas of influence within Elk Valley communities. This initiative corresponds with one of our community sustainability goals: to put processes in place to maximize community benefits and collaboration.

The Elk Valley Communities of Interest Advisory Initiative members tour the West Line Creek Active Water Treatment Facility.

"The panel is one way we can work together to tackle issues and challenges in the community," said Sharon Strom, Coordinator, Sustainability. "It is also a vehicle for us to share information about our operations and activities with the community. We are particularly interested in sharing and gaining feedback on our sustainability initiatives."

With a chair, vice chair and student chair, the panel meets twice a year. A steering committee elected by the wider panel and limited to 13 members — with at least one person for each area of interest and one person from each of the neighbouring communities — meets once a quarter.

We invited an independent third party to help us establish terms of reference and a structure for the panel, which includes task forces to assist in the strategic direction on a short-term basis and standing committees on a longer-term basis.

To date, we have engaged the panel in discussions about our sustainability goals and the Mining Association of Canada's Towards Sustainable Mining initiative.

" Teck's Elk Valley communities of interest advisory initiative has presented an extraordinary opportunity to join in the conversation with a diverse and multidisciplinary group of residents who are impacted by and benefit from the coal mining industry," said Lois Halko, Mayor of Sparwood and panel Chair.

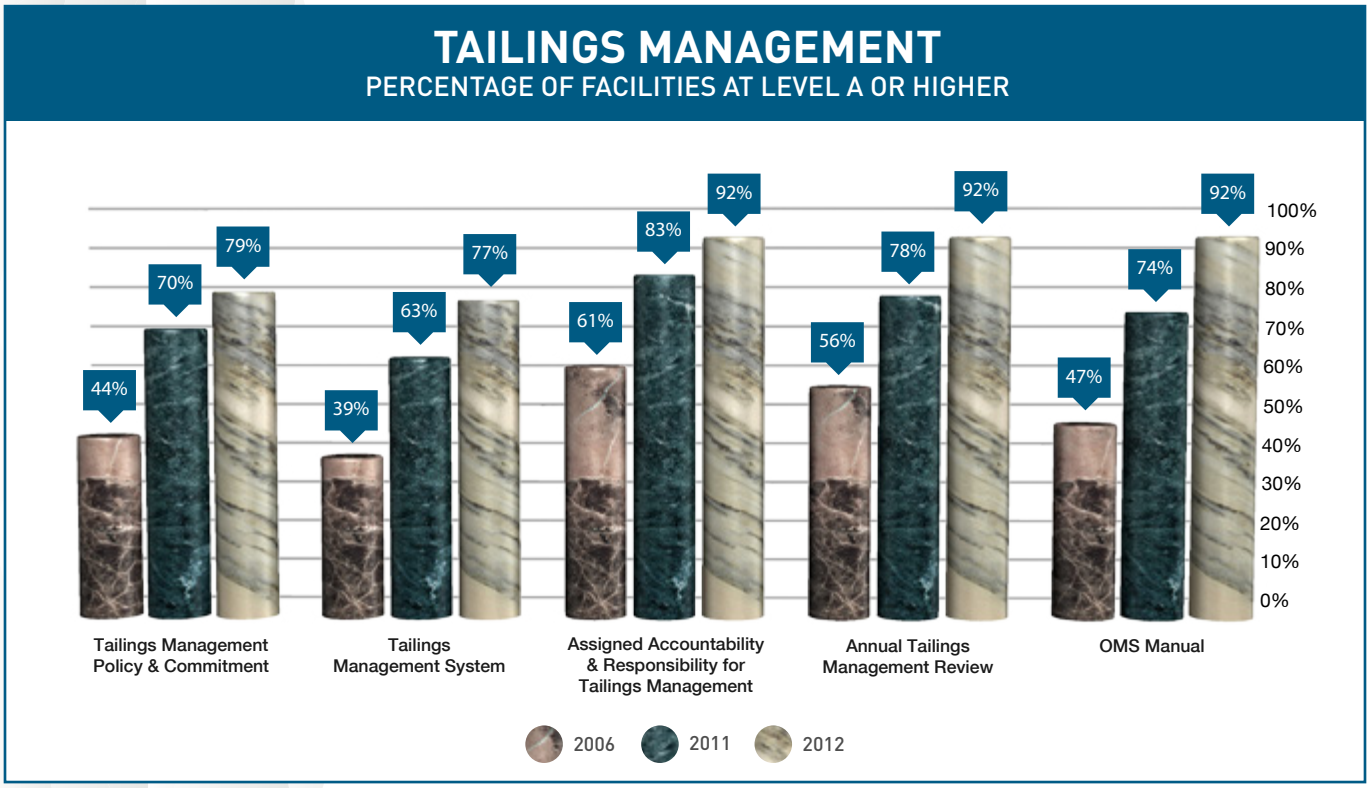
Lee-Anne Walker, a panel member and Executive Director of the community-based watershed group Elk River Alliance, added, "As a community member, I appreciate the open conversation — an opportunity to get the facts directly from Teck. I feel that the company is truly listening."

Source: Teck Resources

ENVIRONMENTAL FOOTPRINT

A goal of TSM is to minimize the impact of mining operations on the environment and biodiversity through all stages of development, from exploration to closure. This section describes ways in which the membership has developed systems to minimize its environmental footprint through best practices in tailings management and biodiversity conservation management.

TAILINGS MANAGEMENT



Tailings impoundments are necessary components of mining activity, and it is crucial that they be managed responsibly to protect human safety and the environment.

The tailings management protocol goes beyond adherence to technical standards and contains five performance indicators. These indicators are designed to confirm whether a facility has implemented a system for responsible tailings management. This protocol seeks to ensure that facilities have a formal policy in place, have developed and implemented a tailings management system, have assigned accountability to the company's CEO or COO, and have developed operation, maintenance and surveillance manuals for all tailings impoundments. Facilities must also conduct annual reviews of their management system and report the results of this evaluation to the accountable executive officer to meet the requirements of this protocol.

The Canadian mining industry is recognized as a leader in tailings management. With our members, MAC developed guides that are used around the world. These guides outline how mining companies can safely operate tailings facilities by adhering to best practices in tailings management.

Overall, the results for tailings management have improved significantly over the past few years. Since 2008, when performance in this area was deemed a priority, MAC has delivered training to practitioners across the country on the guides' application.

Indicator 1: Tailings Management Policy and Commitment
The first indicator in this protocol assesses whether a company has established a policy that expresses its intention, commitments and principles with respect to tailings management. To achieve a Level A for this indicator, a company must be able to demonstrate that it has a policy in place that makes specific commitments to ensure that all structures are stable, all solids and water are managed within designated areas, all aspects of tailings management comply with regulatory requirements and conform to sound engineering practices, consultation occurs with communities of interest regarding tailings management, and programs for ongoing review and continual improvement are implemented.

In 2012, 79% of reporting facilities were assessed at a Level A or higher. This is a notable increase considering that in 2006 only 44% of the reporting facilities were able to demonstrate they met all criteria for this indicator.

Indicator 2: Tailings Management System
The second indicator requires facilities to implement a tailings management system. This provides a formal systematic structure for the assessment of risks, the setting of goals and objectives, consultation with communities of interest, implementation of activities to achieve goals, assignment of responsibilities, development of key performance indicators, and assurance processes to ensure that tailings facilities are managed effectively. The percentage of facilities assessed at a Level A or higher for this indicator has increased from 39% in 2006 to 75% in 2012.

Indicator 3: Assigned Accountability and Responsibility for Tailings Management
The third indicator evaluates whether facilities have established the appropriate accountability and responsibility for tailings management. To achieve a Level A, MAC members are expected to assign overall accountability for tailings management to an executive officer of the company (CEO or COO), with responsibility for putting in place an appropriate management structure and for providing assurance to the corporation and its communities of interest that the company's tailings facilities are managed responsibly. Executive accountability for tailings management is essential to the implementation of a tailings management system. It also signals the importance of tailings facilities to our business and the potential for significant adverse impacts improper tailings management practices can have on the environment.

For multinational companies, the expectation is that accountability is assigned to the most senior executive in Canada. The executive officer will typically delegate the responsibility for tailings management, budgetary issues and other tailings-related functions to operations and other senior corporate personnel while retaining overall accountability for performance. The results for this indicator are quite impressive. The percentage of reporting facilities assessed at a Level A or higher has increased from 61% in 2006 to 92% in 2012.

Indicator 4: Annual Tailings Management Review
The fourth indicator seeks to confirm whether facilities are regularly evaluating the performance of their tailings management systems. To achieve a Level A, facilities must be able to demonstrate that annual reviews are conducted. Typically, the annual review will examine inspection, audit and assessment reports, changing circumstances, monitoring results, spills and other incidents, recommendations, and the commitment to continual improvement. The review will also evaluate the adequacy of policies and objectives for, performance of, and financial resources allocated to the tailings management system. The annual review is a good time to address the need for changes to commitments made to communities of interest. The annual review is meant to go beyond technical performance to address all aspects of the management of the tailings facility and should be reported to the executive officer accountable for tailings management.

The membership's results in this area have been progressively increasing over the past few years. The percentage of facilities assessed at a Level A or higher has increased from 56% in 2006 to 92% in 2012.

Indicator 5: Operation, Maintenance and Surveillance (OMS) Manual
The fifth indicator confirms whether a company has developed a comprehensive OMS manual. The OMS manual defines site protocols for safe operation, maintenance and surveillance of tailings and water management facilities. It is the instruction manual for operating these facilities safely, and ensures that essential documentation is kept and made available. It communicates the key engineering criteria and management principles for the facilities to all personnel. An OMS manual may also be a regulatory requirement, depending on the jurisdiction.

To achieve a Level A under this indicator, companies are required to develop and implement an OMS manual as a component of their management system. Facilities assessed at Level A must also be able to demonstrate that they have established emergency preparedness and response plans, which are an integral component of OMS manuals and the safety of tailings facilities and surrounding communities. MAC maintains a detailed guidance manual specifying best practices on how to develop an OMS manual and what information should be included. This guide can be accessed on the MAC website (www.mining.ca).

The results for this indicator are consistent with the performance for the other areas covered by this protocol. In 2012, 92% of the reporting facilities were assessed at a Level A or higher, which demonstrates a significant increase from 2006 when only 47% of the reporting facilities achieved a Level A or higher.

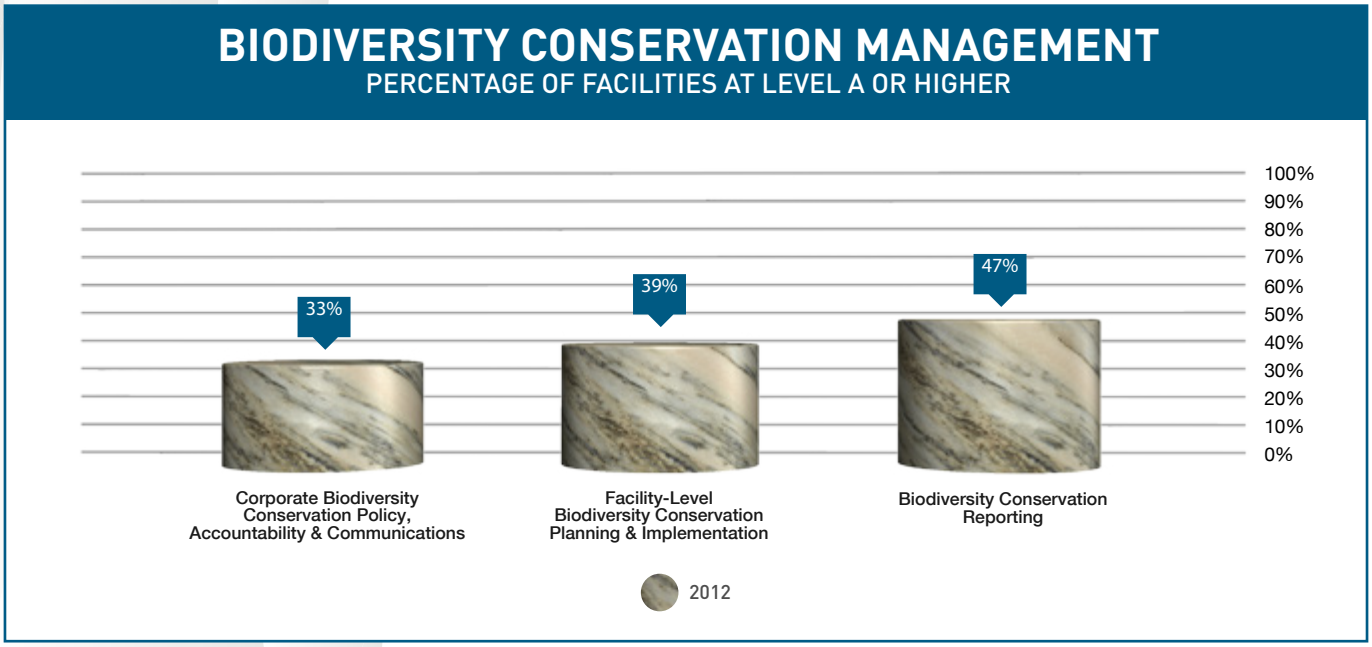
Audit or Assessment of Tailings Management
MAC members can demonstrate leadership by commissioning a formal independent audit or assessment of their tailings management system. Levels AA and AAA across all five indicators of the tailings management protocol require an audit or assessment. At Level AA, this audit or assessment is internal, meaning that the audit or assessment is conducted by an individual or team that is internal to the company but is independent from the site being assessed. At Level AAA, this audit or assessment is external, and the company is required to hire an outside third party to conduct the assessment. The objectives of the audit or assessment are to evaluate whether the tailings management system conforms to MAC's tailings management guidance manual and whether the system has been implemented. The independent assurance provided through an audit or assessment is designed to help companies improve their performance and provide communities of interest with assurance that tailings facilities are being managed to best practice standards.

In 2012, the following facilities achieved a Level A or higher for all tailings management indicators:

- ArcelorMittal Mining Canada G.P., Mont-Wright
- ArcelorMittal Mining Canada G.P., Port-Cartier
- Barrick Gold Corporation, Hemlo
- BHP Billiton Canada Inc., EKATI Diamond mine
- Cameco Corporation, Key Lake operation
- Cameco Corporation, Rabbit Lake operation
- De Beers Canada Inc., Snap Lake mine
- De Beers Canada Inc., Victor mine
- HudBay Minerals Inc., Hudson Bay Mining and Smelting Co.
- IAMGOLD Corporation, Niobec
- IAMGOLD Corporation, Rosebel Gold Mines N.V.
- IAMGOLD Corporation, Essakane
- IAMGOLD Corporation, Westwood project
- Inmet Mining Corporation, Çayeli mine
- Inmet Mining Corporation, Troilus
- Inmet Mining Corporation, Copper Range Company
- Inmet Mining Corporation, Norbec
- Inmet Mining Corporation, Samatosum
- Inmet Mining Corporation, Sturgeon Lake
- Inmet Mining Corporation, Winston Lake
- Rio Tinto, Iron Ore Company of Canada, Labrador City
- Shell Canada Energy, Shell Albian Sands
- Suncor Energy Inc., Oil Sands Facility
- Syncrude Canada Ltd., Oil Sands Facility
- Teck Resources Ltd., Highland Valley Copper
- Teck Resources Ltd., Duck Pond operations
- Teck Resources Ltd., Cardinal River operations
- Teck Resources Ltd., Elkview operations
- Vale, Manitoba operations
- Vale, Sudbury operations
- Vale, VNL operations
- Glencore Copper Operations, Horne Smelter
- Glencore Copper Operations, Kidd operations
- Glencore Nickel Operations, Raglan mine

** Now First Quantum Minerals*

BIODIVERSITY CONSERVATION MANAGEMENT



We believe that mining, conducted in consultation with communities of interest, can co-exist with biodiversity conservation. Conserving biodiversity through all stages of a mine's life cycle is an industry priority and helps to maintain a company's privilege to operate.

The biodiversity conservation management protocol consists of three indicators that set out expectations for mining companies with respect to conserving biodiversity. The protocol seeks to confirm that mining facilities have made formal commitments to manage biodiversity at their sites, that action plans for significant biodiversity aspects are implemented, and that biodiversity conservation reporting systems are in place to inform decision making and to communicate the performance of facilities publicly.

There are many elements that make up a biodiversity conservation management system, and MAC members are still working to understand the requirements of this new TSM protocol. The 2012 aggregate results indicate that there is work to be done to improve performance in this area.

Indicator 1: Corporate Biodiversity Conservation Policy, Accountability and Communications
The first indicator in this protocol is designed to confirm whether corporate policies and accountabilities are in place and are communicated to employees to support the management of biodiversity conservation issues. To achieve a Level A, facilities must be able to demonstrate that there is a corporate commitment for biodiversity conservation that has been communicated to relevant employees. This commitment must be consistent with the intent of MAC's *Mining and Biodiversity Policy Framework*, and there must be defined roles and responsibilities for its implementation. In 2012, 33% of the reporting facilities were assessed at a Level A or higher, and 39% of the reporting facilities were assessed at a Level B. This indicates that although not all members are able to report a Level A for this indicator, they are working towards addressing gaps.

Indictor 2: Facility-Level Biodiversity Conservation Planning, Implementation and Operation
The second indicator evaluates whether a facility has established effective plans and management systems and that they are being implemented to ensure that significant biodiversity aspects are managed. To achieve a Level A or higher, site-level senior management must implement a biodiversity conservation plan or management system. Facilities are expected to include elements such as establishing processes for monitoring, setting targets, consulting with key communities of interest and training employees. After the first year of reporting, the aggregate results show that 39% of the reporting facilities have achieved a Level A or higher, and 19% of facilities were assessed at Level B.

Indicator 3: Biodiversity Conservation Reporting
The third indicator is related to reporting systems. The purpose of this indicator is to encourage companies to develop systems to inform internal decision making and to communicate performance publicly. Facilities are assessed on whether they have developed processes to track and report conservation efforts, implemented consistent approaches to monitoring and reporting, and reported performance both internally and externally. In 2012, 47% of facilities achieved a Level A or higher for this indicator, and 27% of facilities were assessed at Level B. Despite the fact that this protocol was just introduced, there are already members that have achieved Level AA and AAA across all three indicators.

TSM is about collaboration, and MAC's experience with the four original protocols is that those facilities reporting at the lower performance levels will learn from their peers and implement leading management systems for biodiversity conservation.

Water sampling at Glencore's Sudbury Integrated Nickel Operations.

RECLAIMING FEN WETLANDS IN THE OIL SANDS REGION

Some of North America's leading scientists are assisting Syncrude in developing the oil sands industry's largest fen wetland reclamation research project in an area that used to be an open pit mine.

A fen is similar to a swamp or marsh, in that it is just a specific type of wetland habitat. According to Syncrude environmental scientist, Jessica Clark, it's not the name that is important; it's the habitat itself which makes it special to the region.

"These types of landscapes are found naturally in our region and part of being responsible oil sands developers is ensuring we turn this area back to a similar natural habitat," says Clark. "We currently work with universities across North America to ensure we have the best possible research. We look at water, vegetation, climate, nutrients and soil to measure our efforts. Water is key for sustainability and the insects and plants we see are a good indication if we're on the right track."

Fen wetland reclamation at Syncrude's oil sands facility.

Construction of the Sandhill Fen research watershed was completed in 2012, and the last 12 months have acted as a baseline for the ongoing research that will take place for the next 20 years. Hundreds of monitoring stations can be seen throughout the area. These stations monitor important research data like vegetation performance, weather, soil moisture, water quality and water quantity.

The research area includes a water storage pond that can be controlled to allow appropriate water levels to the fen. Coarse woody debris is another important aspect of the habitat, and although it might look out of place at first glance, it plays an important role in decreasing erosion and helping the many plant species find their niche.

"The plants know where they want to grow and the coarse woody debris provides special little areas where different types of plants will flourish. We scientists call these areas micro-sites. Around a single log you will find a range of conditions - shade, sun, dryness and water. Each plant has a specific niche and the coarse woody debris provides a happy place for a wide variety of plants to establish," says Clark.

Eventually all of the former mine pit will look similar to the Sandhill Fen watershed with the help of reclamation operations and research.

"This is the first time a reclaimed fen of this size has been the goal. The more we learn about fen wetland reclamation, the better equipped our toolbox becomes, giving us the knowledge to continue to do better," adds Clark.

Source: Syncrude Canada

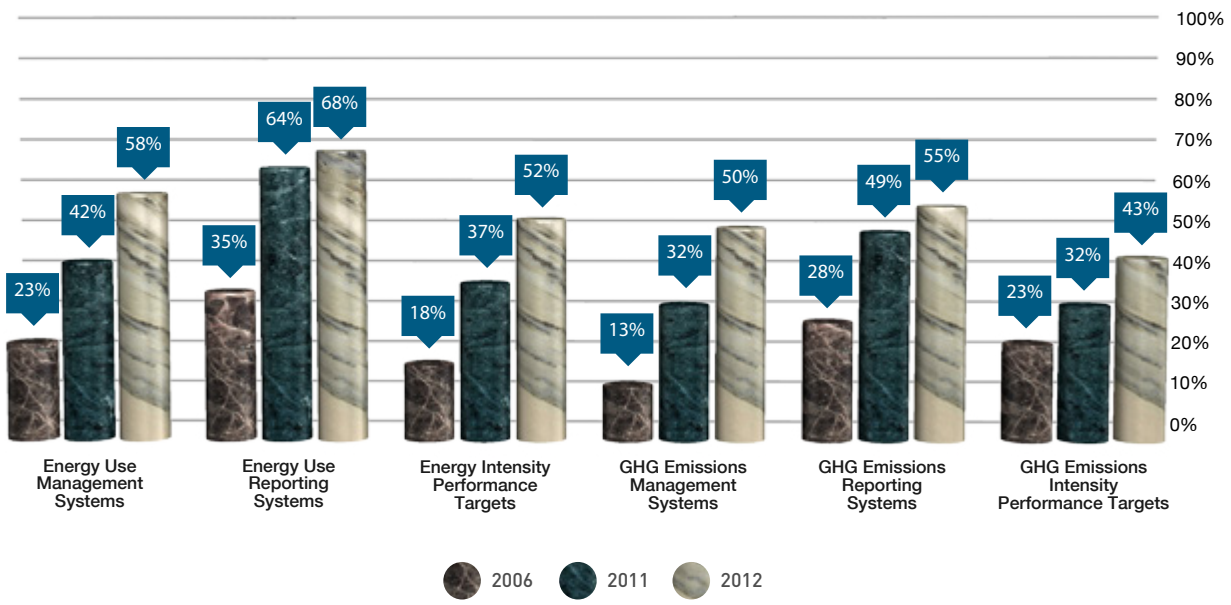
ENERGY EFFICIENCY

In 2009, MAC endorsed the International Council on Mining and Metals' (ICMM) policy on climate change, recognizing that comprehensive and sustained global action is required to reduce the scale of human-induced climate change and to adapt to its impact. The energy use and greenhouse gas (GHG) emissions management protocol is an important tool to assist mining companies in implementing climate change commitments, such as those in ICMM's climate change principles, in a transparent way.

With underground mines developing new production zones at much greater depth, the energy intensity is heightening because extra energy is required for ventilation, pumping, cooling, hoisting and sustaining the infrastructure at depth. As a result, the industry must continue to seek opportunities to reduce energy consumption. Through the development of comprehensive management systems, MAC members can more effectively monitor and reduce their energy consumption and GHG emissions.

ENERGY USE AND GHG EMISSIONS MANAGEMENT

ENERGY USE & GHG EMISSIONS MANAGEMENT
PERCENTAGE OF FACILITIES AT LEVEL A OR HIGHER



Improving energy efficiency and reducing GHG emissions are priorities for the Canadian mining industry as a way to limit impacts to the environment and to help reduce operational costs at a mine site.

The energy use and GHG emissions management protocol has three indicators that seek to confirm whether a facility has established a comprehensive system for energy use and GHG emissions. For this protocol, a facility must show its management system includes assigned accountability from senior management, and that it has a process in place to ensure energy data are reviewed regularly and well

integrated into operator actions. The final year for reporting the three indicators separately for energy use and GHG management was 2012. Revisions to the protocol became effective on January 1, 2013. The new protocol combines energy use and GHG emissions in one management system. This change acknowledges that in the mining sector, facilities produce GHGs primarily through the burning of fossil fuels for energy.

Facilities are also expected to provide energy awareness training and have systems in place to track and report energy use and GHG emissions data for both internal and external reporting. Finally, in TSM's spirit of continuous improvement, this protocol seeks to confirm that facilities establish and meet targets for their energy use and GHG emissions performance.

Indicators 1 and 4: Energy Use and GHG Emissions Management Systems
TSM seeks to confirm that all MAC member facilities are able to demonstrate that they have formal systems in place to manage energy use and GHG emissions, going beyond simply maintaining facility-level data. Facilities that achieve a Level A rating under indicators one and four of this protocol will be able to demonstrate a commitment from senior management that recognizes energy and GHG management as important corporate priorities. Level A facilities will also have defined accountabilities and responsibilities assigned to operational managers and energy leaders, and will also have energy awareness training programs in place.

Facilities that are assessed at Levels AA and AAA are considered leaders within the industry. These facilities are able to demonstrate that energy use and GHG emissions management is integrated into their broader business strategies and look beyond the company for opportunities to optimize energy use and reduce GHG emissions. Examples of such leadership include working with the supply chain to reduce energy consumption and/or GHG emissions, investments in research and development, and engagement with communities of interest in education and outreach activities.

In 2012, 58% of facilities reported a Level A or higher for indicator one (energy management) and 53% reported a Level A or higher for indicator four (GHG emissions management). This is a significant increase since 2006 when 23% reported having a comprehensive energy management system and 13% reported having a comprehensive GHG emissions management system in place. Despite the significant improvement in performance, it is apparent that significant opportunity exists for further progress.

Indicators 2 and 5: Energy Use and GHG Emissions Reporting Systems
In order to make the right decisions concerning energy management, a facility must have processes in place to track and report performance. Facilities that achieve a Level A under indicators two (energy use reporting) and five (GHG emissions reporting) of the protocol will have developed and implemented a system to provide robust data to communities of interest and to inform internal decision makers. Essentially, the reporting system should provide confidence that the right people have the right data.

Facilities that report Levels AA and AAA under this indicator will have their reporting systems internally or externally verified to assess the effectiveness and adequacy of their reporting systems, and the accuracy and reliability of the reported data. Facilities that go beyond the requirements of Level A will also publicly report their performance against specified targets.

The 2012 results for indicators two and five show progress since 2006, with 68% of facilities achieving a Level A or higher for their energy use reporting systems and 59% being assessed at a Level A or higher for their GHG emissions reporting systems. This is an improvement from 2006 when 35% of facilities reported a level A or higher for their GHG emissions reporting system.

Indicators 3 and 6: Performance Targets
Companies set targets and goals for many aspects of their business. Effective energy use and GHG emissions management systems also involve establishing targets. At Level A for indicators three (energy use targets) and six (GHG targets), facilities must not only establish a target for energy use and GHG emissions, but they must also meet these targets within the reporting year. To be assessed at Levels AA or AAA for this indicator, facilities must meet their established targets for the last three out of four years and have their performance internally or externally verified. Over the last few years, MAC members have demonstrated significant improvement in establishing and meeting both their energy use and GHG emissions targets. The percentage of facilities at a Level A or higher for indicator three (energy intensity performance targets) increased from 18% in 2006 to 51% in 2012. There was also an increase with respect to indicator six (GHG emissions intensity performance targets), which increased from 23% in 2006 to 44% in 2012.

Revised Energy Use and GHG Emissions Management Protocol
In 2010, MAC commissioned an independent consultant to review the TSM results for energy use and GHG emissions management to help us understand why the performance results were improving more slowly than expected. The conclusion of this review indicated that TSM performance is directly related to whether energy consumption is a material issue for facilities. Large energy consumers are more likely to develop comprehensive management systems for energy use and GHG emissions, and are likely required to report GHG emissions on an annual basis to a regulator. For smaller emitters, GHG emissions are not as material and, therefore, these facilities are not investing the same resources as larger emitters into their energy management programs.

Because of this review, MAC members conducted a review of the energy protocol to seek opportunities to incorporate materiality into the criteria. At the same time, we reviewed the protocol to ensure that it was a tool to drive performance improvements. This led to the development of a set of revised indicators for energy use and GHG emissions. In 2013, the membership will implement the revised energy use and GHG emissions management protocol.

The following elements have been incorporated into the revised protocol:

Materiality
The original energy use and GHG emissions management protocol required all MAC members to report TSM performance for all facilities, regardless of whether energy use and GHG emissions were considered material. The amended indicators incorporate materiality at two levels. The first is based on total energy use and GHG emissions thresholds; the second reflects specific fuel sources.

A threshold of 25kt CO_2e and 250,000 GJ has been set for both total energy consumption and GHG emissions that would excuse facilities below the threshold from publicly reporting on their management system and performance targets. Facilities below the threshold would still be required to report on their reporting system. MAC expects only a small number of facilities will fall below these thresholds.

The second element of materiality allows a facility to avoid including insignificant fuel sources in their management system if they establish a threshold to define material fuel sources.

The decision to incorporate materiality into this protocol is based on an analysis of MAC member companies' TSM performance in relation to their total reported energy use and GHG emissions. The results of this analysis indicate that facilities that emit more than 50,000 tonnes of CO_2e have a stronger business driver to actively manage and reduce their emissions. On the other hand, emissions are a less material issue for facilities that are emitting less than 50,000 tonnes of CO_2e,

and these facilities are likely to focus on other environmental, social and economic issues that are more significant to their operations. The decision to include materiality in this protocol, a unique inclusion for TSM, was made in consultation with the MAC COI Advisory Panel.

Business Unit Reporting
TSM has always focused on facility-level reporting, but the new energy use and GHG emissions management protocol gives companies the flexibility to aggregate facilities into business units for the purposes of target setting. This decision was made out of recognition that climate change is a global issue, and companies should be encouraged to set performance targets that achieve the greatest reductions, regardless of geographic location.

Performance Targets
The original protocol required companies to set intensity improvement targets and did not recognize other types of targets. The revised protocol is more flexible in the types of acceptable targets, including total emissions and multi-year targets.

In 2012, the following facilities achieved a Level A or higher for all energy use and GHG emissions management indicators:

- ArcelorMittal Mines Canada, Mont-Wright
- ArcelorMittal Mines Canada, Port-Cartier
- Barrick Gold Corporation, Hemlo
- Diavik Diamond Mines Inc., Diavik Diamond Mine
- Inmet Mining Corporation, Çayeli Mine
- Iron Ore Company of Canada, Labrador City
- Iron Ore Company of Canada, Sept-Iles
- Nyrstar, Myra Falls
- Shell Canada Energy, Shell Albian Sands
- Teck Resources Limited, Highland Valley Copper
- Teck Resources Limited, Duck Pond Operations
- Teck Resources Limited, Cardinal River Operations
- Teck Resources Limited, Coal Mountain Operations
- Teck Resources Limited, Elkview Operations
- Teck Resources Limited, Fording River Operations
- Teck Resources Limited, Line Creek Operations
- Glencore Copper Operations, Kidd Operations
- Glencore Copper Operations, CCR Refinery
- Glencore Nickel Operations, Raglan Mine
- Glencore Zinc Operations, CEZinc

** Now First Quantum Minerals*

GLOBAL REACH, CANADIAN VALUES.

Canadians are leaders in developing successful mines around the world. Our mining companies account for almost 10% of the money Canada invested abroad in the last decade, improving the quality of life for millions of people.

Through individual company actions and partnerships with government and NGOs, Canadian mining helps provide education, skills training, and jobs as well as opportunities for local businesses. We apply and share environmental expertise and help build up local social programs.

Active in more than 100 countries, our members embrace their responsibility to ensure benefits for local populations and to protect the natural environment wherever they operate.

IN BURKINA FASO, IAMGOLD BUILT A VOCATIONAL SCHOOL FOR COMMUNITIES SURROUNDING THE ESSAKANE MINE AND HAS HELPED TRANSITION THE SCHOOL INTO A COMMUNITY-LED AND SELF-SUSTAINING INITIATIVE.

MINING.CA

A message from the Mining Association of Canada.

CANADIAN MINING
What will they find next?

INTERNATIONAL INITIATIVES

Towards Sustainable Mining™
Vers le développement minier durable

INTERNATIONAL SOCIAL RESPONSIBILITY

Adoption of the TSM initiative is a condition of MAC membership, which means that implementing and reporting is mandatory for all of MAC members' Canadian operations. Increasingly, a growing number of MAC members are requiring all of their global operations to implement TSM standards and publicly report their performance, including Inmet Mining (now First Quantum Minerals), Agnico Eagle mines and IAMGOLD. In doing so, these companies help demonstrate that they are managing their responsibilities throughout the world to the same high standard as their Canadian operations.

Further to MAC's efforts to encourage best practices across the industry through TSM, there are many other organizations and initiatives throughout the world that work to drive environmental and social performance in the mining sector. International application of TSM is not always feasible for all companies, and many MAC members participate in various international initiatives to foster performance improvement. The table on the next page summarizes the implementation of these standards globally.

Barrick Gold and the Canadian International Development Agency's reforestation pilot project in remote communities near the company's Lagunas Norte mine in Peru.

MAC MEMBER COMPANY APPLICATION OF INTERNATIONAL STANDARDS AND PROGRAMS

* Applied at international operating facilities.
** TSM is applied at international facilities, but results are not reported publicly.

	Industry Sustainability Initiatives			Management System Standards		International Voluntary Initiatives				Reporting, Disclosure and Transparency Standards				Financing Standards	Listed on Socially Responsible Investing Indices		Commodity Specific Standards		
	MAC Towards Sustainable Mining*	ICMM Sustainable Development Framework	PDAC e3 Plus	ISO 14001: EMS Standard	OHSAS 18001	UN Global Compact	Extractive Industries Transparency Initiative	Voluntary Principles on Security and Human Rights	OECD Guidelines for Multinational Enterprises	AA 1000	Global Reporting Initiative	Carbon Disclosure Project	Water Disclosure Project	IFC Social and Enviornmental Performance Standards	Dow Jones Sustainability Index	Jantzi Social Index	Responsible Jewellery	International Cyanide Code	Kimberley Process
COMPANIES/BUSINESS UNITS HEADQUARTERED IN CANADA WITH INTERNATIONAL OPERATIONS																			
Agnico Eagle Mines	X		X								X	X			X		X	X	NA
Barrick Gold Corporation		X	X	X		X	X	X	X		X	X	X	X	X			X	NA
IAMGOLD Corporation	X		X	X			X	X	X		X	X		X		X		X	NA
Kinross Gold Corporation						X	X	X			X	X			X	X		X	
HudBay Minerals Inc. **	X			X	X			X			X	X	X	X			NA	NA	NA
First Quantum Minerals	X					X	X	X				X		X			NA	NA	NA
Teck Resources Limited **	X	X	X	X		X	X		X		X	X	X	X	X	X	NA	NA	NA
Vale (Base Metals)		X				X	X				X	X	X				NA	NA	NA
New Gold				X	X	X					X	X					X	X	NA
COMPANIES HEADQUARTERED OUTSIDE OF CANADA WITH CANADIAN OPERATIONS																			
Glencore							X	X				X	X		X		NA	NA	NA
De Beers Canada **	X	X	X	X	X	X	X	X		X	X	X		X			X	NA	X
Newmont		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	NA	X	NA
ArcelorMittal				X	X		X				X								

MAC's ISR Committee has made it a priority to push the mining industry beyond the status quo when it comes to international social responsibility. The committee's focus in 2012 was to complete a series of research projects, explore opportunities to influence revenue transparency disclosure requirements and challenge the industry to do more regarding human rights.

In 2011, the ISR Committee commissioned several independent consultants to conduct research on various priority issues for MAC members. The first report reviewed the recommendations presented in the National Roundtables on Corporate Social Responsibility and the Canadian Extractive Industry in Developing Countries' 2007 Advisory Group Report. This report was prepared by On Common Ground Consulting and identified areas where governments and other entities have acted to implement the Roundtables' recommendations, as well as current gaps. The second research project was conducted by Fasken Martineau and examined accountability mechanisms across various jurisdictions. Both reports were published in 2012 and can be found on the MAC website (www.mining.ca).

The ISR Committee is also working to understand current practices and expectations related to transparency. In 2013, the committee will release a study conducted by Stratos Inc. that evaluates current disclosure trends in the mining sector. MAC has commissioned this report with the intent of contributing to the understanding of this important issue.

Resource Revenue Transparency
In 2012, MAC signed a Memorandum of Understanding with the Prospectors and Developers Association of Canada, Publish What You Pay–Canada and the Revenue Watch Institute to develop a framework for mandatory disclosure of payments to governments. Over the course of the year, the working group held consultations with industry, civil society and government officials to develop a draft framework for mandatory disclosure of payments to government. The draft framework is expected to be finalized in 2013 with the intent of advancing the transparency of payments made to governments by Canadian mining companies. More information on the status of this initiative can be found at the Publish What You Pay–Canada website (www.pwyp.ca).

Human Rights
In 2012, the ISR Committee identified human rights as a priority for the membership and has proposed that MAC develop a framework of management system elements to effectively deal with human rights-related issues at the mine-site level. The ISR Committee is researching practices currently being implemented by leading companies, as well as the elements of recently developed human rights frameworks. This research will help MAC develop a practical tool that members can implement regardless of their position in the mining life cycle. Moreover, the expertise of leaders in the industry and their willingness to share experiences should assist all MAC members with implementation of the framework.

TSM PERFORMANCE AWARD WINNERS

THE 2013 AWARD RECIPIENTS

MAC recognizes facility-level achievements in environmental and social responsibility with TSM performance awards annually. This year, five members will be presented awards in the following categories:

- Communities and People
- Environmental Footprint
- Energy Efficiency

LEADERSHIP AWARD

Teck Resources, Elkview Operations

Teck Resources' Elkview operation will be receiving a special leadership award for its 2012 performance. A Leadership Award is granted only when a site achieves Level A or higher in tailings management, energy use and GHG emissions management, and Aboriginal and community outreach, and indicates "yes" for all three crisis management indicators.

COMMUNITIES AND PEOPLE

Aboriginal and Community Outreach

Shell Canada Energy, Shell Albian Sands
Teck Resources, Highland Valley Copper
Teck Resources, Elkview
Teck Resources, Fording River
Vale, VNL Operations
Vale, Manitoba Operations
Vale, Sudbury Operations
Vale, Port Colborne
Hudbay Minerals, Hudson Bay
Mining and Smelting Co

Crisis Management Planning

Shell Canada Energy, Shell Albian Sands
Teck Resources, Elkview
Vale, Port Colborne
Vale, Sudbury
Hudbay Minerals, Hudson Bay
Mining and Smelting Co

ENVIRONMENTAL FOOTPRINT

Tailings Management

Shell Canada Energy, Shell Albian Sands
Teck Resources, Highland Valley Copper
Teck Resources, Elkview
Vale, VNL Operations
Vale, Manitoba Operations
Vale, Sudbury Operations
Hudbay Minerals, Hudson Bay
Mining and Smelting Co

ENERGY EFFICIENCY

Energy Use and GHG Emissions Management

Nyrstar, Myra Falls
Shell Canada Energy, Shell Albian Sands
Teck Resources, Highland Valley Copper
Teck Resources, Elkview
Teck Resources, Fording River

= AAA = AA = A

GLOBAL REACH, CANADIAN VALUES.

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Active in more than 100 countries, our members embrace their responsibility to ensure benefits for local populations and to protect the natural environment wherever they operate.

RIO TINTO'S BUNDER DIAMOND PROJECT IN INDIA IS HELPING YOUNG GIRLS AND WOMEN REALIZE THEIR POTENTIAL IN SCHOOL AND WORK AREAS THAT HAVE TRADITIONALLY BEEN OUT OF REACH.

MINING.CA

A message from the Mining Association of Canada.

CANADIAN MINING
What will they find next?

COMPANY PERFORMANCE

Towards Sustainable Mining
Vers le développement minier durable

AGNICO EAGLE MINES LIMITED

Agnico Eagle's mission is to run a high-quality, easy-to-understand business, which generates superior long-term per share returns for shareholders, creates a great place to work for employees, and is a leading contributor to the well-being of the communities in which it operates. In December 2010, Agnico Eagle became a MAC member and fully endorsed the TSM initiative.

The company follows a consistent, low-risk strategy for strengthening its gold-mining business and creating per share value. This strategy generates superior long-term returns per share by:

- **Increasing gold production in lower risk jurisdictions**: Agnico Eagle is expecting production growth of approximately 20% to over 1.2 million ounces by 2015 from current operating regions.
- **Growing operating and free cash flows**: Agnico Eagle's goal is to increase net free cash flow through higher production, controlling operating costs and disciplining capital spending.
- **Operating in a socially responsible manner:** Agnico Eagle creates economic value by operating in a safe, socially and environmentally responsible manner while contributing to the prosperity of employees and the communities in which it operates.

In 2013, the company anticipates continuing its solid performance at its current operations and advancing construction on three near-term growth projects: La India, Goldex and the LaRonde extension. The new projects, combined with forecasted higher grades at LaRonde, are expected to result in growth of approximately 20% in the company's gold production from 2013 to 2015.

Agnico Eagle's exploration strategy helps fuel this growth. It focuses on growing the company's gold reserves and production in mining-friendly regions, acquiring early stage opportunities, and adding value through exploration and mine-building expertise. Agnico Eagle is well positioned to continue growing output through its internal expansion projects, development of the Goldex, La India and Meliadine projects, and its ongoing exploration activities, as well as through potential acquisitions, joint ventures and partnerships.

As part of Agnico Eagle's overall commitment to continuous improvement, the company has steadily increased its presence on national, international and industry-specific boards and organizations. These organizations help Agnico Eagle improve and measure its performance by providing research and guidance on the latest industry standards and global best practices.

In 2012, Agnico Eagle continued to train all of its divisions in TSM implementation. The company's self-assessment against the TSM indicators is presented in this report. However, the company is not reporting on the Goldex mine where mining operations were suspended for the duration of the reporting period.

Agnico Eagle aims to achieve a Level A rating at all of its mines. The company will undertake an external verification of its TSM performance by the end of 2014.

In 2012, Agnico Eagle took steps to further integrate its sustainable development program into all aspects of its business. The following highlights indicate where the program has made a difference and, in some cases, where the company has encountered challenges:

- **Sustainable Development Policy**: In 2012, Agnico Eagle's Health and Safety Policy was integrated into its Environmental Policy—along with its long-established principles of respect for employees and communities—to form a new Sustainable Development Policy. This policy articulates Agnico Eagle's four fundamental values of sustainable development: respect employees; protect the environment; operate safely; and respect communities.
- **Best 50 Corporate Citizens in Canada**: In 2012, Agnico Eagle was ranked by *Corporate Knights* magazine as one of Canada's top 50 corporate citizens, which is defined as a company that fulfills its part of the social contract, while developing innovative solutions to the pressing social and environmental challenges of our time.
- **Stakeholder Advisory Committee**: Agnico Eagle established a Stakeholder Advisory Committee to provide input and guidance to its sustainable development programs, and held the committee's second meeting in October 2012. The company's divisions continued their stakeholder engagement programs at local and regional levels.
- **GHG intensity**: Agnico Eagle's overall GHG intensity in 2012 was 0.029 tonnes of CO_2e compared to 0.024 tonnes of CO_2e in 2011.
- **Combined lost-time accident frequency**: Agnico Eagle's overall health and safety performance improved during the year. The company achieved a combined lost-time accident frequency rate of 2.44—substantially below its target rate of 3.3.
- **Responsible Mining Management System**: In 2012, Agnico Eagle began implementing its new integrated Responsible Mining Management System (RMMS). This integration will be done through the development and implementation of a formal Health, Safety, Environment and Social Acceptability Management System. The RMMS aims to further promote a culture of excellence that encourages employees to continuously improve their skills and to not only meet, but exceed, the regulatory requirements for health, safety and the environment. The system will be consistent with the ISO 14001 standard for environmental management systems and the OHSAS 18001 standard for health and safety management systems. System documentation will be supported by Intelex software. As a participant in the following groups and initiatives, Agnico Eagle has designed the RMMS to ensure that the following compliance requirements and industry standards are met:
  - BNQ 21000 (Quebec)
  - Carbon Disclosure Project
  - Global Reporting Initiative
  - International Cyanide Management Code
  - TSM initiative
  - Conflict-Free Gold Standard
- Although the RMMS will be based on ISO 14001 and OHSAS 18001, Agnico Eagle will not seek certification under these standards.

- **Socially Responsible Company**: For the sixth year in a row, Pinos Altos was certified as a Socially Responsible Company by the Mexican Centre for Philanthropy (Centro Mexicano para la Filantropía) and the Alliance for Social Responsibility of Enterprises (Alianza por la Responsabilidad Social Empresarial en México). This certification recognizes the excellence of the social responsibility practices at Pinos Altos.
- **Silver Hard Hat**: Pinos Altos won the Silver Hard Hat award at the 2012 Annual Safety Contest of the Mexican Chamber of Mines. The award recognizes Pinos Altos for maintaining the best safety statistics for underground mines with more than 500 workers within the Mexican mining industry during 2011. The Pinos Altos Mine Rescue Team also achieved a first place finish in the North Zone Mexican Mines Rescue competition on November 28, 2012. The event was hosted at the Mexico Group company facilities, in Parral City, Chihuahua State, Mexico.
- **Clean Industry**: Pinos Altos was certified as an Industria Limpia (Clean Industry) by La Procuraduría Federal de Protección al Ambiente (the equivalent of the U.S. Environmental Protection Agency in Mexico). This certificate, obtained following a rigorous audit, recognizes the excellence of environmental management at Pinos Altos.
- **Safety First**: Fifteen of the company's supervisors from the LaRonde, Lapa and Goldex mines in Quebec were recognized by the Quebec Mining Association for achieving more than 50,000 hours without compensable accidents on their work teams.

For more information, please visit the Agnico Eagle website: www.agnicoeagle.com.

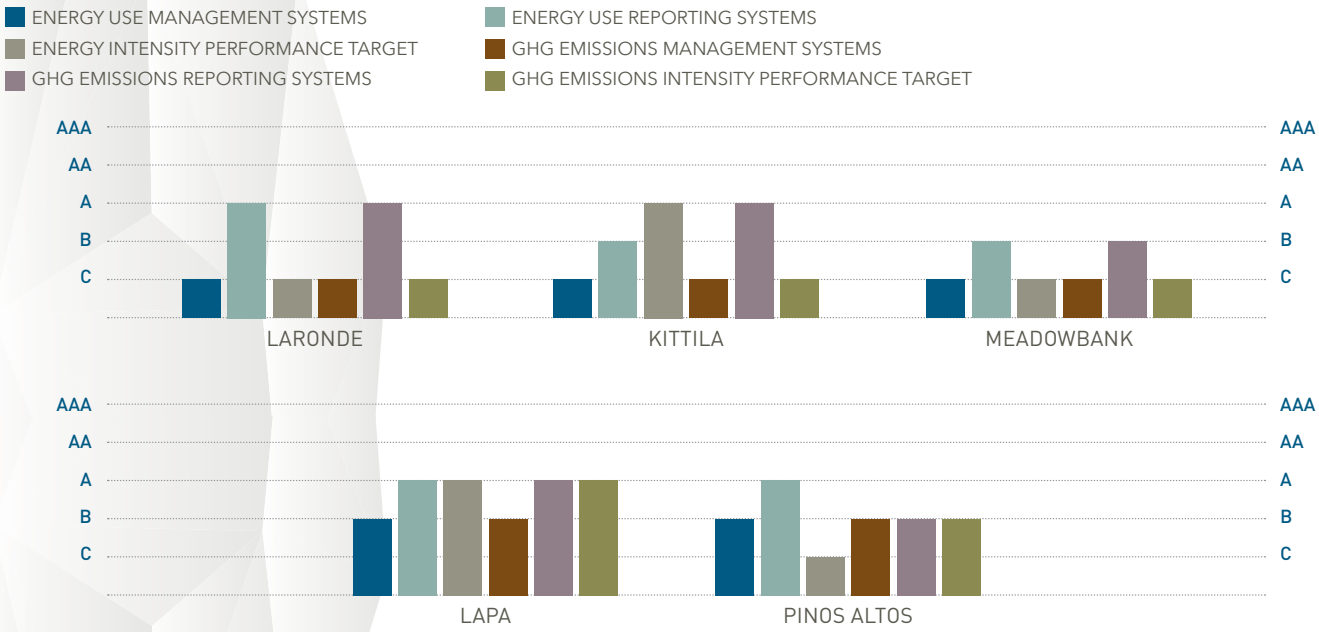
Meadowbank gold mine, Nunavut Territory.

AGNICO EAGLE MINES LIMITED

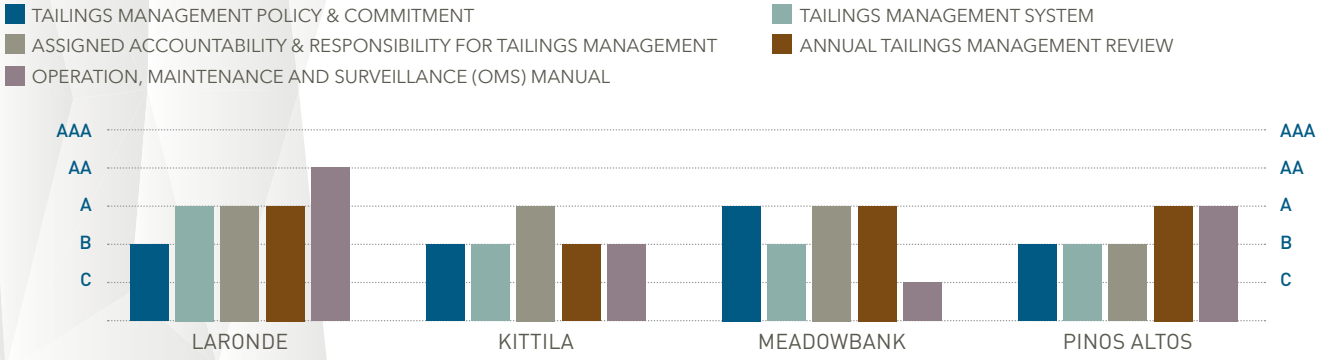
CRISIS MANAGEMENT PLANNING ASSESSMENT

FACILITY	PREPAREDNESS	REVIEW	TRAINING
KITTILA	✓	✓	✗
LAPA	✓	✓	✗
LARONDE	✗	✓	✗
MEADOWBANK	✓	✗	✗
PINOS ALTOS	✓	✓	✗

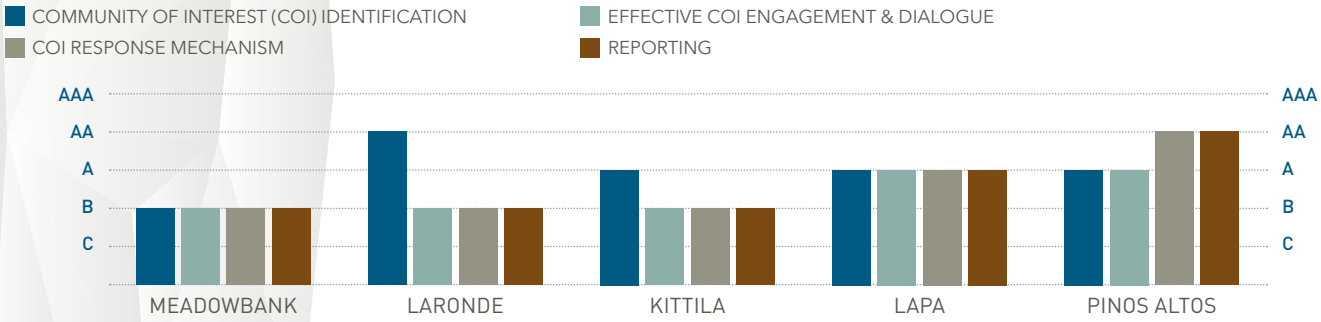
ENERGY USE & GHG EMMISSIONS MANAGEMENT ASSESSMENT



TAILINGS MANAGEMENT ASSESSMENT



ABORIGINAL AND COMMUNITY OUTREACH ASSESSMENT



Miners at Agnico Eagle's Lapa mine in the Abitibi region of northwest Quebec.

ARCELORMITTAL MINING CANADA G.P.

ArcelorMittal Mining Canada G.P. is a leading Canadian supplier of iron ore, producing nearly 40% of Canada's iron ore for the world's steel market. As both a mining and primary processing company, ArcelorMittal operates extensive facilities in Quebec. Its mining facilities and ore deposits, in Mont-Wright near Fermont, are linked by a 420-kilometre railway to the Port-Cartier industrial complex, which includes the pellet plant, private port, railway workshops and the company's corporate offices.

As a MAC member, ArcelorMittal Mining Canada G.P. continues to improve its performance within the TSM framework, continually strengthening its implementation of TSM protocols. As well, the company's environmental and quality management systems continue to be certified to ISO 14001:2004 and ISO 9001:2008 standards.

Since 2008, ArcelorMittal has made employee health and safety a company priority. In June 2011, the company's health and safety management system was registered under the OHSAS 18001:2007 standard. In light of this achievement, ArcelorMittal promoted its Courageous Leadership initiative to re-shape employee attitudes about health and safety, and to reflect the rigour the company applies to all its management processes. This initiative has led to a major improvement in ArcelorMittal's performance in 2012: accident numbers decreased markedly and similar results are likely in the future.

Although the Port-Cartier pellet plant is an industry leader in energy consumption per production tonne, ArcelorMittal is striving to improve the plant's global energy performance further. The aim is to be responsive to future and planned regulations for reducing GHG emissions while lowering manufacturing cost targets. In 2011, the establishment of an energy efficiency team resulted in the reduction of the company's costs and GHG emissions. In the medium term, ArcelorMittal's research and development efforts are focused on finding new energy sources for improving energy efficiency and reducing GHGs.

ArcelorMittal Mining Canada G.P. has been strongly committed to its community for over 50 years and continues to be involved with local communities through different initiatives. In addition to its donations and sponsorship, the company contributed $800,000 to the construction of the Pavillon de Technologie Minérale at the Cégep de Sept-Îles, a general and vocational college.

ArcelorMittal Mining Canada G.P.'s COI Advisory Panel, in addition to fostering an open and constructive dialogue between communities, has also directly supported the launch of numerous projects within Fermont and Port-Cartier. The communities were each granted an annual amount of $50,000 through the company's Environmental and Community Fund.

The company has also signed an Impact and Benefit Agreement with the Innu Takuaikan Uashat Mak Mani-Utenam. The agreement outlines the environmental impacts and mutual benefits of the company's projects.

ArcelorMittal Mining Canada G.P. remains convinced of the relevance and necessity of pursuing continuous improvement through the TSM initiative.

For more information, please visit the ArcelorMittal Mining Canada G.P. website: www.arcelormittal.com/minescanada.

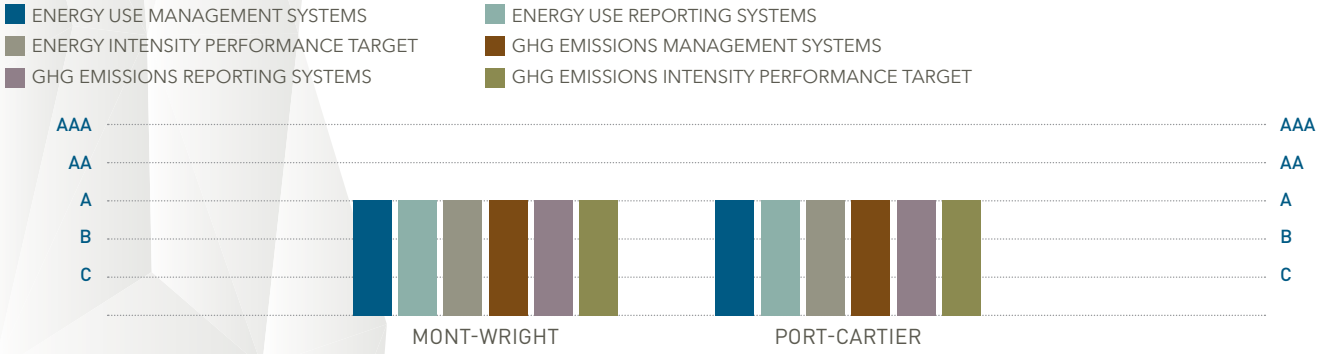
ARCELORMITTAL MINING CANADA G.P.

Towards Sustainable Mining
Vers le développement minier durable

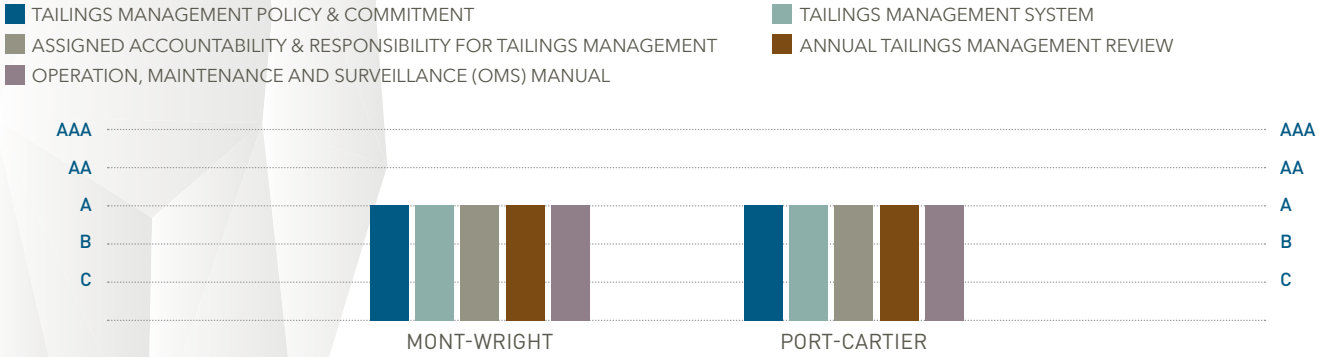
CRISIS MANAGEMENT PLANNING ASSESSMENT

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

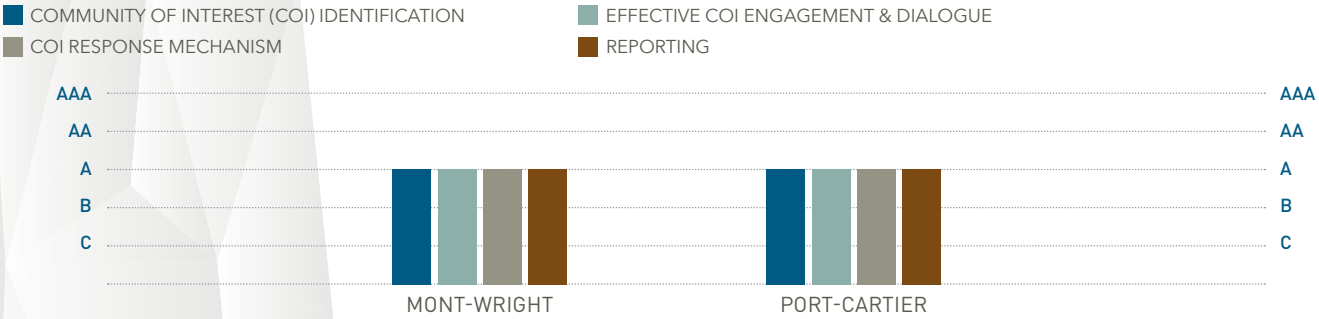
ENERGY USE & GHG EMMISSIONS MANAGEMENT ASSESSMENT



TAILINGS MANAGEMENT ASSESSMENT



ABORIGINAL AND COMMUNITY OUTREACH ASSESSMENT



BARRICK GOLD CORPORATION

Barrick Gold Corporation is the world's leading gold company, operating 27 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 is located in Toronto, Ontario.

Barrick's Hemlo operation, approximately 46 kilometres east of Marathon, Ontario, has produced gold continuously since 1985. The operation includes the David Bell underground mine, and Williams, an underground and open-pit mine. Both mines share a processing facility. Before 2010, the Hemlo operation was a 50-50 joint venture until Barrick acquired full ownership in 2010.

Although Hemlo was prepared to begin a staged closure in 2010, the operation has entered a new phase of its productive life. With the purchase of adjacent lands increasing the site's mineable reserves, the life of the Williams mine has been extended until 2018, with the possibility of additional expansions. The David Bell mine is expected to cease production in 2014.

Before these developments, Hemlo's TSM goal, given the expected closure of the Hemlo site, was to achieve and maintain a minimum of a Level A within each protocol. Now the operation's extended mine life provides new opportunities to enhance Hemlo's practices and operating standards. The operation 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 is illustrated by the site'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. Barrick's commitment to the environment and continued sustainability is further demonstrated by the surveillance recertification of Hemlo's environmental management system to the ISO 14001 standard.

The Hemlo operation continues to expand its external outreach and partnerships. The site is the first in Canada to participate in the Mining Essentials and Environmental Monitoring Training Program for Aboriginal people. This program enabled 10 members of the Pic River First Nation and Pic Mobert First Nation to receive training. The Hemlo operation continues to work on several initiatives with First Nation communities and other identified communities of interest.

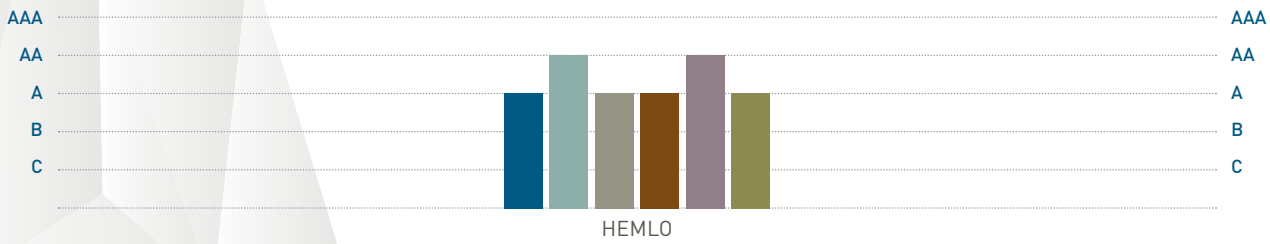
Hemlo is committed to continuous improvement in all aspects of its operation, including its engagement of all stakeholders and interested parties. For more information, please visit the Barrick website: www.barrick.com.

CRISIS MANAGEMENT PLANNING ASSESSMENT

FACILITY	PREPAREDNESS	REVIEW	TRAINING
CORPORATE	✓	✓	✓
HEMLO	✓	✓	✓

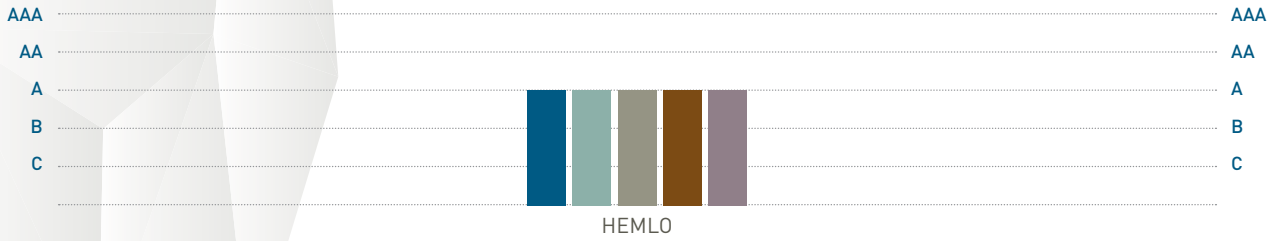
ENERGY USE & GHG EMMISSIONS MANAGEMENT ASSESSMENT

ENERGY USE MANAGEMENT SYSTEMS
ENERGY USE REPORTING SYSTEMS
ENERGY INTENSITY PERFORMANCE TARGET
GHG EMISSIONS MANAGEMENT SYSTEMS
GHG EMISSIONS REPORTING SYSTEMS
GHG EMISSIONS INTENSITY PERFORMANCE TARGET



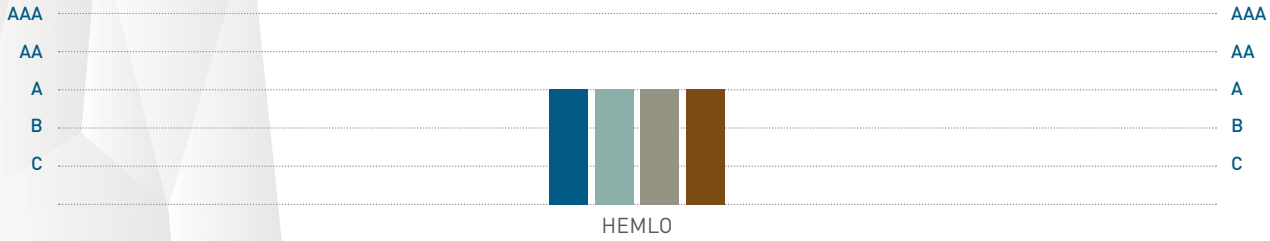
TAILINGS MANAGEMENT ASSESSMENT

TAILINGS MANAGEMENT POLICY & COMMITMENT
TAILINGS MANAGEMENT SYSTEM
ASSIGNED ACCOUNTABILITY & RESPONSIBILITY FOR TAILINGS MANAGEMENT
ANNUAL TAILINGS MANAGEMENT REVIEW
OPERATION, MAINTENANCE AND SURVEILLANCE (OMS) MANUAL



ABORIGINAL AND COMMUNITY OUTREACH ASSESSMENT

COMMUNITY OF INTEREST (COI) IDENTIFICATION
EFFECTIVE COI ENGAGEMENT & DIALOGUE
COI RESPONSE MECHANISM
REPORTING



BHP BILLITON CANADA INC

BHP Billiton Canada Inc. operated the EKATI diamond mine until April 2013, as joint venture between BHP Billiton (80%) and founding geologists Charles Fipke and Stewart Blusson (10% each). The EKATI Diamond Mine was recently acquired by Dominion Diamond Corporation. Located 310 kilometres northeast of Yellowknife, the mine operates in an area of continuous permafrost. This is a report of EKATI's 2012 TSM performance.

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 program 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 2012 were generally acceptable, reflecting BHP Billiton's continuing commitment to health, safety and sustainable development.

Tailings management and community and aboriginal engagement are two areas where the EKATI mine has consistently scored high, and that trend continued in 2012. 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 dialogue on sustainable community partnerships. Based on this dialogue, the EKATI mine has created community development plans that sharply focus on where its efforts will make the most difference in communities.

In 2012, EKATI made considerable efforts in the area of environmental stewardship, and the results achieved verify that those efforts are on track. Notably, EKATI made progress in understanding and conserving biodiversity, in effectively disposing of processed kimberlite, and in managing associated water quality.

In 2012, EKATI's emergency response team won the Surface Competition at the annual Mine Rescue Competition in Yellowknife. The team then competed in the 8th International Mine Rescue Competition in Donetsk, Ukraine. Competing against 26 of the best mine rescue teams in the world, EKATI placed first in the world for the rescue engineering event, and also placed among the top teams for the technician's bench and first aid contests, and for solving the mine rescue problem.

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

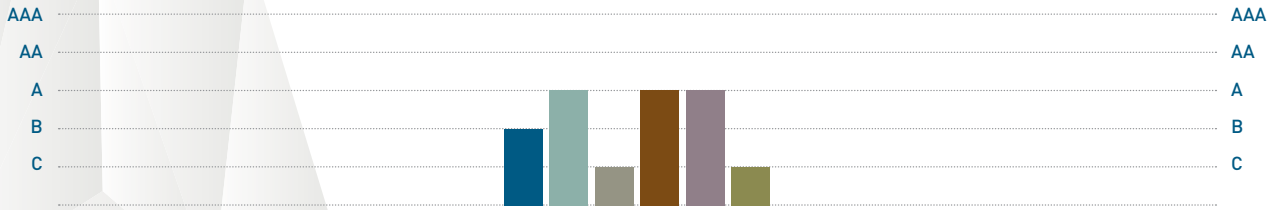
BHP BILLITON CANADA INC

CRISIS MANAGEMENT PLANNING ASSESSMENT

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

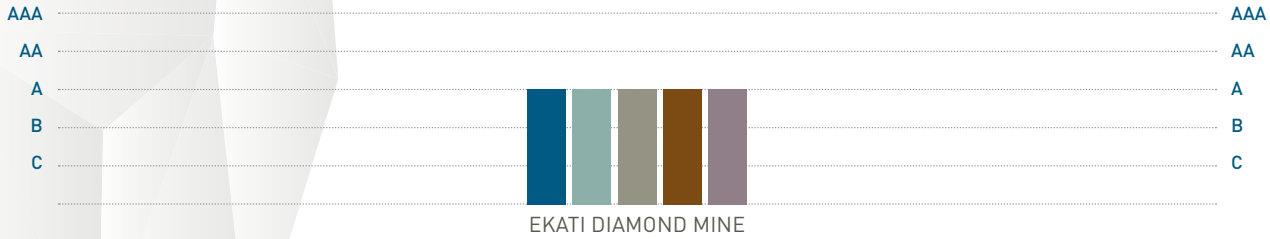
ENERGY USE & GHG EMMISSIONS MANAGEMENT ASSESSMENT

- ENERGY USE MANAGEMENT SYSTEMS
- ENERGY USE REPORTING SYSTEMS
- ENERGY INTENSITY PERFORMANCE TARGET
- GHG EMISSIONS MANAGEMENT SYSTEMS
- GHG EMISSIONS REPORTING SYSTEMS
- GHG EMISSIONS INTENSITY PERFORMANCE TARGET



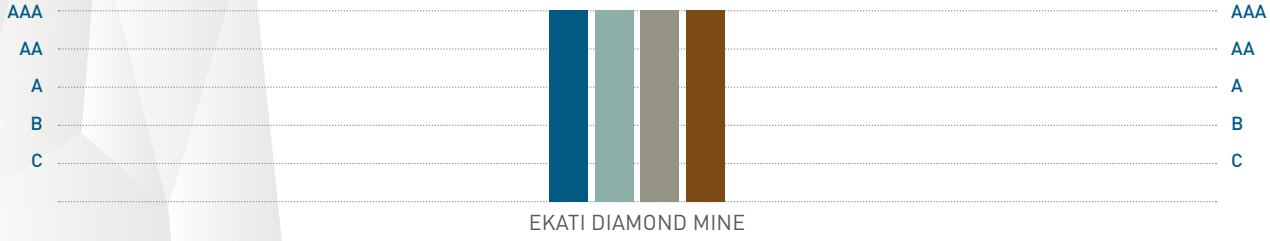
TAILINGS MANAGEMENT ASSESSMENT

- TAILINGS MANAGEMENT POLICY & COMMITMENT
- TAILINGS MANAGEMENT SYSTEM
- ASSIGNED ACCOUNTABILITY & RESPONSIBILITY FOR TAILINGS MANAGEMENT
- ANNUAL TAILINGS MANAGEMENT REVIEW
- OPERATION, MAINTENANCE AND SURVEILLANCE (OMS) MANUAL



ABORIGINAL AND COMMUNITY OUTREACH ASSESSMENT

- COMMUNITY OF INTEREST (COI) IDENTIFICATION
- EFFECTIVE COI ENGAGEMENT & DIALOGUE
- COI RESPONSE MECHANISM
- REPORTING



CAMECO CORPORATION

Cameco Corporation is a leading uranium producer and supplier of processing services required to produce fuel for nuclear power stations. The company's international mining and milling operations, including the facilities in northern Saskatchewan, account for 14% of the world's uranium production. Cameco meets high standards for safety and health and environmental performance, and earns the support of local people wherever it operates.

The most compelling advantage of nuclear energy is its ability to provide large amounts of electricity at a comparatively small environmental cost. To preserve this advantage, Cameco believes all aspects of the nuclear fuel cycle must be safe, clean and sustainable.

In 2012, Cameco marked its first reporting year in the TSM program. The company supports several organizations that have developed relevant policies and standards, including MAC, and believes that an important aspect of a sound management system is periodic evaluation against other the requirements of other organizations.

In the Aboriginal and community outreach area, Cameco has built strong relationships with stakeholder communities in northern Saskatchewan, where its mining operations are located. Effective programs are in place to engage stakeholders and to identify and address issues. After decades of working in partnership with northerners, Cameco is Canada's largest industrial employer of Aboriginal workers. Its Saskatchewan operations purchase 70% of their services from businesses owned by northern peoples. Cameco is recognized as a leader in Aboriginal relations by many external agencies, including the Canadian Council for Aboriginal Business. Opinion research demonstrates strong public support and trust in the company's local operations.

With respect to energy use and GHG emissions management, Cameco is a relatively small emitter of GHG. The electricity generated from Cameco's products and services avoids the emission of over 200 million tonnes of carbon dioxide each year if that electricity were generated by fossil fuels.

Cameco's facilities meet high regulatory standards set and administered by the Canadian Nuclear Safety Commission. Effective tailings management is a priority for Cameco, and the application of industry best practices provides assurance that its tailings facilities are managed effectively. Cameco's recent environmental focus has been on improving the quality of treated water released by its mines and mills, and the company has achieved significant improvement. Overall, Cameco's facilities are well managed, environmentally sound and monitored continually to ensure they perform as designed.

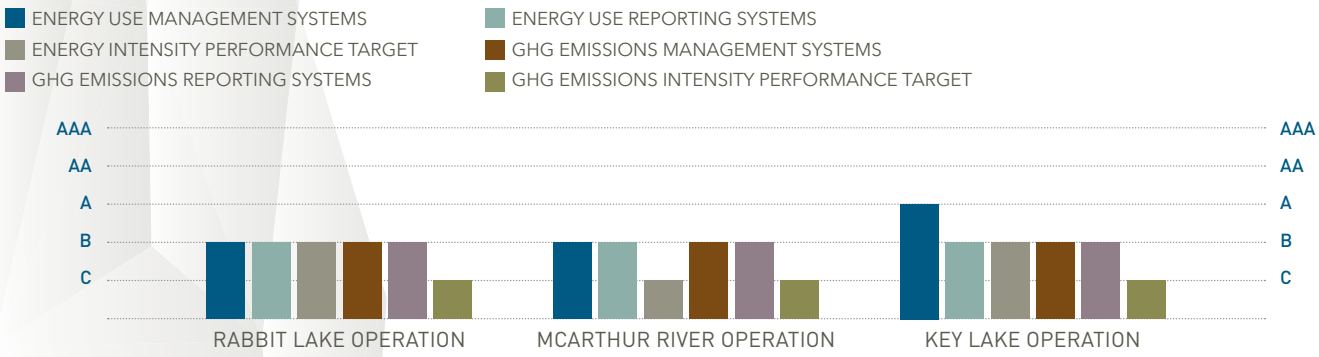
For more information, please visit Cameco's website: www.cameco.com.

CAMECO CORPORATION

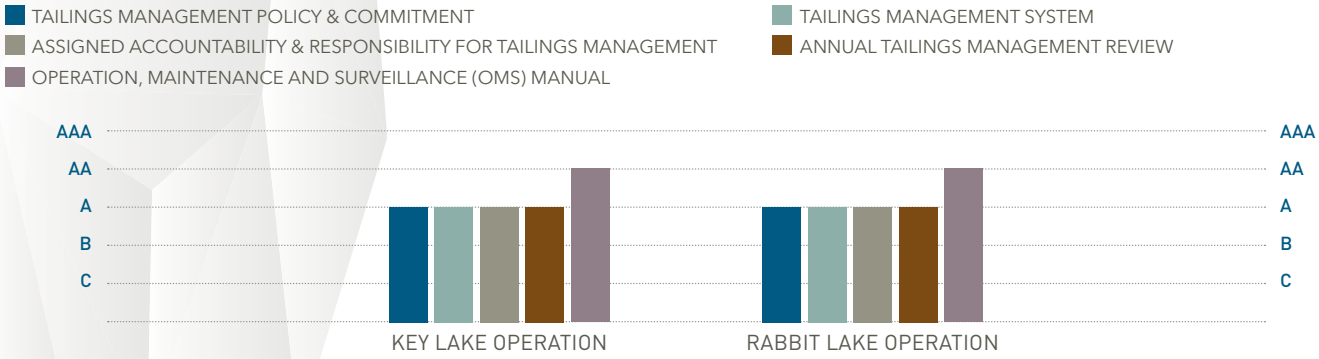
CRISIS MANAGEMENT PLANNING ASSESSMENT

FACILITY	PREPAREDNESS	REVIEW	TRAINING
CAMECO CORPORATION	✓	✓	✓
KEY LAKE OPERATION	✓	✓	✓
MCARTHUR RIVER OPERATION	✓	✓	✓
RABBIT LAKE OPERATION	✓	✓	✓

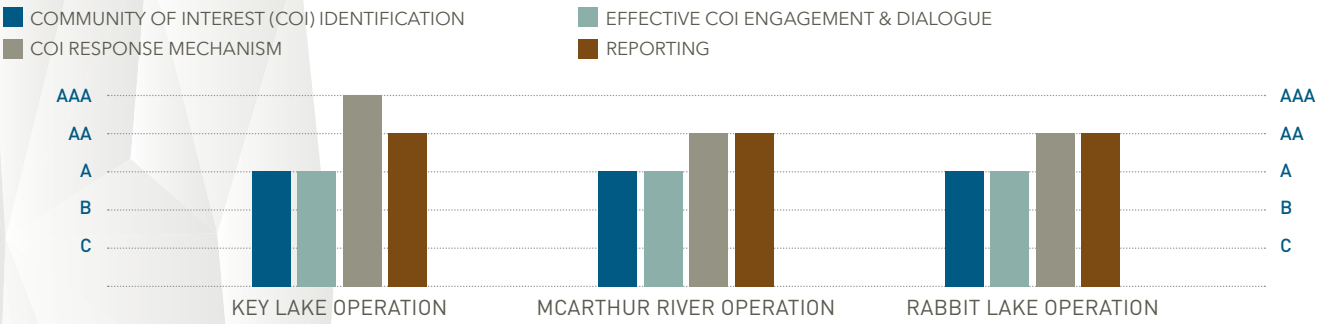
ENERGY USE & GHG EMMISSIONS MANAGEMENT ASSESSMENT



TAILINGS MANAGEMENT ASSESSMENT



ABORIGINAL AND COMMUNITY OUTREACH ASSESSMENT



DE BEERS CANADA INC

De Beers Canada's Snap Lake mine, the country's only fully underground diamond mine, is located approximately 220 kilometres northeast of Yellowknife. The company's Victor mine, Ontario's first and only diamond mine, is located 90 kilometres west of the Attawapiskat First Nation in northeastern Ontario. The company is also the majority partner in the Gahcho Kué project in the Northwest Territories, which may become De Beers Canada's third operation in the future.

De Beers Canada's operations are committed to sustainable development, and both the Snap Lake and the Victor mines have signed impact benefit agreements with eight First Nations communities. Both mines maintain safety, health and environmental management systems that have been certified to OHSAS 18001 and ISO 14001.

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 of companies, De Beers Canada 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.

The following is a summary of TSM results for De Beers Canada in 2012.

CRISIS MANAGEMENT PLANNING

Crisis management plans for the corporate office and Victor mine conform to all TSM performance requirements. Snap Lake maintained a crisis management plan that met all the TSM performance requirements, with one exception: the crisis notification system was tested once as opposed to twice during the year.

ENERGY USE AND GHG EMISSIONS MANAGEMENT

The Victor mine improved its performance above Level A for four of six indicators through internal verification and external auditing. Snap Lake experienced a setback in program continuity and performance due to the resignation of the site energy champion, a role that was reassigned towards the end of the year. Both mines self-assessed at Level B for the reporting performance indicator due to changes to annual public reporting, which aggregated energy and GHG reporting at a group level. In 2013, the site will publicly report its energy use and GHG emissions data, as well as its performance against established targets.

TAILINGS MANAGEMENT

The Snap Lake and Victor mines maintained either a Level AA or AAA for all of the tailings management performance indicators. Both mines participated in the De Beers group's annual tailings management assurance and review program. The Victor mine also undertook a third-party audit of selected elements of its tailings management program.

ABORIGINAL AND COMMUNITY OUTREACH

Both mines maintained either a Level AA or AAA for all of the Aboriginal and community outreach performance indicators.

BIODIVERSITY CONSERVATION MANAGEMENT

The Victor mine completed a detailed review of existing programs compared to TSM performance requirements. The mine conducted an ecological risk assessment and determined appropriate ongoing monitoring needs. Overall, the review concluded that only very minor adjustments are required to ensure that risks to biodiversity and threatened species are adequately monitored in accordance with TSM and De Beers' standards. This is due to the mine's extensive monitoring programs, which are already in place for various permits, environmental assessment follow-up programs and research initiatives.

Implementing the recommendations from the review will take place in 2013. The same recommendations will also be implemented in Snap Lake's programs in 2013. As result, a Level A performance for all indicators is targeted for both mines in 2013.

SAFETY AND HEALTH

The safety and health management systems at both mines were certified to OHSAS 18001, and were self-assessed at Level AAA for all TSM performance indicators, except for the policy, commitment and accountability indicator, which was assessed at Level AA. In 2013, this indicator will be targeted for Level AAA by explicitly including MAC's safety and health protocol as a criterion for external OHSAS 18001 audits.

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

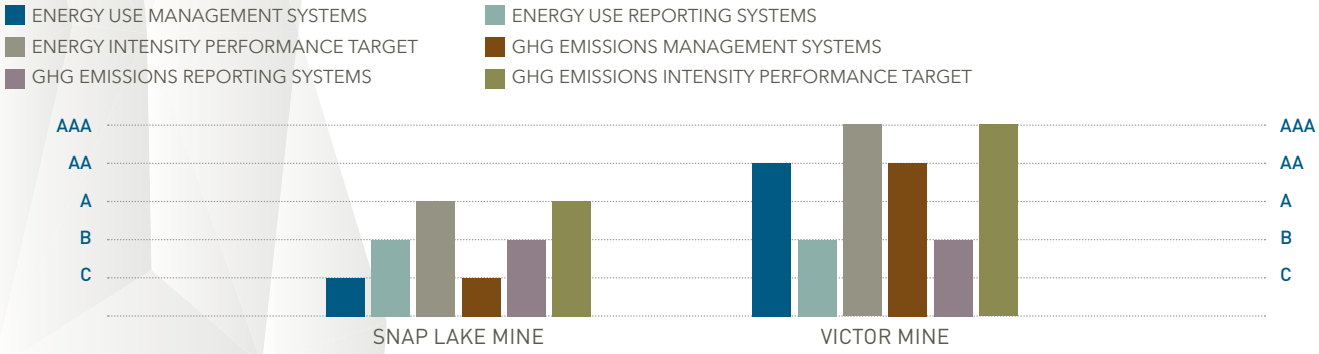
Aerial view of De Beers' Victor Mine in Ontario.

DE BEERS CANADA INC

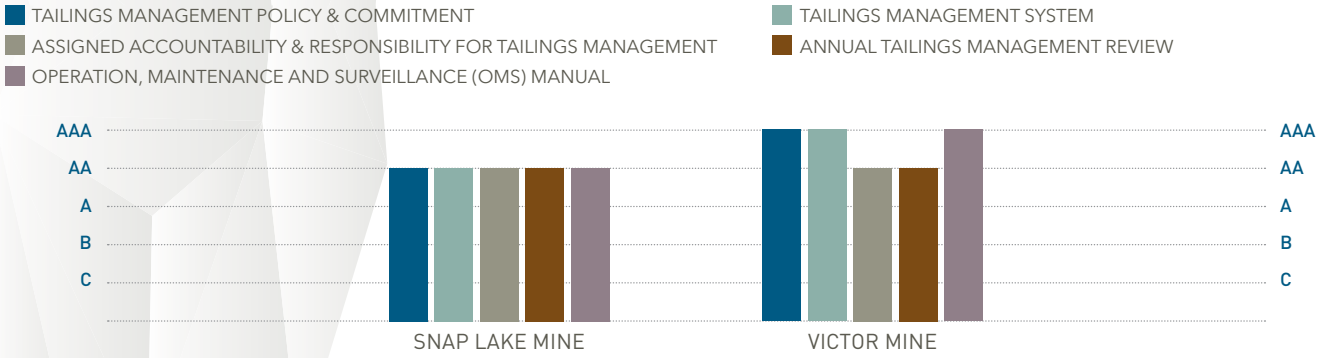
CRISIS MANAGEMENT PLANNING ASSESSMENT

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

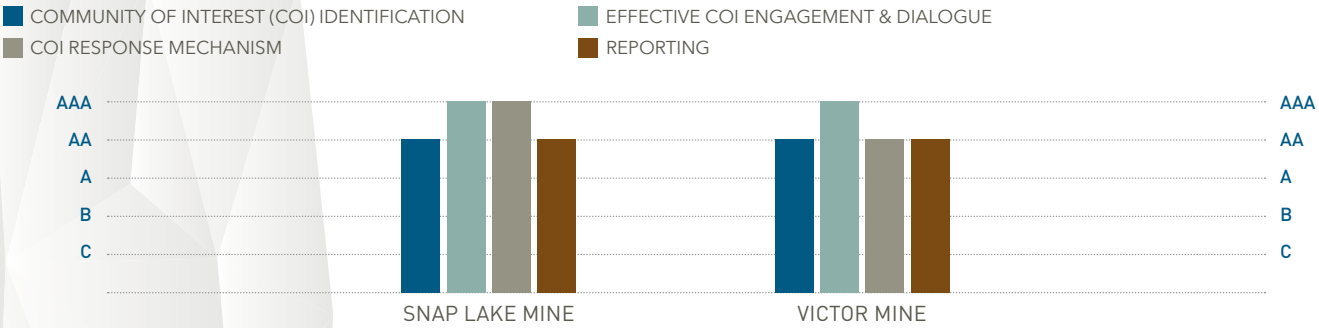
ENERGY USE & GHG EMMISSIONS MANAGEMENT ASSESSMENT



TAILINGS MANAGEMENT ASSESSMENT



ABORIGINAL AND COMMUNITY OUTREACH ASSESSMENT



GLENCORE COPPER OPERATIONS

Glencore Copper Operations (formerly Xstrata Copper Canada) is part of a network of transformation operations, which includes smelters and refineries in Australia, the Philippines and Chile. With global support services based in Toronto and Montreal, the smelters and refineries are part of the larger Glencore copper business.

Glencore Copper's production is vital to society. Copper is used extensively in energy generation and distribution, building products, electronic equipment and a vast array of everyday objects, from cellphones to kitchen utensils. With its growing use in green technologies and antimicrobial applications, as well as its ability to be recycled, copper is playing an important role in creating a sustainable future. Approximately 1,300 people are employed at the company's Horne smelter (Rouyn-Noranda, Quebec), CCR refinery (East-Montreal, Quebec), recycling operations, 15 closed sites and the administrative office in Toronto.

Copper is 100% recyclable, and it is estimated that at least 80% of all mined copper is still being used. The Horne smelter—the only stand-alone active copper smelter in Canada—is a pioneer and world leader in recycling end-of-life electronics and scrap metal to retrieve their copper and precious metals.

The location of the Horne smelter is next to a residential area, which poses unique challenges that are openly discussed with the company's local citizens' committees. Only two noise complaints were received in 2012 compared with five in 2011, while complaints about odours and fumes decreased from 51 to 39. These improvements were the result of targeted actions, such as signage near the site to reduce vehicle speed in the neighbourhood. In recent years, the smelter installed supplementary gas collection equipment, and implemented a process to find the root cause of each incident of fugitive sulphur dioxide emission and make the necessary corrections.

In addition, the smelter met the reduction objectives of a first multi-year plan to address arsenic emissions, and the company developed a new, five-year plan to lower arsenic emissions at ground level by yet another 50% from its 2011 target.

In 2012, the aging vehicle fleet of the Horne smelter was replaced with eight hybrid vehicles and 27 low fuel consumption trucks.

The CCR refinery—the only copper refinery in Canada—refines copper anodes and precious metals from the Horne smelter and other sources. The gold produced at the refinery is certified to the Conflict-Free Gold Standard, which means that it is not linked to human rights abuse and does not support armed conflicts, money laundering or terrorist financing. In 2012, the CCR refinery was awarded the 2012 Prix Hélène-Vandal for the implementation of activities to promote women working in metallurgy and the Grande Mention prize from the Mouvement québécois de la qualité for outstanding performance in the area of quality and best management practices.

A substantial investment to add treatment capacity at Glencore Copper's selenium recovery plant reduced the amount of selenium ending up in the wastewater treatment plant by approximately 90%. New equipment installed at the water treatment plant enabled the refinery to meet the City of Montreal's stringent new limits.

The CCR refinery has implemented a number of measures over the past few years to reduce fugitive emissions of arsenic, nickel and acid mist. However, diffuse emissions continue to be a challenge, and the refinery plans to test a pilot capture hood in 2013. This will lead to the testing of a new baghouse to replace one that has been operating since 1973.

In 2010, the company permanently closed the Kidd copper and zinc metallurgical plants, with the mine and concentrator remaining. The site is now part of 15 closed sites that are actively managed by local employees who make sure that all on-site structures and water treatment equipment, when needed, are in good condition. In 2012, the company completed the rehabilitation of the former Kidd metallurgical site ahead of time and under budget, and without a reportable safety or environmental incident. This tremendous undertaking involved removing equipment, dismantling buildings, disposing of hazardous materials, and collecting and transporting scrap metal and other materials for reuse and recycling, as well as closing and capping the jarosite pond. Soil remediation will be the final phase of the work, once the Kidd mine and Kidd concentrator cease operations.

For more information, please visit the Glencore website: www.glencorexstrata.com.

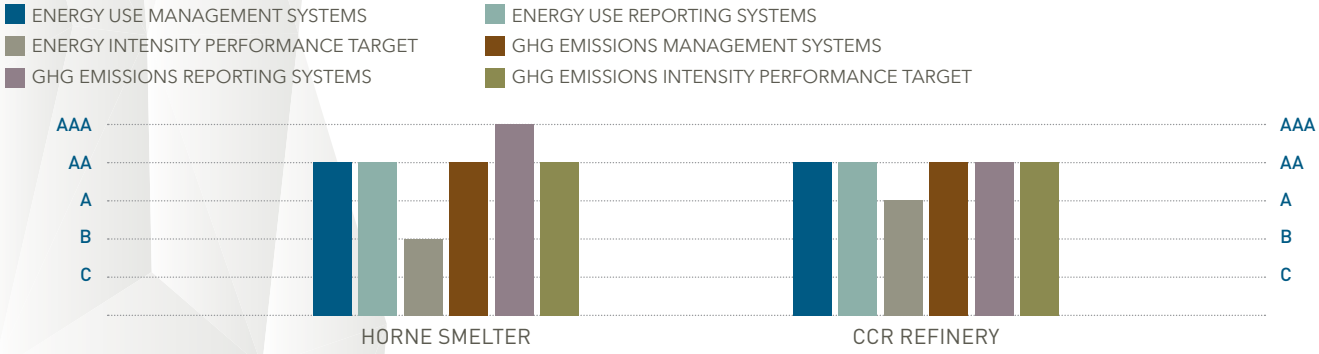
Glencore's Horne Smelter in Rouyn-Noranda, Quebec.

GLENCORE COPPER OPERATIONS

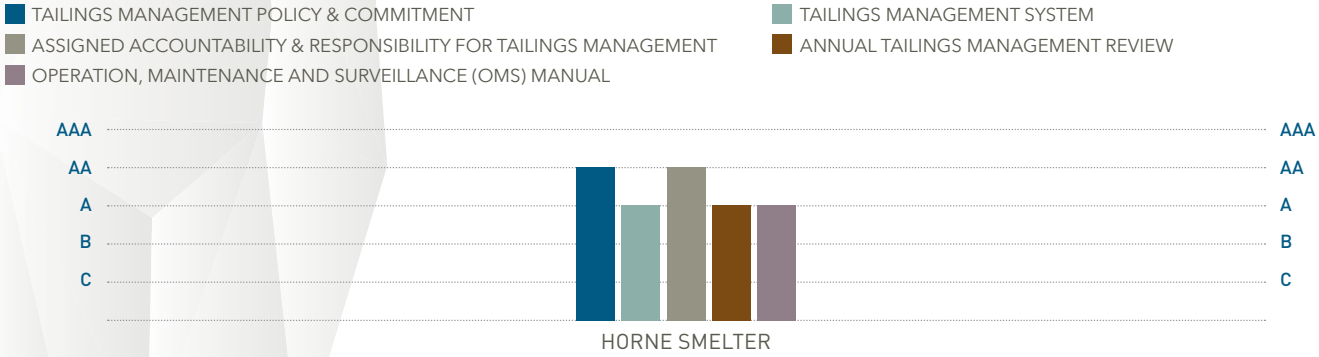
CRISIS MANAGEMENT PLANNING ASSESSMENT

FACILITY	PREPAREDNESS	REVIEW	TRAINING
CCR REFINERY	✓	✗	✓
CORPORATE	✓	✓	✓
HORNE SMELTER	✓	✗	✗

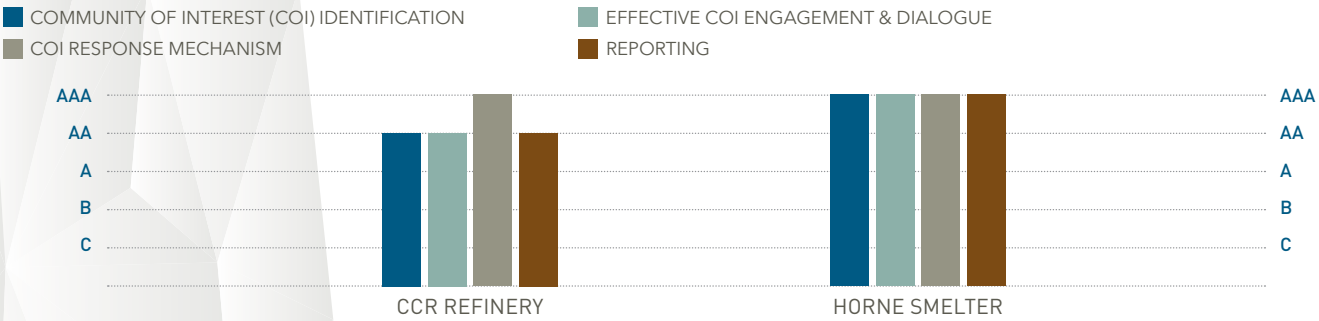
ENERGY USE & GHG EMMISSIONS MANAGEMENT ASSESSMENT



TAILINGS MANAGEMENT ASSESSMENT



ABORIGINAL AND COMMUNITY OUTREACH ASSESSMENT



GLENCORE NICKEL OPERATIONS

In May 2013, Glencore Xstrata plc was formed following the merger of Glencore International plc and Xstrata plc. Glencore Xstrata is one of the world's largest global diversified natural resource companies.

Sustainability lies at the foundation of Glencore'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.

Glencore's five values form the foundation for the way it runs its business. The company's Code of Conduct outlines minimum requirements for its employees, and provides direction and guidance in applying Glencore's values. The Code of Conduct includes 12 focus areas related to health and safety, sustainability and business practices.

The company's values and Code of Conduct, combined with the underlying policies supporting them and the associated operational management procedures for sustainability, represent Glencore's commitment to upholding sustainability in its business practices. They also underpin the company's TSM performance.

Glencore's nickel assets include mines and processing facilities in Canada, the Dominican Republic and Australia, and a refinery in Norway. The company also has a world-class portfolio of growth projects in New Caledonia and Tanzania. Its Canadian mining operations and processing facilities are located in Ontario and Quebec.

Glencore Nickel is the world's fourth-largest nickel producer, with annual managed production of 142,000 tonnes. It produces some of the world's purest nickel, ferronickel and cobalt, and is one of the largest recyclers and processors of nickel and cobalt-bearing materials.

The following facilities have implemented TSM:

- Sudbury Integrated Nickel Operations
- Raglan mine

In 2012, Sudbury Integrated Nickel Operations' performance for energy use and GHG emissions management improved due to the implementation of reporting systems for both indicators. Sudbury Integrated Nickel Operations also integrated biodiversity conservation management into its existing ISO 14001-certified environmental management systems. Doing so improved performance for the indicators related to this element. Continued improvement also occurred for the safety and health indicators as a result of the operations' safety leadership program, Rules to Live By, implementation of core hazard management plans and other initiatives.

In 2012, Glencore Nickel also showed improvements in health and safety scores at its Raglan mine. Raglan launched its zero harm program, and 1,000 workers were trained in this new health and

safety culture. Zero harm promotes an accident prevention approach for all operations, from design to equipment maintenance, and from work planning to task performance. Every person involved in a task—whether it's an employee or contractor—must play a health and safety leadership role.

Raglan mine's 2012 performance improved for indicators associated with biodiversity assessment with the completion of the Minnow Environmental report. The report presents a 15-year summary of environmental monitoring at Raglan. Also in 2012, Raglan reinforced its engagement with communities by increasing the frequency and depth of communications on matters of mutual interest. For example, Raglan enhanced lines of direct communication between Inuit stakeholders and its management team during public consultations for the mine's wind turbine project.

For more information, please visit the Glencore website: www.glencorexstrata.com.

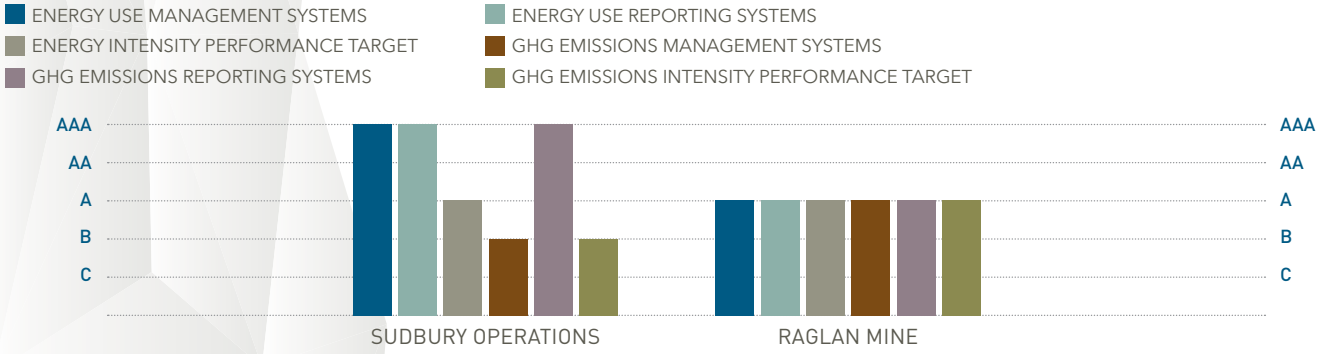
Glencore's Nickel Rim South mine in Sudbury, Ontario.

GLENCORE NICKEL OPERATIONS

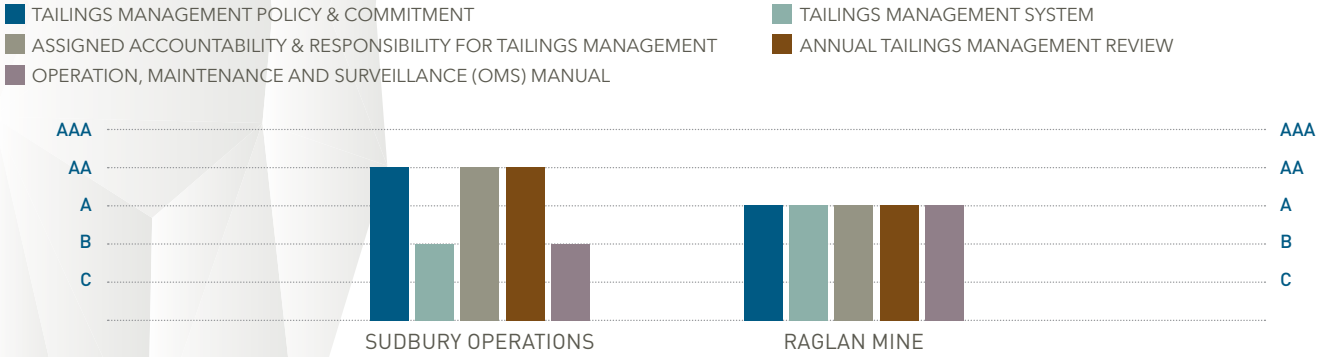
CRISIS MANAGEMENT PLANNING ASSESSMENT

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

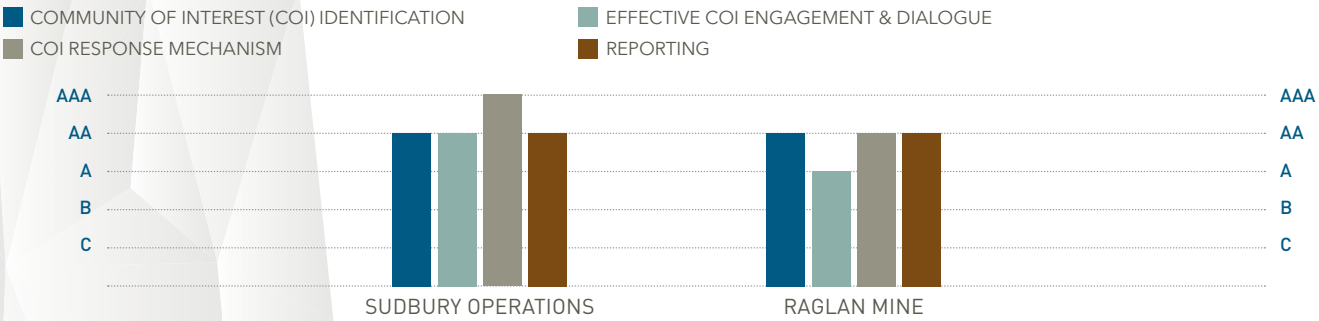
ENERGY USE & GHG EMMISSIONS MANAGEMENT ASSESSMENT



TAILINGS MANAGEMENT ASSESSMENT



ABORIGINAL AND COMMUNITY OUTREACH ASSESSMENT



GLENCORE ZINC OPERATIONS

Glencore (formerly Xstrata Zinc Canada) manages the North American operations of the 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
- Kidd Operations, Timmins, Ontario (transferred from Glencore Copper in May 2013)

Sustainability lies at the foundation of Glencore'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.

Glencore's five values are the foundation for the way it runs its business. The company's Code of Conduct outlines minimum requirements for its employees, and provides direction and guidance in applying Glencore's values. The Code of Conduct includes 12 focus areas relating to health and safety, sustainability and business practices.

Tailings dam management is a vital environmental concern. A tailings dam failure would be considered a catastrophic hazard under the Glencore Risk Management framework. The Brunswick and Kidd mines have very strong management systems in place because of the risk inherent in these types of facilities. Their management systems, as well as the sites' OMS manuals, are subject to regular third-party audits and internal audits. No further work is anticipated on the management systems at the Brunswick and Kidd mines, as the priority now is effective closure planning.

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

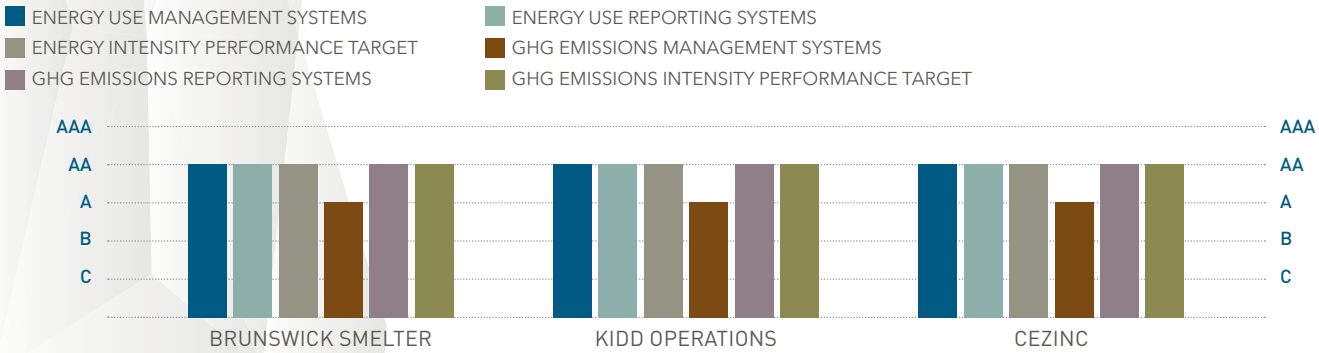
For more information, please visit the Glencore website: www.glencorexstrata.com.

GLENCORE ZINC OPERATIONS

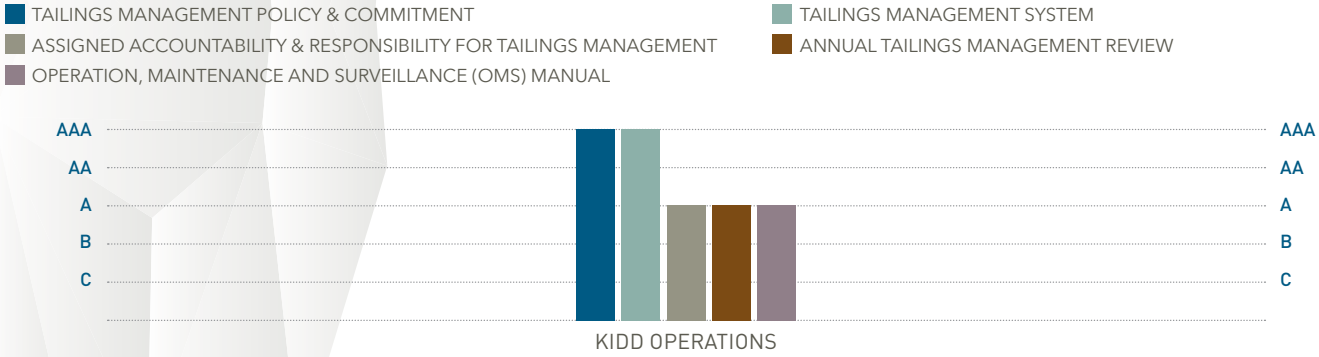
CRISIS MANAGEMENT PLANNING ASSESSMENT

FACILITY	PREPAREDNESS	REVIEW	TRAINING
BRUNSWICK SMELTER	✓	✓	✓
KIDD OPERATIONS	✓	✓	✓
CEZINC	✓	✓	✗

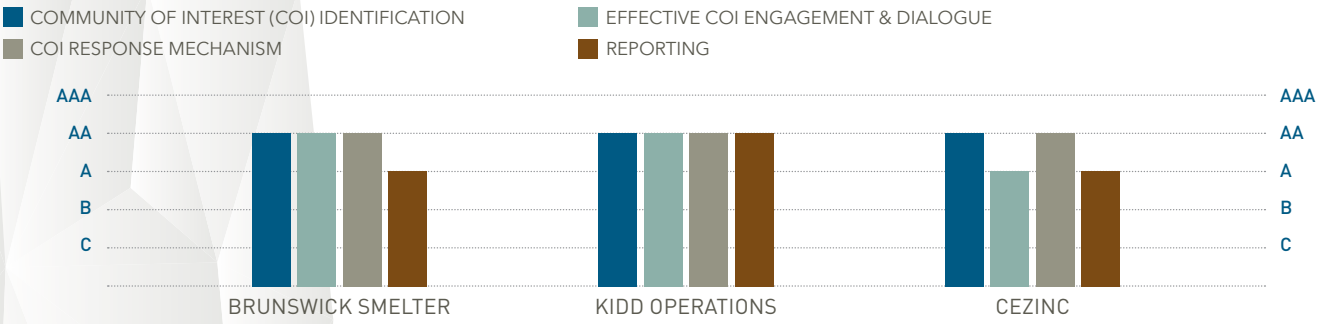
ENERGY USE & GHG EMMISSIONS MANAGEMENT ASSESSMENT



TAILINGS MANAGEMENT ASSESSMENT



ABORIGINAL AND COMMUNITY OUTREACH ASSESSMENT



COMPANY PROFILE

HUDBAY MINERALS INC

Hudbay Minerals is an exploration, mining and processing company active in Canada, the United States, Peru, Colombia and Chile. Hudbay's only current operating facilities are located in Flin Flon and Snow Lake, Manitoba.

In 2012, Hudbay's safety and health performance slipped slightly compared to 2011, the best year the company had ever recorded in the 85-year history of its Manitoba operations. However, Hudbay's 2012 performance was still impressive due to the dedication of the company's employees and contractors.

In 2012, Hudbay actively engaged with local First Nations communities near its Lalor and Reed sites—two new mine construction projects in Manitoba. The company worked with the Manitoba government to develop a consultation process for mine development. Hudbay also funded a traditional use study and independent environmental assessment of its proposed operations for one First Nations community. Hudbay also supported the proposed Manitoba mining roundtable, a committee intended to bring together First Nations, government and industry to address First Nations concerns.

In 2012, Hudbay's TSM performance was verified by a third party, and its internal assessments remained unchanged following this review. The company's goal for 2013 is to maintain its scores.

Hudbay has committed to implementing TSM protocols at sites outside Canada once they are operational. TSM protocols have already been introduced to personnel in Peru, who are building the Constancia mine. They are currently designing management systems to meet the requirements of the protocols. The company intends to start reporting on its performance at the Constancia mine once construction is complete and operations begin.

For more information, including Hudbay's annual sustainability reports and details on safety, environmental and social performance, please visit the Hudbay Minerals website: www.hudbayminerals.com.

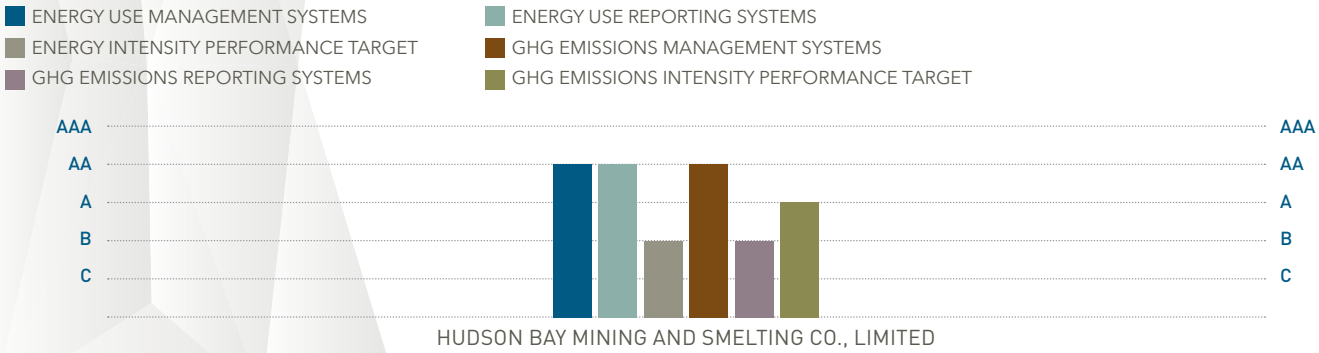
Hudbay Minerals' operation in Flin Flon, Manitoba.

HUDBAY MINERALS INC

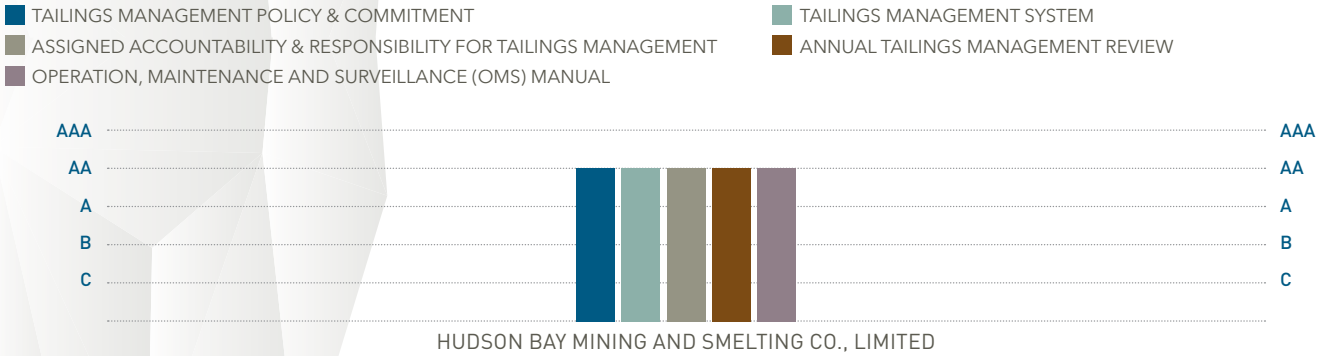
CRISIS MANAGEMENT PLANNING ASSESSMENT

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

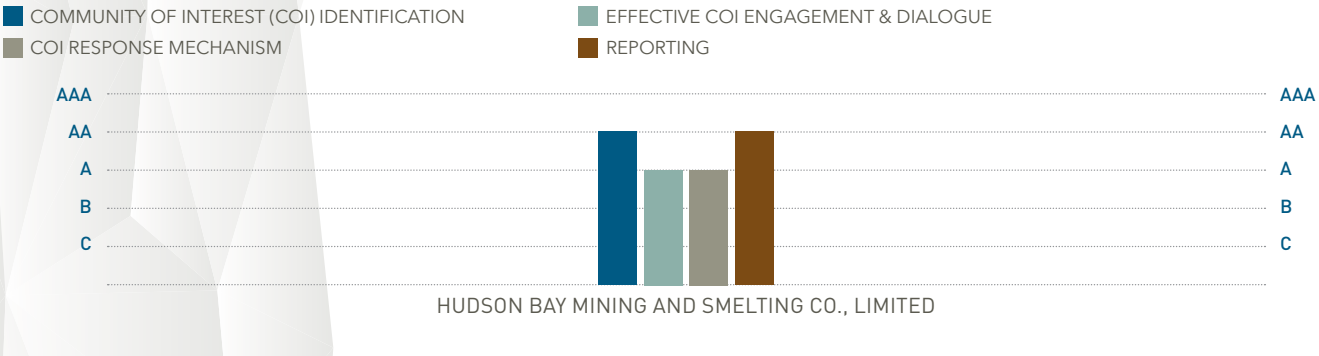
ENERGY USE & GHG EMMISSIONS MANAGEMENT ASSESSMENT



TAILINGS MANAGEMENT ASSESSMENT



ABORIGINAL AND COMMUNITY OUTREACH ASSESSMENT



IAMGOLD CORPORATION

IAMGOLD is a leading mid-tier Canadian gold mining company, with five operating mines on three continents (including current joint ventures) that collectively produce approximately one million ounces of gold a year.

In Quebec, the company operates Niobec Inc., one of the world's top three producers of niobium. IAMGOLD is well positioned for growth, with a strong financial position and extensive management and operational expertise. It has a lineup of development and exploration projects, and continues to assess accretive acquisition opportunities. The company's growth plans are strategically focused on certain regions in Canada and select countries in South America and Africa.

The Westwood gold mine, which is still under development, is located 35 kilometres east of Rouyn-Noranda, Quebec, next to the former Doyon gold mine. When the Westwood mine begins production in 2013, it will use some of the Doyon infrastructure, such as the former open pit for tailings storage. Avoiding the use of undisturbed land for this purpose means Westwood will minimize its environmental footprint. Despite the fact that the site is not in operation, IAMGOLD has been including Westwood in its TSM reporting since 2009.

In 2012, IAMGOLD acquired the Côté Gold Project in northern Ontario. The project deposit is located in north-central Chester Township, about half way between Timmins and Sudbury, and is approximately 25 kilometres southwest of Gogama. As this project advances towards construction and development, IAMGOLD will add it to its TSM reporting.

Zero harm is the vision that guides IAMGOLD. The company is committed to do no harm and bring benefits wherever it operates. IAMGOLD continuously works towards achieving the highest standards in human health, environmental management and community engagement. Zero harm is both a goal and a journey. It is well understood by the company's employees, in whatever language they operate, and is part of how they conduct business. The TSM program is a component of zero harm and, therefore, is a key part of IAMGOLD's operating practices and pursuit of excellence.

As a MAC member, IAMGOLD upholds its commitment to TSM by continually strengthening the application of TSM protocols. In 2012, the company underwent external verification and is pleased to report that it experienced overall improvement from last year's results. The verification process was helpful in identifying several areas for additional improvements, and the company has plans to implement them in 2013. In 2012, IAMGOLD received TSM awards for its community engagement, crisis management and tailings management.

IAMGOLD recognizes that tailings are typically a mining operation's most significant environmental risk. With this in mind, the company conducts a supplementary third-party tailings audit each year to provide rigour to the regular inspection program required under TSM. In 2012, IMAGOLD completed the OMS manual at the Essakane operation in Burkina Faso. Now all of IAMGOLD's operations have achieved a Level A in tailings management indicators for the first time.

Action plans to address deficiencies in communication with communities of interest were put in place at all sites. As a result, IAMGOLD achieved a Level A or higher for each of the Aboriginal and community outreach performance indicators.

Performance on energy use and GHG emissions management remains the weakest overall area, and one for future focus. However, IAMGOLD continues to take part in the Carbon Disclosure Project and expects to see improvements.

For more information on IAMGOLD's sustainability and engagement programs and progress, including the *IAMGOLD 2012 Health, Safety and Sustainability Annual Report*, please visit the company's website: www.IAMGOLD.com.

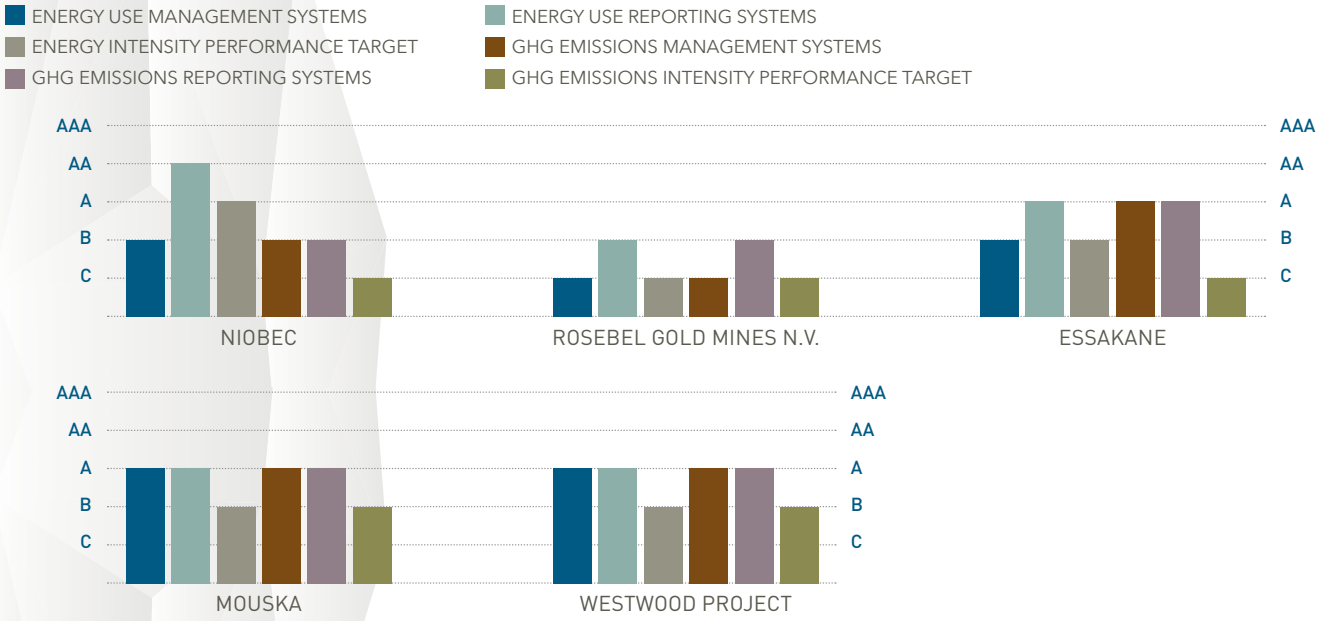
Miners at IAMGOLD's Westwood project in Southwestern Quebec.

IAMGOLD CORPORATION

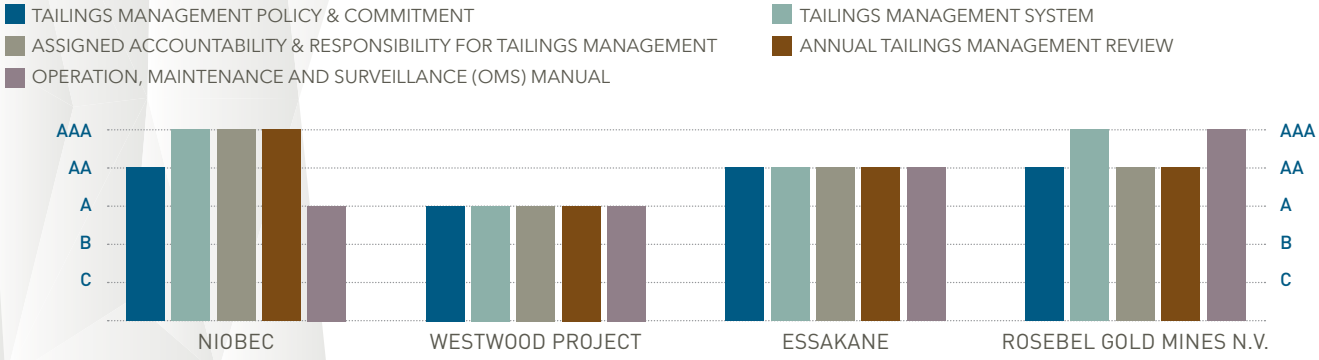
CRISIS MANAGEMENT PLANNING ASSESSMENT

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

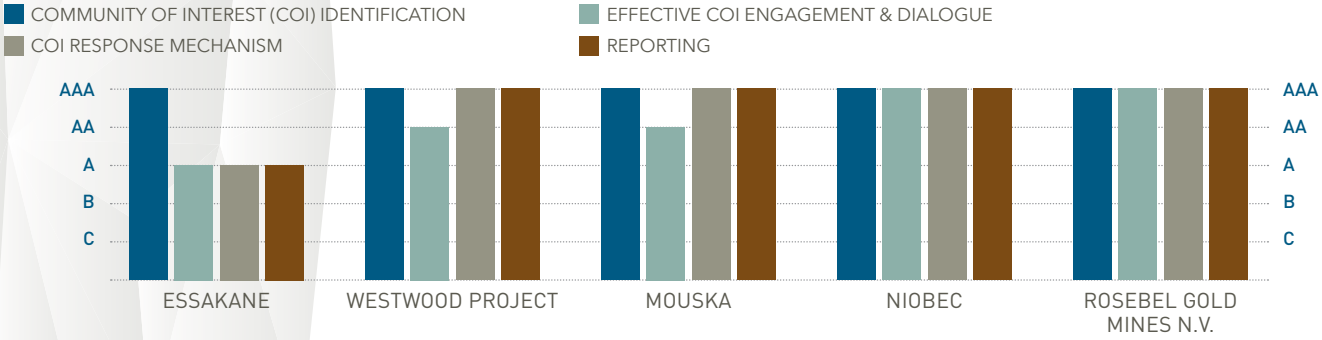
ENERGY USE & GHG EMMISSIONS MANAGEMENT ASSESSMENT



TAILINGS MANAGEMENT ASSESSMENT



ABORIGINAL AND COMMUNITY OUTREACH ASSESSMENT



INMET MINING CORPORATION*

Inmet's commitment to corporate responsibility focuses on managing risks prudently and being good stewards. The company recognizes that the social and environmental challenges of development are greater than it can address alone. By working with customers and suppliers and in cooperation with industry peers, NGOs, governments and communities, Inmet aims to make a positive difference through its operations.

TSM is one of the tools Inmet uses to manage risk. The company's six closed sites and active operations in Finland, Spain and Turkey continue to complete yearly TSM self-assessments. Inmet's evolving development property, Cobre Panama, also completes TSM self-assessments in order to identify gaps and improve risk management. In 2012, Inmet once again scored well on crisis and tailings management, safety and health, and Aboriginal and community outreach. The company's performance in biodiversity conservation management, energy and GHG management is also improving.

TAILINGS MANAGEMENT

Tailing facility impacts can be severe if not properly managed, so Inmet strives to manage tailings in a safe and environmentally responsible manner. In 2012, Inmet's operation in Turkey completed its OMS manual, meeting its objective of having OMS manuals for all operating and closed properties, both in Canada and abroad. In 2012, Inmet made improvements in tailings management by auditing the accountability and management reviews at several of its facilities.

CRISIS MANAGEMENT PLANNING

In 2012, Inmet completed crisis simulation exercises at all of its majority-owned sites and closed properties. Inmet's operations also reviewed and updated their crisis management plans to ensure that they are responsive to risks and reflect best practices. A crisis simulation is scheduled to be carried out annually at the corporate office, but it was not completed in 2012.

ABORIGINAL AND COMMUNITY OUTREACH

At each of its sites, Inmet is committed to:

- Constructive engagement on environmental, social and economic impacts and on opportunities associated with its business
- Transparent disclosure of information allowing for effective dialogue and resolution of potential concerns
- A community feedback mechanism designed to address stakeholders' concerns and grievances
- Sustainable community development where the community is integrally involved in the design, implementation and management of its own development

In 2012, Inmet's operations in Turkey and Panama once again scored well under all TSM elements, while operations in Spain showed significant improvement on community of interest identification, engagement and dialogue.

* Now First Quantum Minerals

ENERGY USE AND GHG MANAGEMENT

Mining is an energy-intensive activity, so monitoring and managing energy use is both an environmental responsibility and a sound business practice. In 2012, Inmet developed a Corporate Responsibility Management System, which includes a procedure to promote energy conservation and GHG emissions reduction. Inmet developed this procedure consistent with MAC's guidelines to ensure its operations proactively manage energy to reduce energy consumption as well as GHG emissions. To date, Inmet's operation in Turkey and its closed properties in Canada have implemented the procedure, which includes developing an energy management team and plan. Inmet also continues to participate in the Carbon Disclosure Project.

SAFETY AND HEALTH REPORTING

Making sure its people return home to their families each night is Inmet's top priority. Inmet is succeeding in changing behaviour and improving the safety culture across the company. In 2012, its sites continued to score well under each element. The company is particularly proud of its operation in Finland, which has gone more than two years without a lost-time injury.

BIODIVERSITY CONSERVATION MANAGEMENT

Inmet's Corporate Responsibility Management System includes a procedure for biodiversity management. This procedure is aligned with MAC's biodiversity conservation management protocol and will be implemented company-wide over the next two years. It includes requirements for consultation with communities of interest, conservation planning and implementation, as well as public reporting. Inmet is also publicly committed to having a net positive impact on species and ecosystems at any new development project, and its existing operations are expected to make good faith efforts towards achieving this goal.

In 2012, Cobre Panama finalized its Biodiversity Action Plan, which is aimed at achieving a net positive impact. Implementing the plan will involve supporting landscape-scale conservation, conservation management of species of concern and reforestation. At the landscape level, Cobre Panama has committed to supporting the conservation of approximately 290,000 hectares of rainforest, which is over 40 times the size of the project's footprint. At the species level, Inmet is developing studies on prioritized species of flora and fauna, to improve knowledge of distribution in and out of the project area. The Biodiversity Action Plan also covers additional habitat creation, capacity building and enhancement of the national capacity for the conservation of biodiversity. Development of the plan has involved building alliances with relevant national and international organizations focused on biodiversity and conservation. It also receives independent internal and external review and verification.

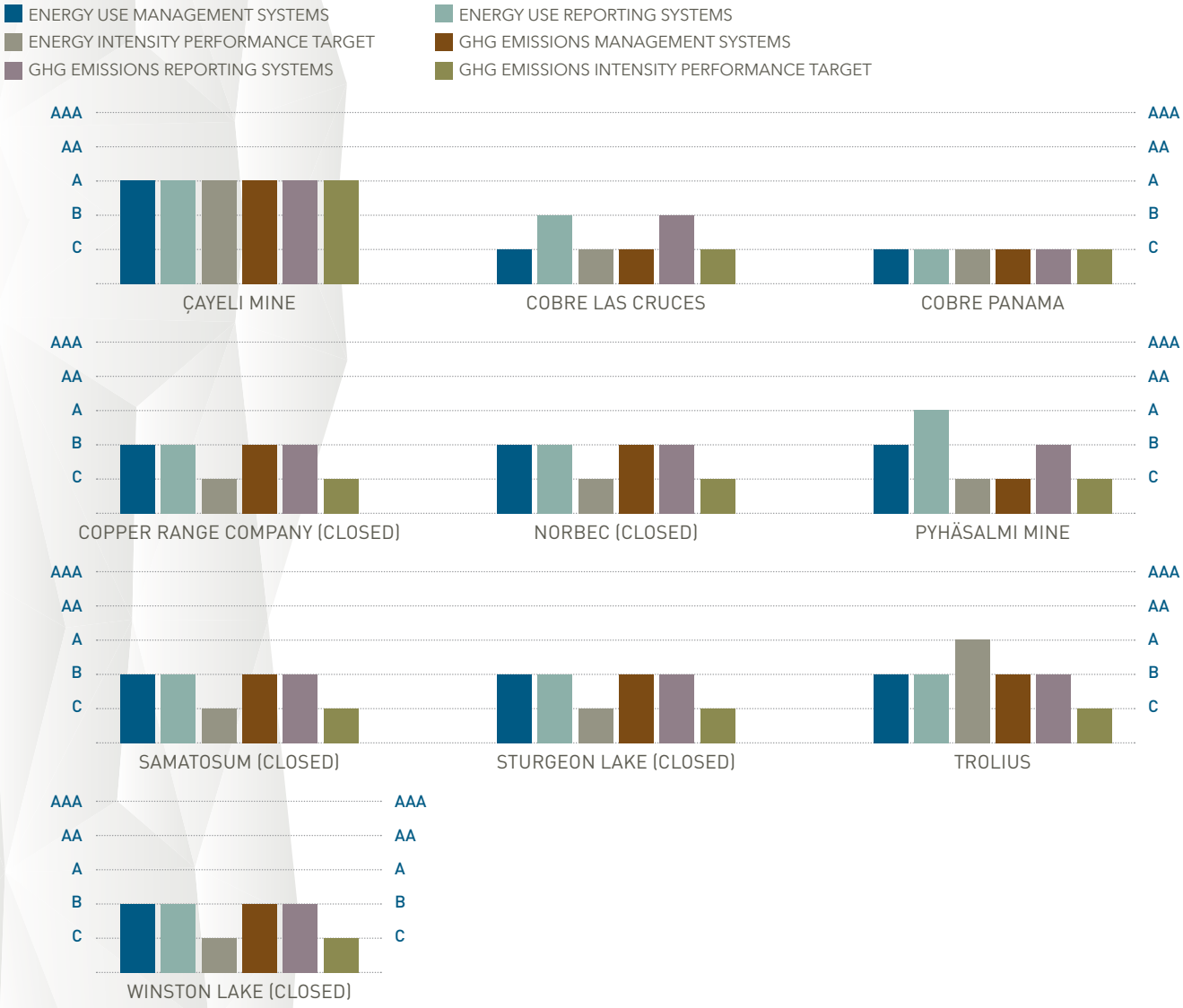
For more information, please visit the company's website (www.first-quantum.com) or see the UN Global Compact's 2011 Communication on Progress (www.unglobalcompact.org).

INMET MINING CORPORATION

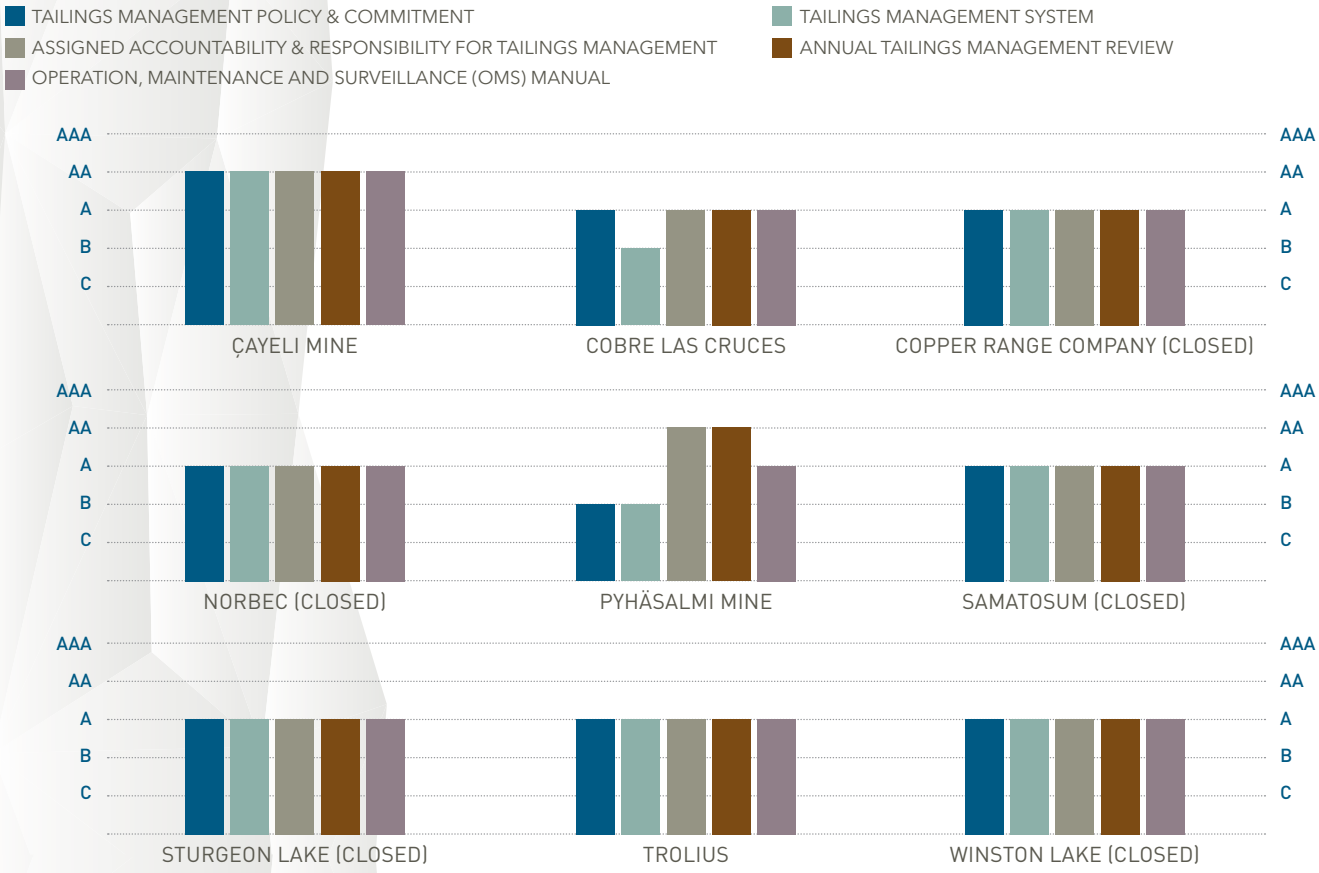
CRISIS MANAGEMENT PLANNING ASSESSMENT

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

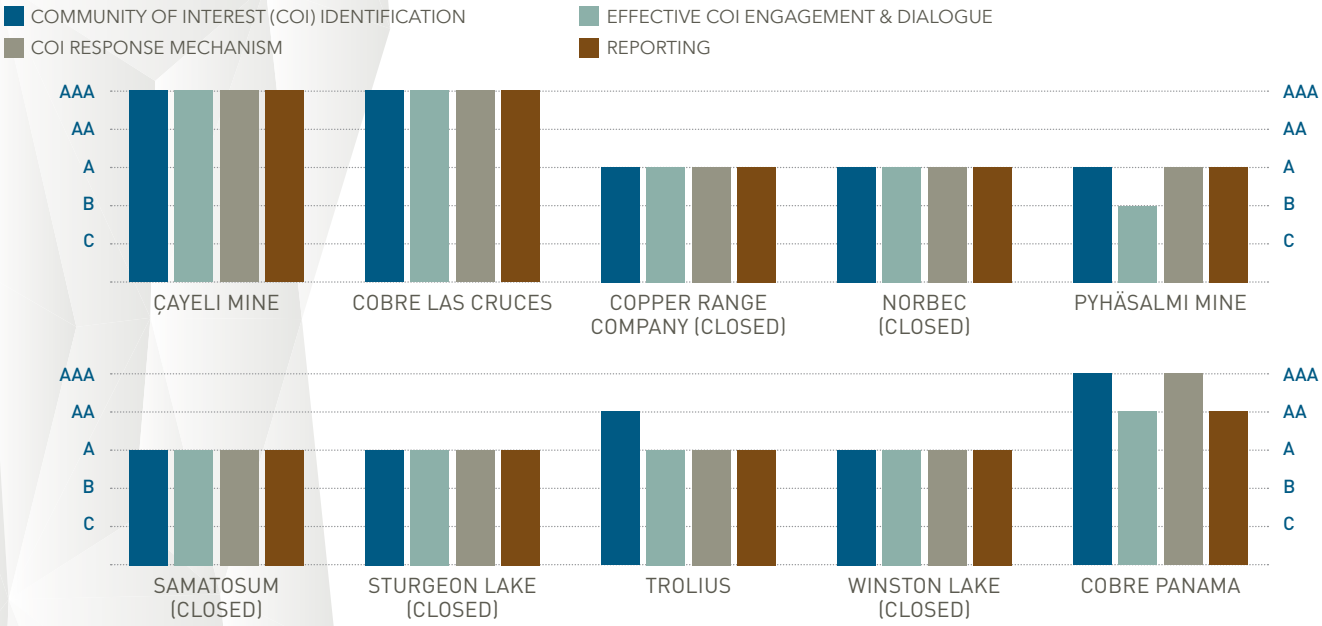
ENERGY USE & GHG EMMISSIONS MANAGEMENT ASSESSMENT



TAILINGS MANAGEMENT ASSESSMENT



ABORIGINAL AND COMMUNITY OUTREACH ASSESSMENT



NEW GOLD INC

New Gold is an intermediate gold mining company, which has a portfolio of four producing assets and two significant development projects. The combination of the New Afton mine in Canada, the Cerro San Pedro mine in Mexico, the Mesquite mine in the United States, and the Peak mines in Australia positions New Gold as one of the lowest-cost producers in the industry. In 2013, the company is forecasting between 440,000 and 480,000 ounces of gold production. In addition to its four operating mines, New Gold owns 100% of the exciting Blackwater Project in Canada and 30% of the world-class El Morro project in Chile.

New Gold is committed to achieving the highest possible level of performance with regards to safety, environmental protection and sustainable community development. This commitment drives New Gold to seek out those standards, protocols and performance indicators that assist its people in achieving these goals. As a result, New Gold has adopted standards such as the International Cyanide Management Code and the 10 principles of the United Nations Global Compact. New Gold has also attained ISO 14001 certification for two of its four operations, and follows the guidelines of the Global Reporting Initiative and the Carbon Disclosure Project to ensure relevant information is made known to its communities of interest.

TSM provides an additional valuable set of performance indicators for New Gold's New Afton Mine. While only in its first year of TSM implementation, New Afton has enthusiastically adopted the TSM protocols, in addition to implementing ISO 14001, as it moved from the project development phase, through commissioning and into production in July 2012.

New Afton is New Gold's first mine to adopt TSM at this early stage. The company is currently reviewing its corporate management standards to incorporate TSM requirements. This would ensure that as the new standards are implemented, TSM principles will be applied at all New Gold operations. Although not yet required to report in 2013, New Gold is disclosing its results at the facility level, demonstrating the company's commitment to transparency and the TSM program. For added credibility, a third party compiled the results.

Notably, New Afton has achieved significant success in Aboriginal and community outreach, tailings management, and safety and health. Regarding Aboriginal and community outreach, New Afton has successfully developed a Partnership Agreement with the Skeetchestn and Tk'emlúps Indian bands. New Afton has reached level A in 50% of the Aboriginal and community outreach indicators and level B in the other 50% of the indicators. Significant work has been completed this year and will be carried out in 2014 towards Level A or AA.

New Afton has recently won several awards, such as the Mining Association of British Columbia's 2011 Mining and Sustainability Award, the 2012 Viola R. McMillan Award for excellence in mining development, the 2012 Corporate Champion for Aboriginal Business Award, the 2013 British Columbia Mining Human Resources Diversity Award and the British Columbia Ministry of Energy, Mines and Natural Gas Safest Underground Mine Award.

Regarding energy use and GHG emissions management, New Afton has achieved level A in two of the six indicators. In 2012, New Afton made significant progress toward a vision of sustainable energy management. An innovative energy management information system was installed as the backbone of the new ISO 50001 compliant energy management system, which is targeted for completion by the end of 2013.

For safety and health reporting, New Afton achieved level AA on performance, level A for three indicators, and level B for monitoring and reporting, which is currently being addressed as part of a cross-corporation initiative in health and safety reporting. New Gold expects to reach A or AA levels on all indicators by next year.

Even though New Afton did not achieve a level A rating across all indicators on its first year, its performance is commendable given the early stage of its TSM adoption and the fact that it has been in operation for less than one year. As a way to further improve performance and achieve a higher TSM rating, New Afton has defined and will carry out an action plan to reach at least level A during 2013. In addition to achieving its TSM objectives, New Afton is working towards ISO 50001 certification by the end of 2013 for its energy management systems.

For more information, please visit New Gold's website: www.newgold.com

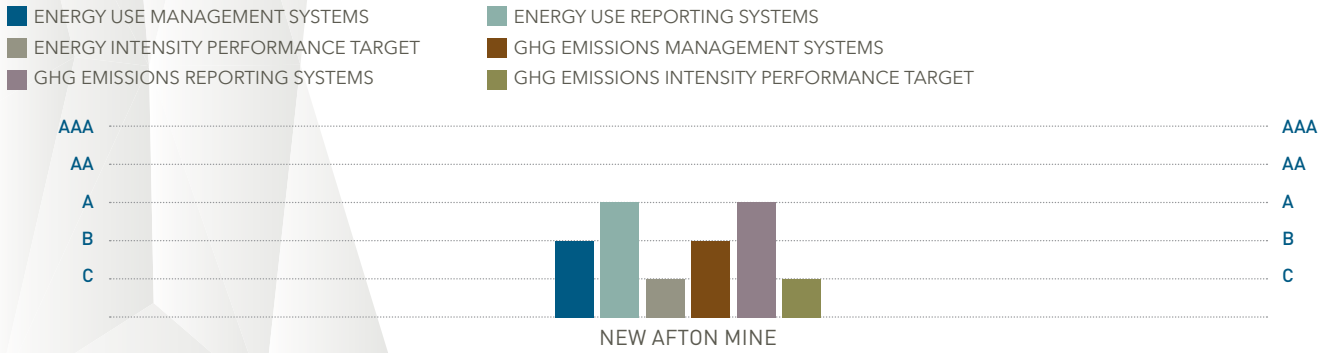
New Gold's New Afton mine near Kamloops, British Columbia.

NEW GOLD INC

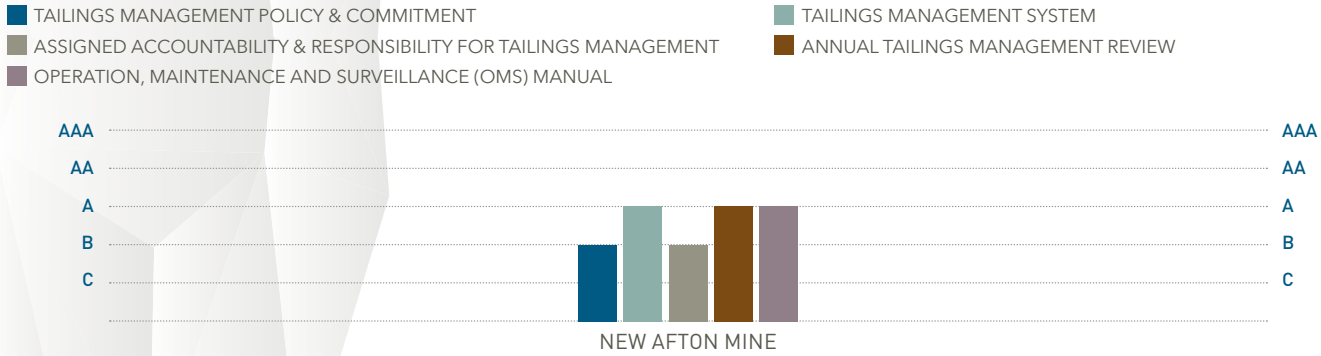
CRISIS MANAGEMENT PLANNING ASSESSMENT

FACILITY	PREPAREDNESS	REVIEW	TRAINING
NEW AFTON MINE	✓	✓	✓
NEW GOLD CORPORATE	✓	✓	✓

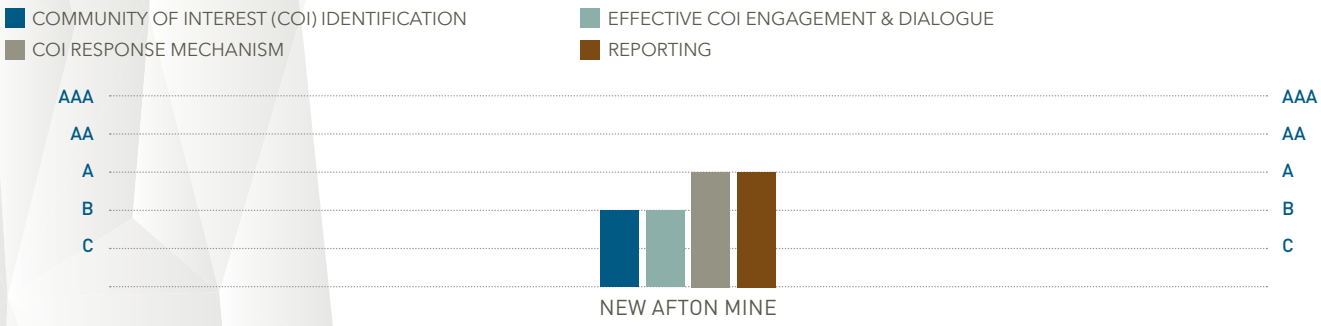
ENERGY USE & GHG EMMISSIONS MANAGEMENT ASSESSMENT



TAILINGS MANAGEMENT ASSESSMENT



ABORIGINAL AND COMMUNITY OUTREACH ASSESSMENT



NYRSTAR

Nyrstar is an integrated mining and metals business, with market-leading positions in zinc and lead and growing positions in other base and precious metals. Nyrstar's worldwide mining and smelting operations include two mines in Canada: Myra Falls in British Columbia and Langlois in Quebec. The company's corporate office is in Zurich, Switzerland.

At Nyrstar, sustainability is viewed as a key driver of business success, and the company is committed to working with its stakeholders to achieve continual improvement in safety, health, environment and community (SHEC) performance. Nyrstar's Group SHEC Management Framework sets the direction for all related activities and establishes a common approach to managing SHEC risks at the company's sites. The framework is fully aligned with ISO 14001 and OHSAS 18001, and Nyrstar requires all operations to implement integrated SHEC management systems that are certified to these standards. TSM performance elements help Nyrstar's Canadian sites address key safety, health and environmental risks. Moreover, the processes that accompany TSM requirements are integrated into the sites' SHEC management systems.

The Myra Falls and Langlois operations joined Nyrstar in 2011 as part of the acquisition of Breakwater Resources. Nyrstar Myra Falls is an underground base metal mine on Vancouver Island, 90 kilometres southwest of Campbell River, British Columbia. The mine's location inside Strathcona Provincial Park provides unique challenges that heighten the importance of robust environmental and community management programs. The Langlois mine is in northwest Quebec near the town of Lebel-Sur-Quévillon. The mine, which was restarted in 2011 following a period of care and maintenance, resumed commercial production in the first half of 2012. Based on its ramp-up schedule, Langlois is planning to conduct its first TSM self-assessment in 2013, reporting its results in 2014.

Nyrstar Myra Falls has been reporting under MAC's TSM program since 2006. TSM protocols have assisted in prioritizing environmental initiatives and in enhancing the operation's commitment to environmental performance. The mine's externally verified assessment results for 2012 demonstrated many improvements, but also highlighted some areas requiring renewed attention and focus.

Energy use and GHG emissions management was generally strong with most of the indicators showing improvements. This reflects Myra Falls' long-term focus on energy management and the importance of reliable and efficient energy supply to the overall performance of the mine. In 2012, 95% of the operations' energy needs were met through low-carbon power supplied from the mine's two hydro facilities.

The crisis management assessment revealed several deficiencies, both at the site and corporate levels. Nyrstar is developing an action plan to strengthen processes and capabilities for crisis management, which will help refocus attention on this important performance element.

Tailings management has been a key focus area for Myra Falls for many years. The mine has well-established processes for the operation, maintenance and surveillance of its tailings storage facilities. TSM scores for this element are expected to improve as the mine continues to develop and strengthen its environmental management systems.

Biodiversity conversation management is an area of critical importance for Nyrstar's operations and involves a large number of activities and initiatives. As it does for tailings management, Nyrstar expects improvements in its TSM score for this performance element as it builds its comprehensive environmental management system.

Processes for Aboriginal and community outreach have undergone significant development since Myra Falls joined Nyrstar, and the 2012 TSM scores show improvement in communities of interest response mechanisms. The company completed a range of community engagement activities in 2012, including a major consultation process for closure of Myra Falls' main tailings storage facility.

In the area of safety and health, 2012 marked a banner year for Myra Falls as it celebrated a full year without a lost time injury and achieved a significant reduction in its recordable incident frequency rate. As a result, the site was presented with the John T. Ryan Award for the metal mine with the lowest incident rate in British Columbia and Yukon.

Nyrstar expects that TSM scores for all applicable protocols will improve as the company implements the SHEC Management Framework across its operations.

For more information, visit Nyrstar's website: www.nyrstar.com.

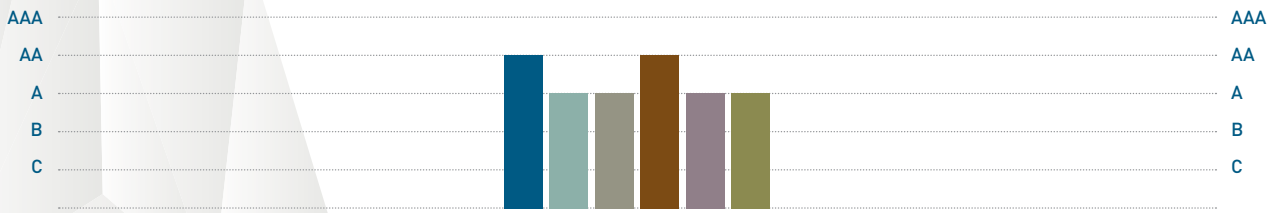
The mill complex at the west end of Nyrstar's Myra Falls operation.

CRISIS MANAGEMENT PLANNING ASSESSMENT

FACILITY	PREPAREDNESS	REVIEW	TRAINING
CORPORATE	⊗	⊗	⊗
NYRSTAR MYRA FALLS	⊗	⊗	⊗

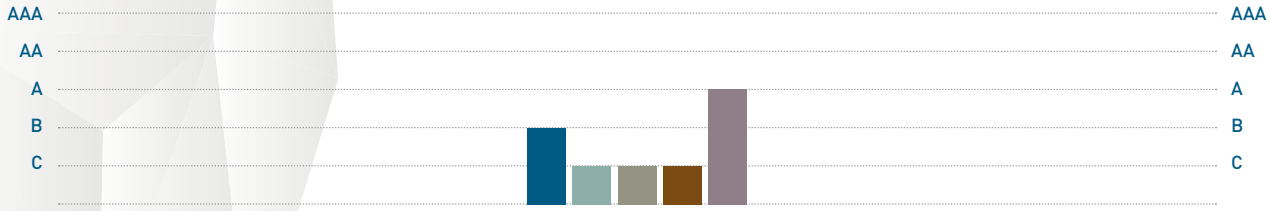
ENERGY USE & GHG EMMISSIONS MANAGEMENT ASSESSMENT

- ENERGY USE MANAGEMENT SYSTEMS
- ENERGY USE REPORTING SYSTEMS
- ENERGY INTENSITY PERFORMANCE TARGET
- GHG EMISSIONS MANAGEMENT SYSTEMS
- GHG EMISSIONS REPORTING SYSTEMS
- GHG EMISSIONS INTENSITY PERFORMANCE TARGET



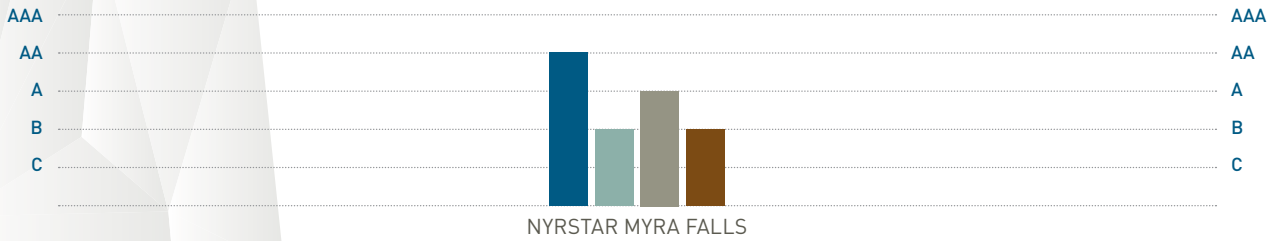
TAILINGS MANAGEMENT ASSESSMENT

- TAILINGS MANAGEMENT POLICY & COMMITMENT
- TAILINGS MANAGEMENT SYSTEM
- ASSIGNED ACCOUNTABILITY & RESPONSIBILITY FOR TAILINGS MANAGEMENT
- ANNUAL TAILINGS MANAGEMENT REVIEW
- OPERATION, MAINTENANCE AND SURVEILLANCE (OMS) MANUAL



ABORIGINAL AND COMMUNITY OUTREACH ASSESSMENT

- COMMUNITY OF INTEREST (COI) IDENTIFICATION
- EFFECTIVE COI ENGAGEMENT & DIALOGUE
- COI RESPONSE MECHANISM
- REPORTING



RIO TINTO

Rio Tinto is a leading international mining group headquartered in the United Kingdom, with strong representation in Canada, Australia and the United States.

Rio Tinto's business is finding, mining and processing mineral resources. Its major products are aluminum, copper, diamonds, energy (coal and uranium), industrial minerals (borax, titanium dioxide, salt, talc) and iron ore. The company is active worldwide, especially in Australia and North America, and operates significant businesses in the United States, Asia, Europe, Africa and South America.

In Canada, Rio Tinto operates 35 sites in 7 jurisdictions and employs approximately 14,000 employees. Its investments have been focused on improving health and safety and environmental performance, advancing innovative technologies and supporting community development. The company's Canadian assets include the following:

- The Iron Ore Company of Canada (IOC) is a joint venture of Rio Tinto Mitsubishi and the Labrador Iron Ore Royalty Corporation. Managed by the Rio Tinto Iron Ore group, IOC is Canada's largest iron ore pellet producer. IOC maintains an open-pit mine, a concentrator and an iron ore pellet-making plant in Labrador City, Newfoundland and Labrador. The company operates a 418-kilometre railway from the Labrador City plant to private port facilities in Sept-Îles, Quebec. In 2012, IOC continued its award-winning work to rehabilitate its tailings, creating wetland habitats for various species. In 2013, IOC continues to increase its air quality monitoring facilities and improved communications with local communities regarding this important issue.
- The Diavik diamond mine in Canada's Northwest Territories is a joint venture between Rio Tinto (60%) and Dominion Diamond Corporation (40%). Diavik is recognized for its success in providing socio-economic benefits to local communities. In 2012, Diavik employed 1,071 people of whom 508 were northerners and 238 were Aboriginal. Diavik has a good record of a strong relationship with the community.

ABORIGINAL AND COMMUNITY OUTREACH

Community engagement is an integral part of Rio Tinto's culture. IOC has been partnering with communities in Labrador West and Sept-Îles for more than five decades, and hopes to continue for many more. IOC's new office in St John's is focused on maintaining mutually beneficial relationships with communities and provincial stakeholder groups, particularly with those in the Newfoundland and Labrador government.

Rio Tinto is a strong believer in developing and maintaining good relationships with local Aboriginal groups, which is reflected by its strong performance in Aboriginal and community outreach. Both Sept-Îles and Labrador City continue to report strong performance in the area of Aboriginal and community outreach, achieving a Level AA and AAA across all indicators for this protocol.

The Diavik diamond mine sees itself as a guest in a land where Aboriginal people assert a centuries-old presence. In planning the mine, Diavik consulted extensively with local communities about its operation and effects. Diavik is committed to providing significant training, employment and business opportunities to residents in local communities of the Northwest Territories and the West Kitikmeot region of Nunavut, ensuring that it leaves a legacy of economically and socially stable local communities in the region. Diavik

has consistently reported a Level AAA under the Aboriginal and community outreach protocol since TSM first began.

CRISIS MANAGEMENT PLANNING

IOC's business resilience and recovery plan meets the intent of the TSM crisis management planning performance indicator, and is implemented at the company's three sites: corporate (Montreal), Labrador City and Sept-Îles. This year's assessment confirmed that IOC's crisis management system meets all the requirements of the TSM protocol.

Diavik's management system meets all the criteria for indicator two and three of this protocol; however, this year's assessment identified a gap for the first indicator, crisis preparedness. The company plans to address this gap in 2013.

TAILINGS MANAGEMENT

Responsible tailings management is a priority for Rio Tinto. Over the last few years, the company has demonstrated strong improvements in all of the indicators within this protocol and is now reporting consistent Level AA performance in this area for its IOC operations. In 2010, IOC adopted the guiding principles for tailings management, which helped strengthen the company's commitment to tailings management and encourage continuous improvements. Diavik has also maintained strong performance for tailings management over the years.

ENERGY USE AND GHG EMISSIONS MANAGEMENT

Rio Tinto has maintained high levels of performance for its energy use and GHG emissions management practices. Since 2009, Labrador City, Sept-Îles and Diavik have achieved a Level AA or AAA for all indicators in this protocol.

The company is always looking for innovative opportunities to reduce its carbon footprint. A notable example is Diavik's new wind farm in the Northwest Territories. Diavik now operates the world's most northern large-scale wind farm. This $33 million project is Rio Tinto's first wind generation facility and the first large-scale wind farm in Canada's Northwest Territories. The wind farm, which began delivering power to the mine's grid on September 28, 2012, is projected to lower the mine's annual power-related diesel fuel requirement by 10% and reduce its carbon footprint by 6%. As well, it will reduce Diavik's seasonal winter road fuel haul by approximately 100 loads.

Rio Tinto remains committed to responsible energy management and continues to explore opportunities for improved performance in this area.

SAFETY AND HEALTH

Rio Tinto is determined to succeed when it comes to the safety and health of its employees. The company has undertaken several initiatives to help foster education and awareness. The company hosts workshops for union leaders, design engineers and general managers, conducts team-based safety talks, and acknowledges safety-conscious acts and encourages employee-driven innovation. Rio Tinto's commitment to safety is reflected in this year's TSM results, with strong performance across the four indicators.

BIODIVERSITY CONSERVATION MANAGEMENT

Rio Tinto's corporate biodiversity strategy governs IOC and Diavik's biodiversity management systems. The operations have focused their attention on implementing Rio Tinto's strategy and furthering understanding of the requirements of the new TSM protocol.

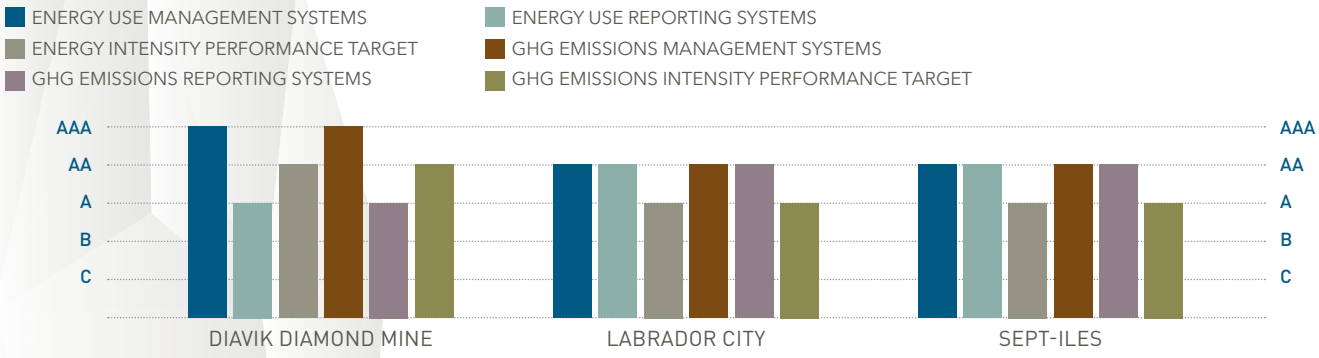
For more information, please visit the Rio Tinto website: www.riotinto.com.

Towards Sustainable Mining
Vers le développement minier durable

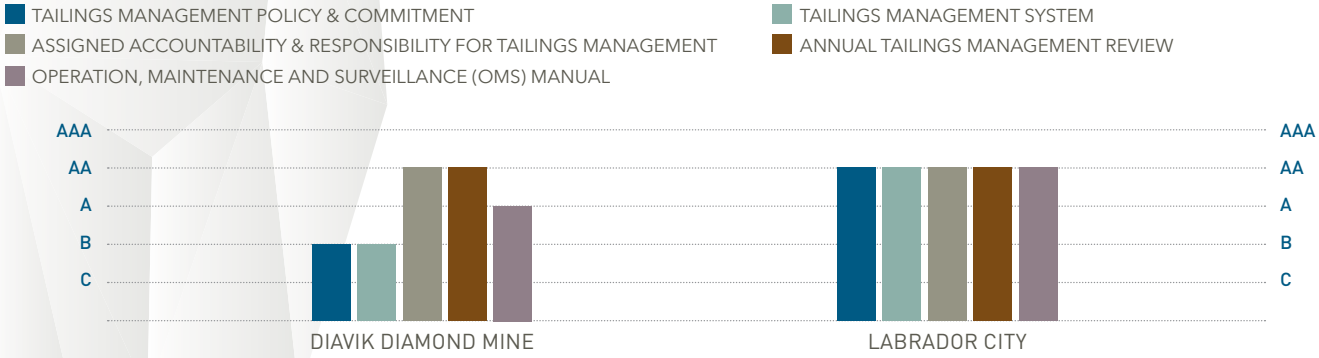
CRISIS MANAGEMENT PLANNING ASSESSMENT

FACILITY	PREPAREDNESS	REVIEW	TRAINING
DIAVIK CORPORATE	⊗	⊗	✓
DIAVIK DIAMOND MINE	⊗	✓	✓
IOC CORPORATE	✓	✓	✓
LABRADOR CITY	✓	✓	✓
SEPT-ILES	✓	✓	✓

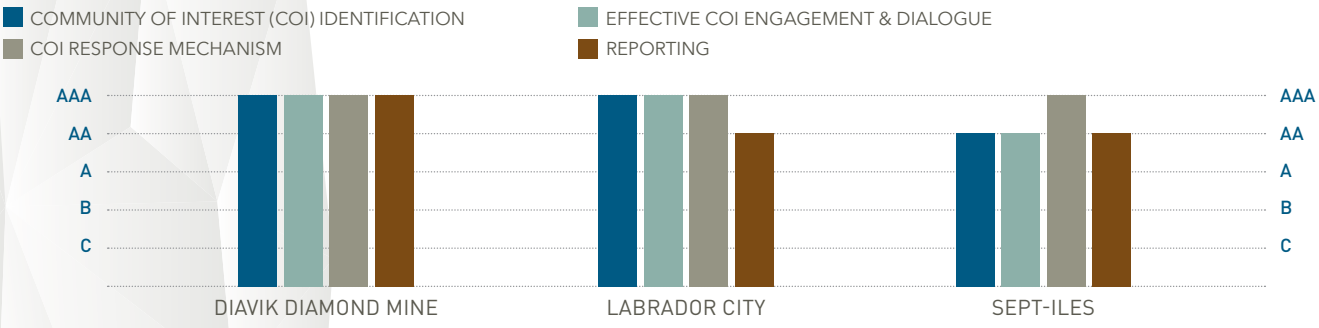
ENERGY USE & GHG EMMISSIONS MANAGEMENT ASSESSMENT



TAILINGS MANAGEMENT ASSESSMENT



ABORIGINAL AND COMMUNITY OUTREACH ASSESSMENT



SHELL CANADA ENERGY LTD

Shell Canada Energy (Shell) operates the Muskeg River and the Jackpine mines, located 75 kilometres north of Fort McMurray, Alberta, on behalf of the owners of the Athabasca Oil Sands Project (AOSP): Shell Canada Limited (60%), Chevron Canada Limited (20%) and Marathon Oil Sands LP (2%).

Shell's commitment to sustainability is embedded in the company's general business principles. Meeting this commitment requires:

- Balancing short- and long-term interests
- Integrating economic, environmental and social considerations into business decisions
- Regularly engaging with the company's many stakeholders

In practice, Shell aims to reduce impacts and deliver benefits through its portfolio and products, and through the way it operates. Shell is committed to building projects, running facilities and managing supply chains safely. Shell is also committed to operating in ways that reduce negative environmental and social impacts and create positive benefits for local communities.

ECONOMIC SUSTAINABILITY

It is one of Shell's integral values to invest in the general well-being of the communities that grant its licence to operate, and Shell endeavours to create lasting social benefits by employing local people and using local contractors and suppliers.

In the summer of 2012, the AOSP produced its 500-millionth barrel of bitumen. This is a tremendous achievement for Shell's oil sands business and is the result of almost 10 years of hard work and innovation by thousands of employees and contractors.

The company's offices in Fort McKay and Fort McMurray, and its liaison for Fort Chipewyan, allow Shell to keep in contact with the community and to engage with stakeholders on an ongoing basis. Most of the 2,500 employees at Shell Albian Sands live in the Regional Municipality of Wood Buffalo.

Shell builds and maintains strong relationships with Aboriginal businesses within areas that surround its operations. At the end of 2012, it had invested more than $1.25 billion with Aboriginal businesses as part of the AOSP since 2005. All of these business relationships are based on the same criteria and standards as the company's business relationships with non-Aboriginal partners.

In November 2011, Shell announced a fly in/fly out program for Fort Chipewyan, making it possible for current and future employees and their families to continue living in their community, while participating in the economic growth on their traditional land.

ENVIRONMENTAL SUSTAINABILITY

Shell takes a "best in class" approach to environmental management. In 2004, the Muskeg River mine was certified to the ISO 14001:1996 standard. This achievement made the mine the first oil

sands operation in the world to attain this international standard. The facility has since renewed its three-year certificate under the ISO 14001:2004 standard three times, most recently in 2013. This ISO standard, though voluntary, is externally audited and recognized as the top international standard for environmental management systems (EMS).

Proven management systems 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. In addition to being a MAC member, Shell is also an active member of:

- The Oil Sands Developers Group
- The Cumulative Environmental Management Association
- The Wood Buffalo Environment Association
- The Regional Aquatics Monitoring Program
- The Canadian Association of Petroleum Producers
- Canada's Oil Sands Innovation Alliance
- The Integrated CO2 Network

Tailings are one of the oil sands industry's most critical issues. To respond to this issue, the seven oil sands mining companies created the Canada's Oil Sands Innovation Alliance (COSIA). Shell was central to the formation of the consortium and to a landmark agreement among its members. Oil sands mining companies have agreed to remove all monetary and intellectual property barriers and to collaborate on future tailings research and solutions to accelerate tailings reclamation and reduce freshwater usages.

Fossil fuels provide about 80% of the world's daily energy needs but are also among the most carbon-intensive. Shell takes a proactive and innovative stance towards carbon dioxide emissions management. For example, Quest, a carbon capture and storage (CCS) project, is the world's first oil sands CCS project and a flagship CSS project on a global scale for Royal Dutch Shell.

SOCIAL SUSTAINABILITY

In March 2012, Shell and its joint venture owners, Chevron and Marathon, announced a $1 million contribution to Father Patrick Mercredi Community High School, Science and Technology Centre, in Fort McMurray.

"We needed to do something for our high school students to better engage them," said Kim Jenkins, Superintendent of Schools for Fort McMurray Catholic School District, "Thanks to supporters and industry partners like Shell Canada, Father Mercredi was equipped with labs, tools and equipment necessary to properly instruct these students as they work towards their certificate."

In late 2012, Shell announced its second largest social investment ever in Canada—Shell Place at MacDonald Island. The facility will include an outdoor performance stadium, a shared space community centre that will help grassroots thrive, a tournament centre, and many other features thanks to this $2.5 million partnership with MacDonald Island Park.

Since 2003, Shell has donated more than $15 million to 170 organizations throughout the region on behalf of its Muskeg River and Jackpine mine operations.

TSM ANNUAL FACILITY REVIEW

Shell continues to maintain high standards in the TSM performance elements of crisis management planning and Aboriginal and community 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 the communities and hosting community members at the facility. Shell informs communities about its environmental performance through its annual *Oil Sands Performance Report*.

Shell's tailings management initiatives continued in 2012 with the company focusing on extending its understanding of pilot-scale technologies to determine if they can be operated on a commercial scale. Over the last 10 years, Shell has spent more than $200 million on tailings technology and research. Key technologies the company is currently working on include beaching, atmospheric fines drying and thickened tailings.

GHG emissions management and reporting is getting better as Shell adopts more automatic systems to improve its data reporting to meet regulatory requirements. Energy management programs continue to be a key focus for Shell and are captured in its EMS. In 2012, the company implemented several projects to reduce energy use within its operation.

Shell continues to focus on safety, people, environment and social performance as it helps develop Canada's oil sands resources.

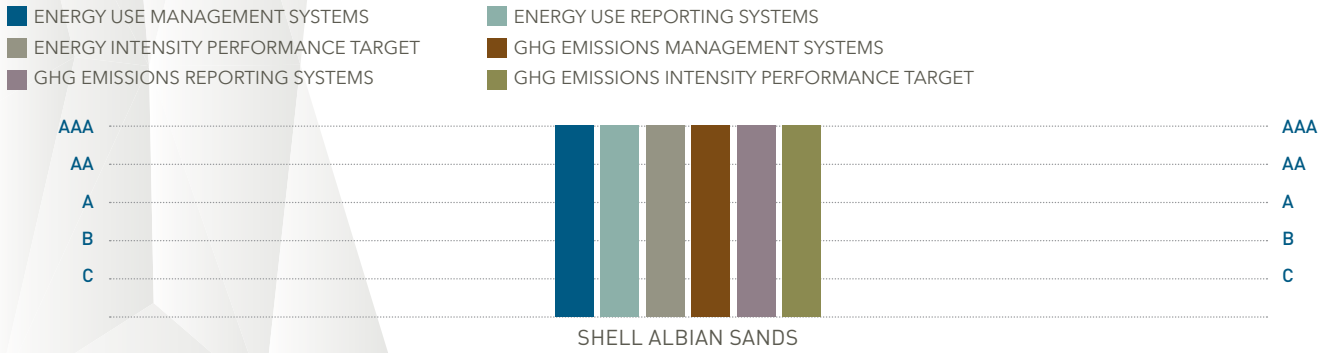
For more information, please visit the Shell Canada website: www.shell.ca/oilsands.

SHELL CANADA ENERGY LTD

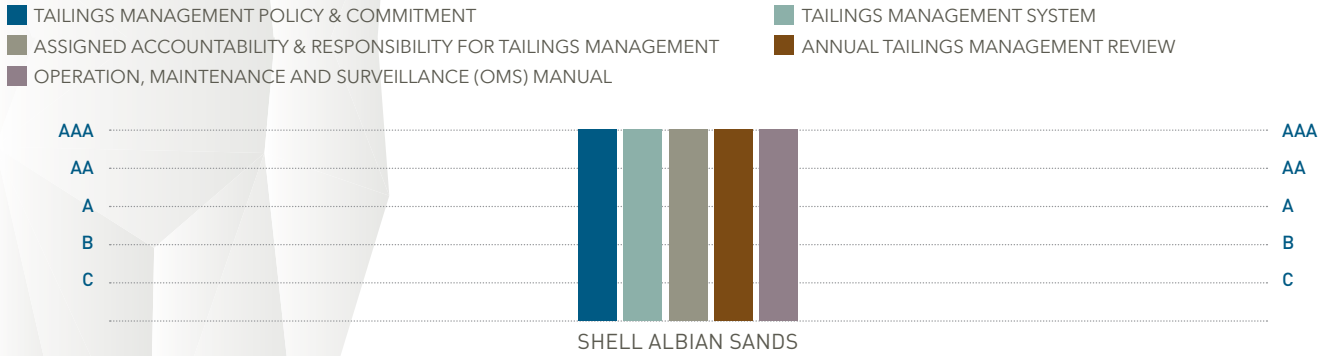
CRISIS MANAGEMENT PLANNING ASSESSMENT

FACILITY	PREPAREDNESS	REVIEW	TRAINING
CORPORATE	✓	✓	✓
SHELL ALBIAN SANDS	✓	✗	✓

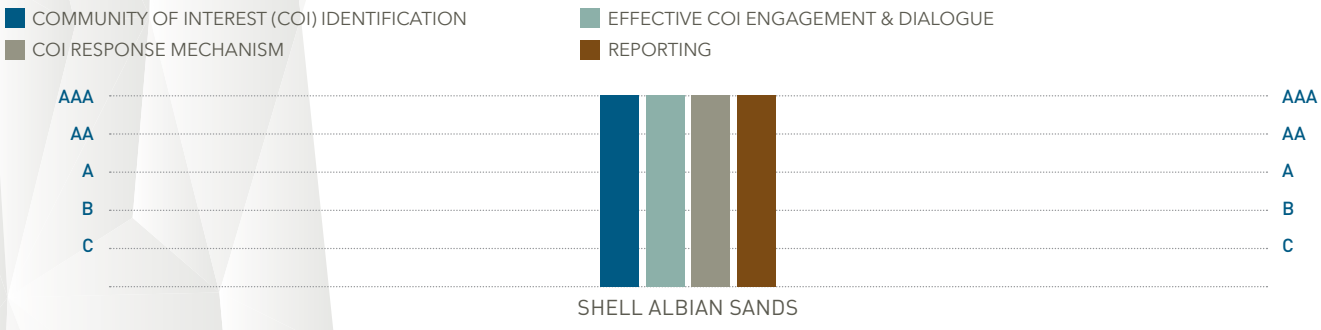
ENERGY USE & GHG EMMISSIONS MANAGEMENT ASSESSMENT



TAILINGS MANAGEMENT ASSESSMENT



ABORIGINAL AND COMMUNITY OUTREACH ASSESSMENT



SUNCOR ENERGY INC

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 in the coming years.

Suncor's 2012 TSM results were internally verified. For the most part, they were consistent with the company's externally verified results from 2011.

CRISIS MANAGEMENT PLANNING

In 2011, external verification indicated a lack of formal documentation for this element, resulting in a "no" score for the training indicator. Suncor improved its internal processes, resulting in three "yes" scores in 2012.

ENERGY USE AND GHG EMISSIONS MANAGEMENT

Although Suncor scored Level A's or higher for all indicators in 2011, the company did not meet its energy or GHG intensity targets in 2012. This resulted in Level B scores for the third and sixth indicators.

TAILINGS MANAGEMENT

Oil sands tailings ponds have come under increased public scrutiny in the past few years. Suncor has worked hard in this area to ensure compliance with all performance indicators. As in 2011, Suncor scored Level A's for all indicators. Work continues in this area to ensure that the company can maintain a high level of compliance in the future.

ABORIGINAL AND COMMUNITY ENGAGEMENT

Suncor has consistently performed well in this area as external outreach has always been a key part of maintaining its social licence to operate. Suncor 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 conducts business. Moreover 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 the Suncor website: www.suncor.com.

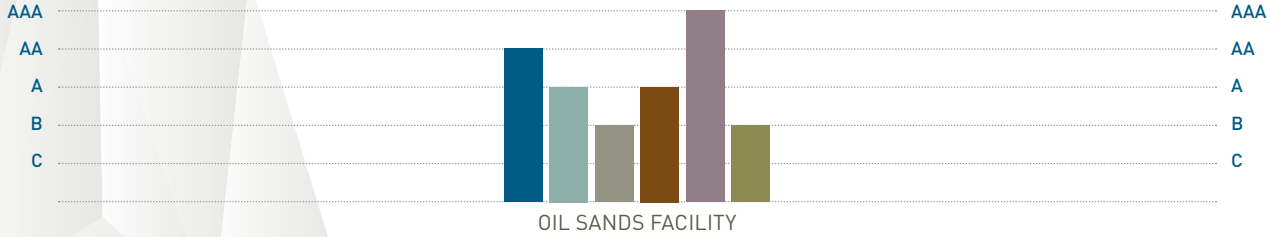
SUNCOR ENERGY INC

CRISIS MANAGEMENT PLANNING ASSESSMENT

FACILITY	PREPAREDNESS	REVIEW	TRAINING
OIL SANDS FACILITY	✓	✓	✓

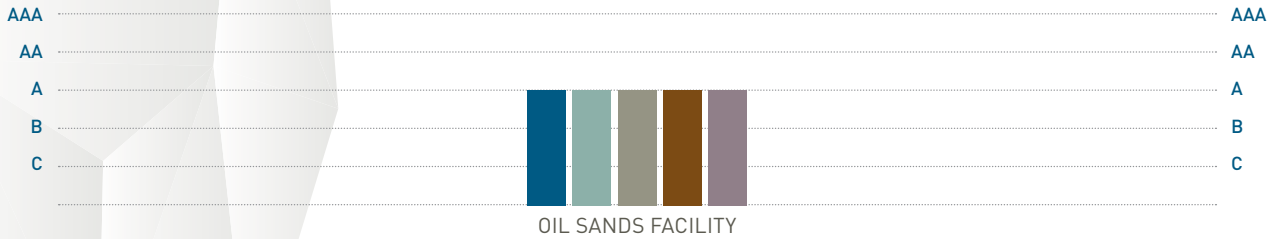
ENERGY USE & GHG EMMISSIONS MANAGEMENT ASSESSMENT

- ENERGY USE MANAGEMENT SYSTEMS
- ENERGY USE REPORTING SYSTEMS
- ENERGY INTENSITY PERFORMANCE TARGET
- GHG EMISSIONS MANAGEMENT SYSTEMS
- GHG EMISSIONS REPORTING SYSTEMS
- GHG EMISSIONS INTENSITY PERFORMANCE TARGET



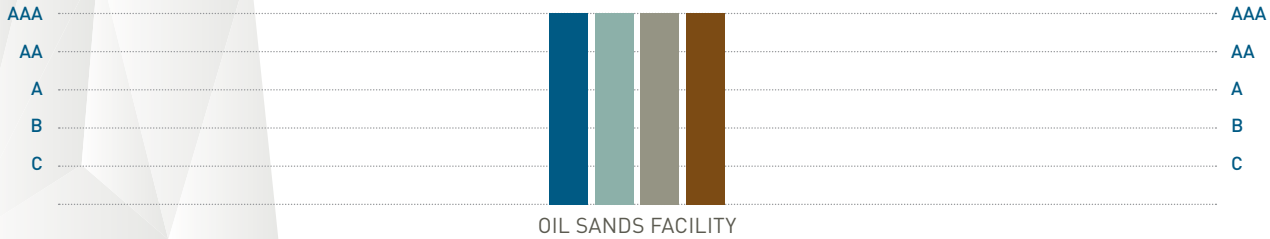
TAILINGS MANAGEMENT ASSESSMENT

- TAILINGS MANAGEMENT POLICY & COMMITMENT
- TAILINGS MANAGEMENT SYSTEM
- ASSIGNED ACCOUNTABILITY & RESPONSIBILITY FOR TAILINGS MANAGEMENT
- ANNUAL TAILINGS MANAGEMENT REVIEW
- OPERATION, MAINTENANCE AND SURVEILLANCE (OMS) MANUAL



ABORIGINAL AND COMMUNITY OUTREACH ASSESSMENT

- COMMUNITY OF INTEREST (COI) IDENTIFICATION
- EFFECTIVE COI ENGAGEMENT & DIALOGUE
- COI RESPONSE MECHANISM
- REPORTING



SYNCRUDE CANADA LTD

Syncrude is a leader in Canada's oil sands industry, with production capacity equivalent to 15% of the nation's crude oil requirements. It operates technologically advanced oil sands mines, extraction and upgrading facilities, and utilities plants at 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 environment, health and safety performance and excellence in community relations has been strengthened by participating in TSM. In 2012, Syncrude's performance remained consistent, except in achieving its targets for energy and GHG emissions intensity due to a shortfall in overall production during the year.

Highlights for 2012 include:

- Syncrude earned a Level A rating in all areas of tailings management. Syncrude regularly updates its OMS manuals for all of its tailings facilities. The company conducts regular monitoring of all dams on its site, has external technical reviews and has emergency plans to respond to any incidents involving these facilities. The vice president of mine production and the vice president of technical services signed a letter of management commitment to ensure Syncrude's high level of performance continues in this area.
- Although Syncrude's energy use and GHG emissions management and reporting systems are excellent, it did not meet its intensity targets in 2012 and did not achieve a Level AAA score. This was the result of lower than anticipated production levels, which affected the company's overall performance.
- Syncrude achieved Level AAA ratings for Aboriginal and community outreach. Syncrude has been reaccredited at Gold Level status in the Progressive Aboriginal Relations program of the Canadian Council for Aboriginal Business for the fifth consecutive time. A management-level group oversees the strategic plan of Syncrude's Aboriginal engagement, and communities of interest input has been sought to drive future performance.
- Syncrude works extensively with regional stakeholders to manage the social and environmental effects of oil sands development. This includes numerous multi-party organizations and industry associations that deal with local socio-economic impacts and policy issues.
- Syncrude scored "yes" in all areas of crisis management for TSM. The company regularly conducts emergency response simulations, including desktop and site-wide simulations, to ensure all personnel are properly trained and tested. Pre-plans exist for all medium- and high-level risks, and approved company spokespeople are identified and trained.
- Syncrude achieved Level AAA ratings for biodiversity conservation management. The company demonstrated continuous improvements in evaluation and reporting programs, as well as in the avoidance or mitigation of significant adverse biodiversity effects. Syncrude has also improved communications about its efforts to reclaim disturbed land. The vice president of production has signed a letter of commitment to ensure continuous improvement in this area.

- Syncrude earned level AAA ratings in four out of five safety categories, demonstrating its commitment to protecting and promoting the safety and well-being of employees, contractors, communities and the environment.

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

Aerial photo of Fort McMurray, Alberta.

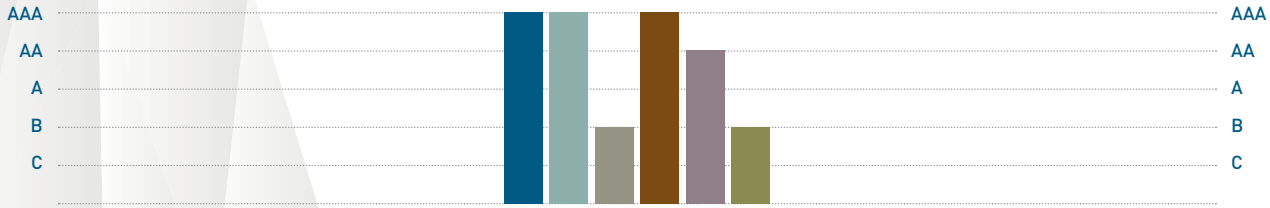
SYNCRUDE CANADA LTD

CRISIS MANAGEMENT PLANNING ASSESSMENT

FACILITY	PREPAREDNESS	REVIEW	TRAINING
SYNCRUDE CANADA LTD	✓	✓	✓

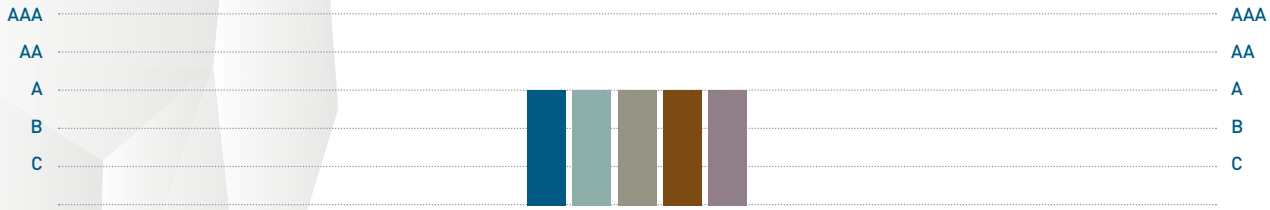
ENERGY USE & GHG EMMISSIONS MANAGEMENT ASSESSMENT

- ENERGY USE MANAGEMENT SYSTEMS
- ENERGY USE REPORTING SYSTEMS
- ENERGY INTENSITY PERFORMANCE TARGET
- GHG EMISSIONS MANAGEMENT SYSTEMS
- GHG EMISSIONS REPORTING SYSTEMS
- GHG EMISSIONS INTENSITY PERFORMANCE TARGET



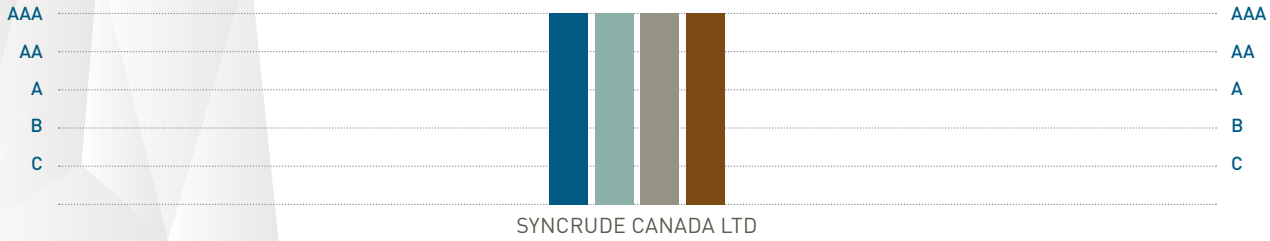
TAILINGS MANAGEMENT ASSESSMENT

- TAILINGS MANAGEMENT POLICY & COMMITMENT
- TAILINGS MANAGEMENT SYSTEM
- ASSIGNED ACCOUNTABILITY & RESPONSIBILITY FOR TAILINGS MANAGEMENT
- ANNUAL TAILINGS MANAGEMENT REVIEW
- OPERATION, MAINTENANCE AND SURVEILLANCE (OMS) MANUAL



ABORIGINAL AND COMMUNITY OUTREACH ASSESSMENT

- COMMUNITY OF INTEREST (COI) IDENTIFICATION
- EFFECTIVE COI ENGAGEMENT & DIALOGUE
- COI RESPONSE MECHANISM
- REPORTING



COMPANY PROFILE

TECK RESOURCES LTD

Teck Resources Limited is a diversified natural 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, focused on copper, steelmaking coal, zinc and energy. Teck is the world's second-largest exporter of seaborne high-quality steelmaking coal, an important producer of copper and one of the world's largest zinc producers.

All of Teck's operations participate in TSM. Its Canadian operations have participated since 2008 or earlier, and its US and Chilean operations began participating in 2011.

All of Teck's Canadian operations publicly report their TSM results. These include Duck Pond Operations, Highland Valley Copper Operations, Trail Operations and six steelmaking coal operations: Cardinal River, Coal Mountain, Elkview, Fording River, Greenhills and Line Creek.

In 2012, two of Teck's coal operations in southeastern British Columbia and its Highland Valley Copper operations near Kamloops underwent third-party verification. Teck is pleased to report that the third-party verification confirmed significant improvements in reported protocols, especially in the areas of energy use and GHG emissions management, as well as in aboriginal and community outreach.

For more information, please visit the Teck website: www.teck.com.

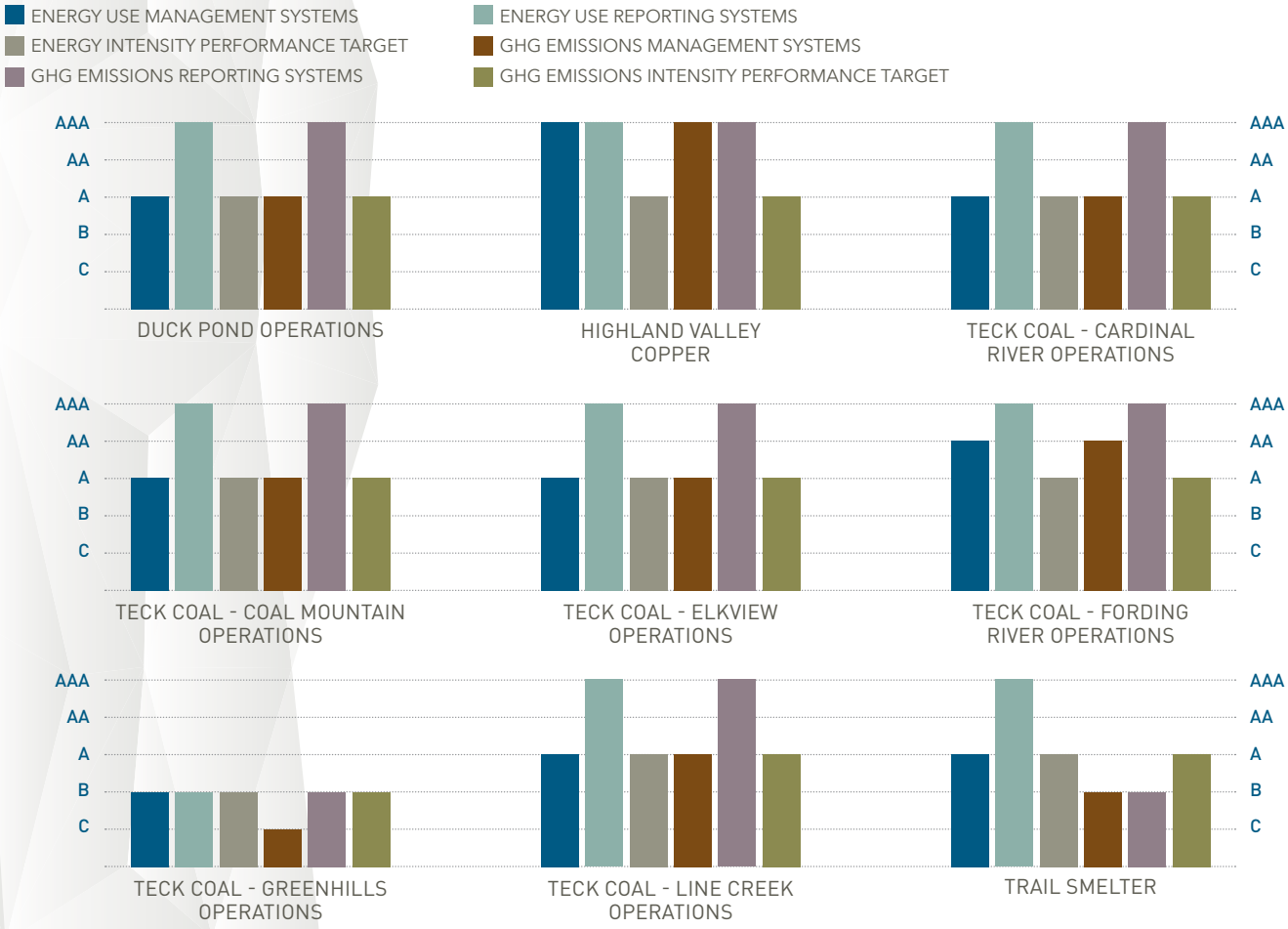
Teck Resources' Highland Valley Copper mine in British Columbia.

TECK RESOURCES LTD

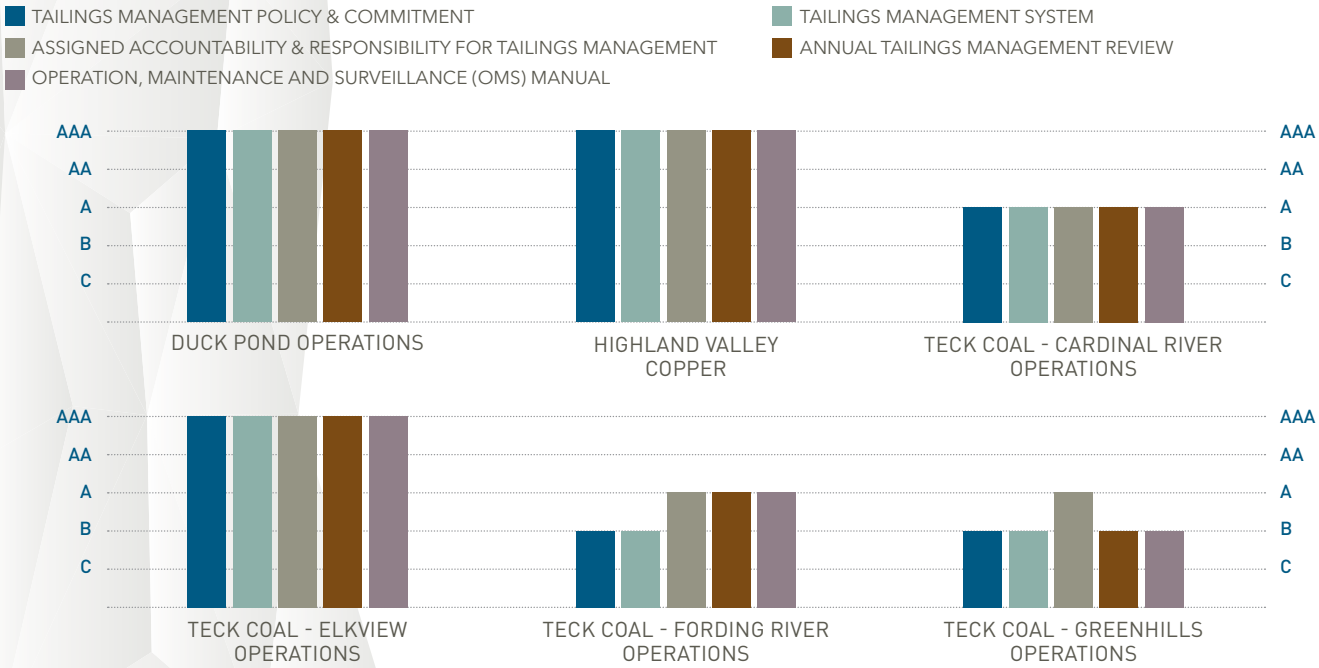
CRISIS MANAGEMENT PLANNING ASSESSMENT

FACILITY	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 - FORDING RIVER OPERATIONS	✓	✗	✗
TECK COAL - GREENHILLS OPERATIONS	✗	✗	✓
TECK COAL - LINE CREEK OPERATIONS	✓	✓	✓
TRAIL SMELTER	✓	✓	✓
VANCOUVER CORPORATE	✓	✓	✓

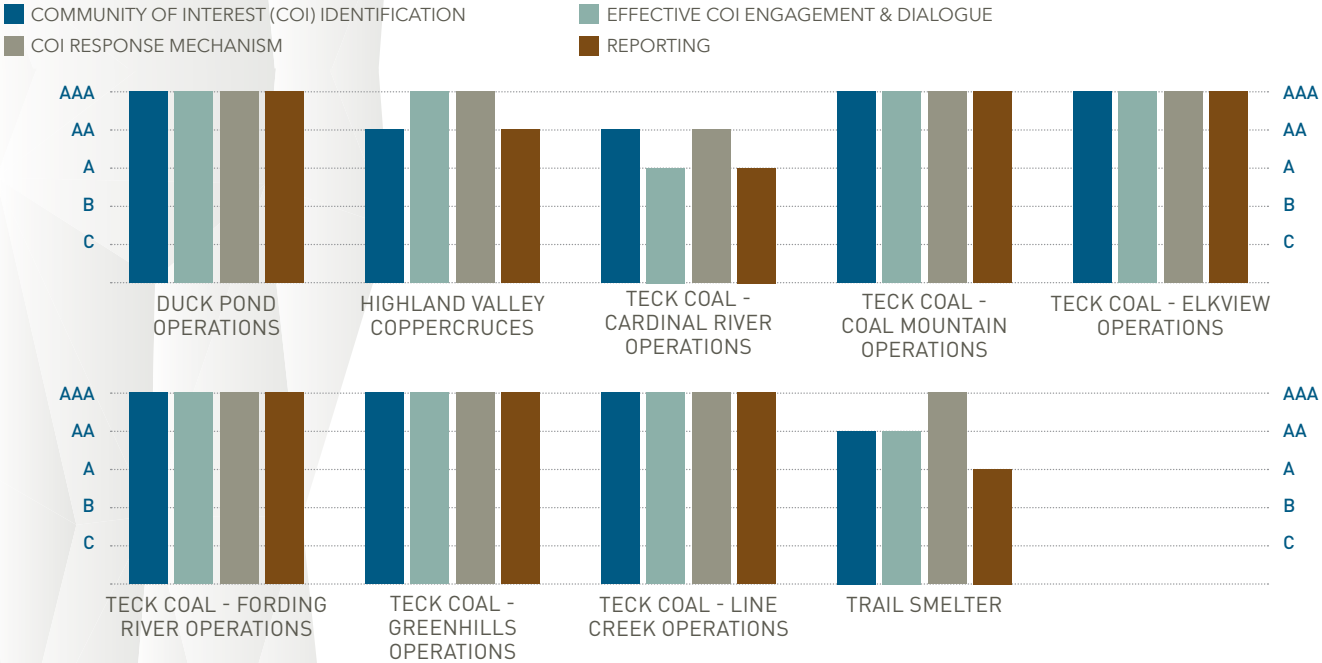
ENERGY USE & GHG EMMISSIONS MANAGEMENT ASSESSMENT



TAILINGS MANAGEMENT ASSESSMENT



ABORIGINAL AND COMMUNITY OUTREACH ASSESSMENT



VALE

Vale is a global mining company that embraces its mission of transforming natural resources into prosperity and sustainable development. The company's vision is to become the top global resource company in creating long-term value through excellence and a passion for people and the planet. Vale believes in zero harm — to its people, to its workplaces, to the communities in which it operates and to the natural environment. Vale demonstrates its commitment to zero harm by integrating sound risk management practices into all aspects of its business, by continually improving these practices, and by fully merging safety, health and environmental concepts with its economic and production goals. At all times, the company strives to leave a positive social, economic and environmental legacy in the areas where it operates.

Vale, the world's largest producer of iron ore and second-largest producer of nickel, operates its base-metals business from Toronto. Much of Vale's nickel production is derived from its Canadian operations, as is the company's production of copper, cobalt, platinum group metals, gold and silver. In Sudbury, Ontario, and Thompson, Manitoba, Vale runs mine, mill, smelter and refinery operations. In Port Colborne, Ontario, Vale operates a cobalt refinery and a precious metals upgrading facility. In Voisey's Bay, Newfoundland and Labrador, Vale's assets include mine and mill operations. Vale directly employs approximately 6,000 people in Canada and several thousand contractors.

In 2012, despite a turbulent global economy, the company continued to implement a number of key capital projects to ensure a sustainable future in Canada, such as the Long Harbour nickel processing plant in Newfoundland and Labrador.

Production is expected to begin early next year at Totten mine, Vale's first new mine in the Sudbury basin in over 40 years. Totten is located in Worthington, which is approximately 40 kilometres from Copper Cliff. The mine is expected to produce 765,000 tons of ore per year, including nickel, copper and platinum group metals. Once in full production, the Totten mine is expected to employ approximately 200 people.

The development of the Totten mine over the past five and a half years has generated a tremendous economic boost to the Greater Sudbury area. At a cost of $760 million, the project has created more than 500 jobs and employed the services and supplies of many local companies, including those owned and operated by Sagamok Anishnawbek.

Chief Paul Eshkakogan and Kelly Strong, Vale's Vice President of Ontario and UK Operations, signed an impact benefit agreement during Treaty Day celebrations on June 22, 2012. This agreement offers an opportunity for Vale and Sagamok Anishnawbek to solidify its working relationship around Totten mine.

The development of the Kronau potash project in Saskatchewan is moving more slowly than originally planned. However, Vale continues to engage with Aboriginal and community stakeholders. Environmental assessment work continues and is expected to be completed in 2013. Meanwhile, Vale is examining options to fund the advancement of the Kronau Project development. While these

considerations take place, work will continue to advance the project and we remain committed to keeping all stakeholders informed.

Vale's Atmospheric Emissions Reduction Project—the Clean AER Project—is a historic investment in sustainability. The project is the largest single environmental investment in the history of Sudbury. At an estimated $1 billion, it will reduce sulphur dioxide levels by 85% over current levels, as well as significantly reduce metals and particulate emissions. In January of 2013, Vale announced it would be moving to a single furnace operation. For the Clean AER Project, this has meant the company can achieve better environmental performance for a lower capital investment than originally planned.

ABORIGINAL AND COMMUNITY OUTREACH

In May 2011, Vale funded the creation of the Thompson Economic Diversification Working Group. The group comprises stakeholders across northern Manitoba and is working to develop a plan for the economic diversification of the City of Thompson and region. Action plans have been finalized and presented to the relevant stakeholders. The plans include a proposed alternative justice facility, education and training (including an industrial skills and trades centre), housing, local and regional identity, economic development, regional infrastructure and a regulatory framework to modernize the city.

In 2012, in light of difficult economic conditions, Vale's base metals business was asked to focus on reducing fixed costs across its operations. On April 24, 2012, Vale announced that it was exploring a strategic partnership for its Thompson nickel operation. Tremendous progress has been made towards operational improvements through collaboration with local and provincial stakeholders. The company formed a working group with the City of Thompson, the Province of Manitoba, and the Union, with the objective of achieving $100 million in savings. All stakeholders have demonstrated a strong commitment to the operations and to finding creative ways to decrease production costs to ensure a sustainable future in Thompson.

In October 2012, Vale hosted its annual open house at Copper Cliff. The event offered visitors an opportunity to meet Vale staff, learn about the company's operations and discuss issues that are important to the community.

In Port Colborne, Vale continues to engage key stakeholders in the Community Based Risk Assessment including the Ontario Ministry of Environment. Also at this location, Vale held an open house in which it shared information about its operations and used comment cards to solicit concerns from local communities of interest. The open house provided an opportunity to identify other communities of interest Vale should engage with.

In 2012, Vale partnered with a local Port Colborne group called Port Cares (www.portcares.on.ca). The company allowed the group to use several of Vale's vacant residential lots to create the With My Own Two Hands community garden. The program provides community members the opportunity to learn how to become successful gardeners. Participants plant, maintain and grow a variety of fresh vegetables at the community garden for community members to pick and take home. Port Cares has also expanded the program to help local residents plant and grow raised bed gardens in their own backyards. In 2013, the company also opened its doors to the Vale Health and Wellness Centre for community use.

At Voisey's Bay, Vale identified communities of interest through its extensive community consultations for the environmental assessment of the mine and concentrator project, and through negotiations of separate Innu and Inuit impact and benefit agreements. As a result of these regulatory and negotiating

procedures, management practices and processes are in place at the Voisey's Bay site to ensure that ongoing community of interest and stakeholder engagement occurs on a regular basis. Impact and benefit agreement committees serve as formal vehicles for dialogue with the Nunatsiavut Government and the Innu Nation. Aboriginal employment coordinators make regular monthly visits to communities, providing Vale the opportunity to meet with community leaders to discuss issues related to the Voisey's Bay project. In 2012, the company had continued success in meeting employment and business commitments for adjacent Inuit and Innu communities on whose traditional territory the Voisey's Bay mine and concentrator operate. Training, employment support and cultural awareness were among the topics discussed with and presented to Vale workers.

In 2012, Vale continued construction of the Long Harbour nickel processing plant, which uses new processing technology developed by Vale in Canada. Employment for the construction phase will require approximately 25 million person-hours, and the facility is expected to employ about 500 people when it starts up in 2013.

ENERGY AND GHG EMISSIONS MANAGEMENT

Globally, Vale is committed to reducing its projected 2020 GHG emissions by 5% (its carbon target). The company considers that engaging its suppliers worldwide in the effort is critical to its success in this area. In 2012, Vale trained 55% of its invited suppliers on how to create GHG emissions inventories.

In Canada, Vale named company energy leaders in its monthly newsletter *Energy Exchange* and developed Vale Canada Limited's energy professionals network for sharing best practices. This group is instrumental in identifying potential avenues for transforming the company's energy matrix to more renewable or sustainable options. Vale Canada Limited designated investment funds to conduct energy studies and implement energy-saving projects that would not normally meet the financial threshold for prioritization under the capital budgeting process.

In Ontario, the provincial government's 5CP (periods of intense energy use "coincident peaks") program offers large industrial electricity consumers like Vale, substantial incentives to reduce energy consumption that can result in a huge savings on their electricity bill. The actual amount depends on how well these consumers reduced their consumption in the previous year during the highest short-term surges in the province's energy demand. If Vale cuts its draw on the grid during those peak periods, the province saves a lot of money, and, in turn, Vale saves money and contributes to energy conservation.

Also in 2012, Vale rolled out the Sustainability Action Plan at its Canadian sites. Part of the plan's mandate is to improve performance on several key environmental indicators, including the use of direct and indirect energy. In addition, as examples of this commitment, the Vale Technology Institute is conducting 15 research projects related to climate change and energy. For example, the company set an intensity target for the Port Colborne refinery and identified energy-saving projects at Voisey's Bay. By recovering energy for heating from processing and facility operations at Voisey's Bay, and by rationalizing the use of the generators by upgrading the units, the company's annual diesel fuel use was reduced by more than 700,000 litres. In addition, the introduction of zero-based budgeting in Sudbury led to the development of energy targets for several unit operations within the facility.

Vale drafted a Corporate Guideline on Climate Change Adaptation, a policy that complements the Corporate Guideline on Climate Change and Carbon the company developed in 2008. Globally, Vale continued to participate voluntarily in the Carbon Disclosure Project and in the Global Reporting Initiative. Through such policy commitments and reporting activities, Vale has developed a stronger understanding of its carbon footprint and its exposure to climate change risks and opportunities.

In 2012, Vale Canada Limited continued to support climate change initiatives and worked with the corporate sustainability group to identify and implement opportunities for improved performance.

TAILINGS MANAGEMENT AND CRISIS MANAGEMENT PLANNING

Vale has maintained performance across the tailings management protocols, averaging a Level A. The company has reviewed all tailings management policies with its communities of interest. In 2012, the company continued to implement its tailings management framework to improve its performance in this area.

Crisis management planning and preparedness is a critical component of Vale's risk management activities. In 2009, Vale Canada Limited completed implementing the final components of its crisis management system. In 2012, the company revised the corporate system to reflect recent organizational changes and will close a remaining administrative gap identified in 2013. All facilities will test the crisis management framework by executing table-top exercises and mock drills.

NEW PROTOCOLS FOR SAFETY AND HEALTH AND BIODIVERSITY

Vale supports a wide variety of environmental initiatives in the Greater Sudbury area, including slag re-greening, aerial seeding, tree planting and aquaculture. The company also supports a number of environmental community groups such as the Junction Creek Stewardship Committee, reThink Green and Clean Air Sudbury. Vale's aerial seeding program, which targets barren land around the company's operations, treated 450 acres just north of Coniston in 2012. The company's aerial seeding program began in 1990 and has treated more than 6,700 acres of land to date.

Biodiversity protection clearly demonstrates how much Vale prizes the planet. In 2012, the company actively supported biodiversity work by partnering with the Manitoba department of conservation's woodland caribou collaring program, supporting the Vale Inco Living with Lakes Centre, and conducting extensive biodiversity studies in Voisey's Bay. During 2013, Vale will continue to seek a full understanding of MAC's new protocol, share best practices across its facilities, and develop a holistic plan to improve biodiversity management at the company's Canadian facilities.

At Vale, life matters most and people are valued. The company applauds MAC's initiative for developing a safety and health protocol and has begun to align its safety systems accordingly.

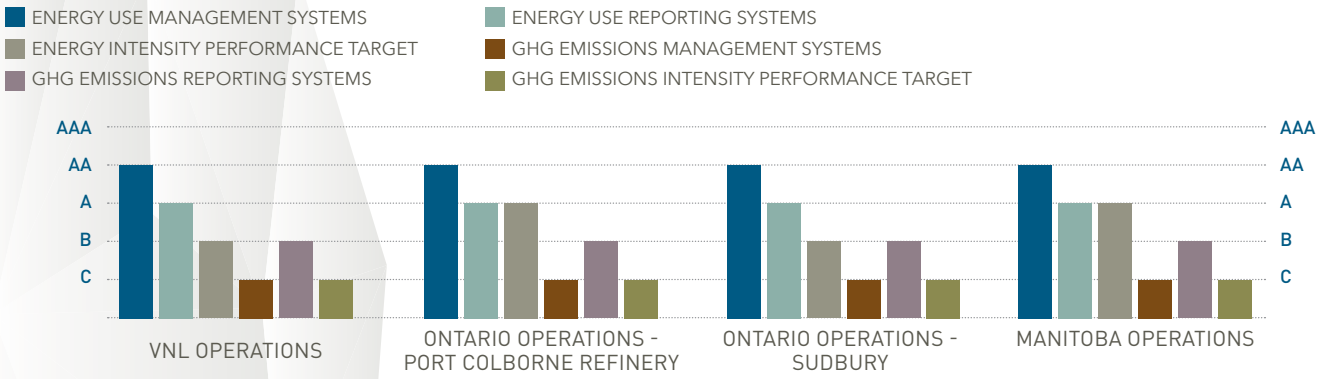
For more information, please visit the Vale website: www.nickel.vale.com.

Environmental monitoring at Vale's VINL Labrador operations.

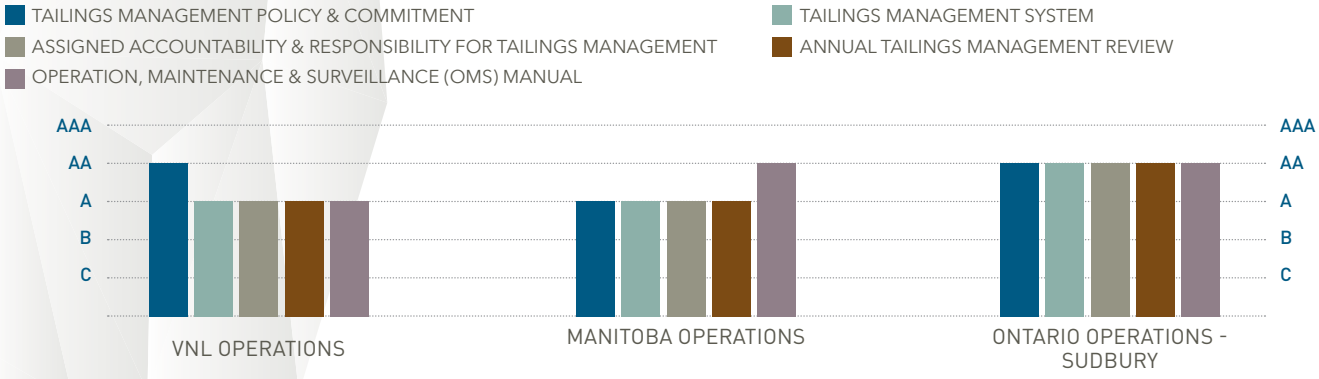
CRISIS MANAGEMENT PLANNING ASSESSMENT

FACILITY	PREPAREDNESS	REVIEW	TRAINING
CORPORATE	✓	✗	✓
MANITOBA OPERATIONS	✓	✗	✓
ONTARIO OPERATIONS - PORT COLBORNE REFINERY	✓	✓	✓
ONTARIO OPERATIONS - SUDBURY	✓	✓	✓
VNL OPRERATIONS	✓	✗	✓

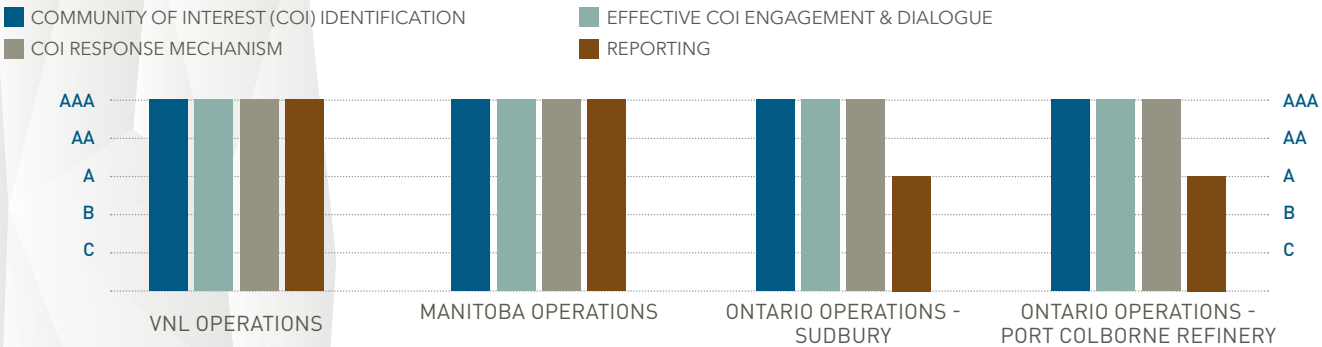
ENERGY USE & GHG EMMISSIONS MANAGEMENT ASSESSMENT



TAILINGS MANAGEMENT ASSESSMENT



ABORIGINAL AND COMMUNITY OUTREACH ASSESSMENT



The Mining Association of Canada

ADVOCACY STEWARDSHIP COLLABORATION

350 Sparks Street
Suite 1105
Ottawa, ON
K1R 7S8

WWW.MINING.CA