

ANNUAL REPORT 2009



The Mining Association
of Canada L'Association minière
du Canada

ADVOCACY STEWARDSHIP COLLABORATION

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INTRODUCTION

ABOUT THE MINING ASSOCIATION OF CANADA



The Mining Association of Canada (MAC) is the national organization of the Canadian mining industry. It comprises companies engaged in mineral exploration, mining, smelting, refining and semi-fabrication. Member companies account for the majority of Canada's output of metals and major industrial materials.

The Association's functions are to promote the interests of the industry nationally and internationally, to work with governments on policies affecting minerals, to inform the public and to promote cooperation between member firms to solve common problems. MAC works closely with provincial and territorial mining associations and other industries, as well as with environmental and community groups across Canada and internationally.



MESSAGE FROM THE CHAIRMAN AND THE PRESIDENT



The mining industry remains a cornerstone of the Canadian economy. It contributes \$40 billion to the country's GDP, employs 350,000 people, pays about \$13.5 billion in taxes and royalties, accounts for 19 % of Canada's exports and generates business for 3,140 supplier companies. The industry creates value in urban, rural and remote regions, and its products are fundamental to modern life and to the emergence of clean energy technologies such as hybrid vehicles, solar power and lightweight materials.

After the economic tumult of late 2008 and early 2009, the latter part of 2009 showed some signs of recovery. The future looks promising for Canadian mining companies. Many indicators suggest that despite impressive growth over the past decade, China and India remain relatively undeveloped and offer strong market opportunities for decades to come. Canada will benefit from the mineral and metal prices associated with the global demand that these developing countries create. Further, as an investment destination, Canada features low taxes, little political risk, a stable energy supply and a skilled mining workforce. The Canadian industry is also diversified, with strengths in such areas as oil sands, potash, uranium, gold, diamonds, aluminum, nickel and iron ore. This diversification provides a degree of stability during cyclical commodity-specific movements.

Still, despite the positive signals, most mineral prices remain below 2007 levels. In an economic climate focused on recovery, it is more important than ever that we work with government to make sure programs, regulation and legislation combine to sustain and create

mining jobs across Canada. These efforts are especially required in remote locations, where economic development options are limited and operating costs are high. A strong mining sector benefits Canadians in every region of the country. MAC's work to deliver this message—on the part of its staff, committees and the Board—is detailed in this report.

In 2009, a study by Canadian Business for Social Responsibility found that MAC's Towards Sustainable Mining initiative has earned a high degree of credibility and promotes continuous improvement. The study's review of corporate social responsibility frameworks for the extractive industry reaffirms that TSM is effective and credible, and that it enables our members to demonstrate their commitment to improved performance in sustainable development.

The TSM initiative continued to evolve during the year. After extensive committee efforts, consultations with the TSM Community of Interest Advisory Panel, and hard work by initiative leaders and other MAC committees, MAC's Board of Directors approved three new protocols that will be integrated into TSM over the next few years. By 2013 all MAC members will publicly report their TSM scores in the areas of safety and health, biodiversity conservation, and Aboriginal and community outreach. These are the first new performance elements since the TSM initiative began in 2004.

MAC's focus on Aboriginal participation in mining is a strong priority linked to our strategic plan. In March 2009, after a year of dialogue, MAC signed a Memorandum of Understanding with the Assembly of First Nations (AFN). In the lead-up to the signing, we worked closely with the AFN to define four pillars of commitment—partnership, investment, procurement and employment—areas in which our members have demonstrated an ability to contribute to the advancement of Aboriginal communities. Our work to create an Aboriginal-Industry Mining Forum in the NWT also culminated in 2009 with the launch of the body. At the forum meetings, Aboriginal leaders acknowledged industry's contributions and their willingness to meet industry halfway, but emphasized that their communities want more meaningful input into decisions on how mining proceeds locally.

MAC's advocacy in 2009 focused on many areas, among them issues related to corporate social responsibility, changes to the National Pollutant Release Inventory,

regulatory reform, federal tax policy, geoscience, climate change, a clean air framework and human resource concerns. During the year we reinforced key priorities through mini-lobby days organized by Mining Works for Canada, including another successful Mining Day on the Hill.

MAC and MAC members continued to invest heavily in science to advance two objectives: supporting policy and regulatory development, and mitigating our environmental footprint as an industry. For example, the MEND research program, which involves federal and provincial governments and NGOs, looks for ways to improve the management and mitigation of acid rock drainage. The program is highly respected, both within Canada and abroad. Canada is the only country to address acidic drainage and metal leaching through a research program directed by a multi-stakeholder steering committee from industry, government and NGOs. As well, the National Orphaned/Abandoned Mines Initiative seeks solutions to the legacy of orphaned and abandoned mines in Canada.

Throughout 2009 we continued MAC's role in the multi-party process—which involves federal and provincial governments, industry, and environmental and health NGOs—to develop a comprehensive air management system. MAC is involved in the steering committee and several working groups of this initiative.

To further boost our effectiveness, MAC belongs to several formal and informal industry groups. They include the Industry Coordinating Group on the *Canadian Environmental Protection Act*, the Resource Associations Group, the National Resource Industry Associations, the North American Metals Council and the International Council on Mining and Metals.

We were pleased to expand MAC membership in 2009 by adding North American Tungsten Corporation and Anglo American (Exploration), which both joined as full members. We also welcomed, as associate members, AquaTox Testing and Consulting, Dingo Maintenance Systems, Gabriel Resources, Genivar, Partners in Performance, Redcorp Ventures, TetrES Consultants and WorleyParsons Canada.

MAC's achievements in 2009 were due to the collective efforts of many people. These individuals include our strong Board of Directors, Executive Committee and TSM Governance Team, and the committed industry representatives who lend their expertise to committees, task forces, working groups and multi-stakeholder groups. We also boast one of the strongest association staffs in Ottawa, composed of individuals who are recognized for their expertise and professionalism by government and other associations. With their mix of skills, experience and teamwork, they deliver tangible outcomes that benefit the entire industry. Their work is much appreciated by the Board and members of MAC.

As we look ahead, the economic challenge we all face is daunting. But by working together, we will produce the results we need to meet climate change commitments, secure a skilled workforce and set the stage for a competitive, productive future for all Canadians. In 2010 MAC will build on past successes, deal with ongoing challenges and confront the new issues that will no doubt emerge.

For more details on the topics discussed here, and on other aspects of MAC's work, we encourage you to read the annual report in full.

REPORT FROM THE CHAIR OF THE TOWARDS SUSTAINABLE MINING GOVERNANCE TEAM



Highlights

- Canadian Business for Social Responsibility identifies TSM as a “practical and tangible system of continuous improvement of social and environmental management”
- Adoption of new protocols on safety and health, biodiversity conservation, and Aboriginal and community outreach
- Release of guidance document on energy use and greenhouse gas emissions
- Presentations on TSM in Colombia and Spain

A study by Canadian Business for Social Responsibility, released in April 2009, found that MAC’s Towards Sustainable Mining (TSM) initiative has earned a high degree of credibility and promotes continuous improvement. The study’s review of corporate social responsibility frameworks for the extractive industry reaffirms that TSM is effective and credible, and that it enables MAC members to demonstrate their commitment to improved performance in sustainable development.

A copy of the study is available on MAC’s website (www.mining.ca).

New Performance Elements—First Since TSM’s Inception

The MAC Board of Directors approved three new protocols that will be integrated into TSM over the next few years. By 2013 all MAC members will publicly report their TSM scores in the areas of safety and health, biodiversity conservation, and Aboriginal and community outreach. These are the first new

THE TOWARDS SUSTAINABLE MINING GOVERNANCE TEAM WAS CREATED TO EXAMINE OPPORTUNITIES FOR IMPROVING THE MINING INDUSTRY’S PERFORMANCE AND REPUTATION WITH KEY STAKEHOLDERS.

performance elements since the TSM initiative began in 2004.

Also in 2009 MAC’s Energy Committee, along with TSM initiative leaders, issued a final guidance document for members on energy use and greenhouse gas emissions.

TSM Communications

During 2009 the Community of Interest Advisory Panel continued its work of challenging MAC with new issues, providing guidance on the TSM process and performing post-verification reviews.

In consultation with the COI Advisory Panel, MAC and its members developed a draft communications plan for TSM. Presentations about TSM were given in Colombia and Spain and to groups such as the Canadian financial community.

As well, MAC developed *Towards Sustainable Mining 101: A Primer*. This summary document introduces new MAC members, member employees and the general public to the TSM initiative.

Plans for 2010

In 2010 MAC hopes to explore the issue of water and mining, with a view to possibly developing a new policy framework for this area. The TSM team will also look to develop another performance element for mine closure. Finally, MAC intends to improve TSM communications within member companies and with communities of interest.



COMMITTEE REPORTS

DIAMONDS COMMITTEE



Highlights

- Lack of government progress on recommendations from Northern Regulatory Improvement Initiative
- Nunavut Planning and Project Assessment Bill improved by industry input
- Challenges with diamond effluent regulations
- Memorandum of Understanding signed with Assembly of First Nations
- Establishment of CanNor and the Northern Projects Management Office

Northern Regulatory Issues

Since the 2008 McCrank report, which was the culmination of the Northern Regulatory Improvement Initiative (NRII), the federal government has taken some steps that it has portrayed as moving toward improvements in the northern regulatory regime. Yet there has been little progress on specific recommendations from the report that would streamline Northwest Territories processes related to the *Mackenzie Valley Resource Management Act*.

Indian and Northern Affairs Canada (INAC) did begin consulting with industry on the Nunavut Planning and Project Assessment Bill (discussed below), and department officials have stated that an action plan is underway to obtain funding for the NRII. In October 2009 Minister Chuck Strahl referred to the creation of the new Canadian Northern Economic Development Agency (CanNor) and the Northern Projects Management Office as the department's main initiatives so far. However, as important as these new agencies are, neither has the mandate or the resources to implement the major components of the McCrank

THE DIAMONDS COMMITTEE ADDRESSES ISSUES AFFECTING THE OVERALL HEALTH OF THE DIAMOND INDUSTRY, WITH A FOCUS ON THE NORTHERN REGULATORY ENVIRONMENT, ECONOMIC DEVELOPMENT, AND ABORIGINAL AND COMMUNITY ENGAGEMENT.



report. That responsibility rests with the Policy and Programs Directorate of INAC's Northern Affairs Program and, at year end, it remained an unfunded work in progress.

In August 2009 MAC provided input to the Office of the Auditor General of Canada on the NWT's preparedness for resource development, and underscored that government must implement key elements of the NRII. The consultation was part of a review of the federal government's progress—specifically INAC's progress—since the Auditor General's 2005 report on the NWT. The findings should be tabled in the first half of 2010.

Planning and Project Assessment Legislation

Through much of 2009 MAC was part of an industry working group, along with the Prospectors and Developers Association of Canada (PDAC) and the NWT and Nunavut Chamber of Mines, to review the draft Nunavut Planning and Project Assessment Bill. This legislation is recommended by the McCrank report and industry has lobbied for the measure for several years. The working group took part in two workshops convened by INAC and completed three reviews of the bill.

The draft bill focuses on how the Nunavut regulatory process will operate. Land use plans, once in place, will guide a project's entry into the development process; conformity to the plans will be required. Entry is intended to occur through a one-window approach via the Nunavut Planning Commission.

The bill also recognizes the importance of resource development to Nunavut's economic advancement. An important aspect of the legislation, as required by the Nunavut Land Claims Agreement, is its paramountcy over other Canadian laws.

Following industry submissions, INAC made a number of key amendments to the bill, the most important being to add 22 process timelines to keep project reviews moving through the system. Other changes included the resolution of transboundary issues and the definition of projects subject to review and those exempted, or "below threshold."

Minister Strahl later commended the industry working group for its input and singled out the mining industry for providing the most comprehensive feedback, which resulted in two rewrites of the draft. The bill should be tabled in Parliament in 2010, and MAC will likely be invited to comment when the bill is reviewed by the standing committee.

Effluent and Water Regulations for Diamond Mining

Environment Canada and the Department of Fisheries and Oceans (DFO) have identified a regulatory gap that they say could, in certain situations, prevent *Fisheries Act* authorizations from being issued for new diamond mine development without an enabling regulation. Because the 2002 *Metal Mining Effluent Regulations (MMER)* do not apply to diamond mining, it is the departments' position that any diamond project involving tailings deposits in natural fish-bearing waters could be disallowed.

During 2009 MAC urged Environment Canada to support the development of a national baseline effluent regulation for diamond mining. However, although Environment Canada and DFO officials agree that a regulation is needed, they are reluctant to proceed without a commitment of government resources, particularly in the area of monitoring and enforcement, claiming that a major new regulatory framework is required. Industry believes the situation is less onerous. MAC contends that a new regulation could be modelled on the *MMER* and that the existing

monitoring and enforcement regime for diamond mining would work for a new or amended regulation.

To prepare for work on an effluent regulation, Environment Canada commissioned a study in 2009, *Identification of the Best Available Control Technologies Applicable to Canadian Diamond Mining Effluent*, and invited diamond mining operators to comment. The department revised the report in response to deficiencies identified by industry, and has since stated that the document provides the technology base to move forward. However, at the time of writing, it is not known whether the revised report will be released or when government might move ahead with a revised *MMER* or a new regulation.

To exacerbate the situation, although diamond mines have operated in the North for over a decade, there are still no workable water and effluent criteria for mining in the territories. Since 2007 MAC has urged INAC and the northern resource boards to work with industry to develop the much-needed criteria. In July 2009 INAC announced plans to proceed with criteria development in line with recommendations in a report by Macdonald Environmental Services Ltd. In a parallel move, the Mackenzie Valley Land and Water Board created a working group to develop water and effluent quality guidelines for the Northwest Territories. The group has said it is willing to work with INAC but has not yet included industry in the dialogue.

Aboriginal Engagement

In March 2009, after a year of dialogue, MAC signed a Memorandum of Understanding with the Assembly of First Nations (AFN). In the lead-up to the signing, MAC worked closely with the AFN to define four pillars of commitment—partnership, investment, procurement and employment—areas in which MAC members have demonstrated an ability to contribute to the advancement of Aboriginal communities. The AFN, under new National Chief Shawn Atleo, has since expressed willingness to move forward on an action plan in accordance with the MOU commitments.

During the year MAC was involved with Aboriginal organizations in other areas.

- **Canadian Aboriginal Minerals Association (CAMA).** MAC participated in the 17th annual CAMA conference in November 2009, the theme of which was "Commodities, Communities and Certainty." Along with diamond company representatives, MAC took part in a panel presentation on skills training and development, with a focus on the Aboriginal mining workforce in the NWT.
- **Aboriginal-Industry Mining Forum.** MAC's work to create an Aboriginal-Industry Mining Forum in the NWT culminated in 2009 with the launch of the body. The forum, which has financial support from INAC, MAC members and PDAC, met twice during the year: on January 15 in Yellowknife and on June 10 in Dettah. The NWT and Nunavut Chamber of Mines and PDAC also participated. At the meetings Aboriginal leaders acknowledged industry's contributions and their willingness to meet industry halfway, but emphasized that their communities want more meaningful input into decisions on how mining proceeds locally. They highlighted the importance of training and employment opportunities for youth, as well as community opportunities

to engage in business development. The NWT and Nunavut Chamber of Mines offered to take the lead in developing similar initiatives, and it was agreed that government has a role in the forum, particularly through CanNor (discussed below).

Northern Economic Development

A major milestone in 2009 was the launch of the Canadian Northern Economic Development Agency (CanNor). This federal agency is a stand-alone economic development body similar to those in the West, Ontario and Atlantic Canada regions. CanNor reports to the Minister of Indian Affairs and Northern Development and is headed by Deputy Minister and President Nicole Jauvin. The agency, which covers all three territories, has an operating budget of \$50 million over five years and will house existing northern and Aboriginal economic development programs.

CanNor also oversees the new Northern Projects Management Office (NPMO), created in 2009 in response to industry recommendations under the Northern Regulatory Improvement Initiative (NRII) and longstanding requests by MAC. The new office, headquartered in Yellowknife and with regional offices in Iqaluit and Whitehorse, will coordinate federal input into project reviews in the territories. Although the NPMO does not have primary responsibility for regulatory improvement (this role remains with INAC), its mandate does include recommending regulatory process improvements under the NRRI.

Northern Infrastructure for Mineral Development

October 2009 saw MAC take part in the multi-stakeholder Strategic Northern Infrastructure Symposium in Yellowknife. The key priorities that emerged from this event included road and port infrastructure, hydro power development and alternative energy.

The mineral sector and the Nunavut government are still keenly interested in advancing the Bathurst Inlet Port and Road (BIPAR). From the NWT side, connecting the BIPAR with the existing ice road from the south would improve supply to the existing

diamond operations from both directions and would create access to undeveloped mineral deposits in the northern Slave Geological Province. Competing with this potential development is the more popular extension of the Mackenzie Valley Highway to Inuvik. Overcoming the costs for either project is the biggest challenge. A decision on the Mackenzie gas pipeline would considerably influence which project will go ahead.

New hydro development is also a critical issue for future mining. The proposed expansion of the Taltson hydro operation near Fort Smith, which would extend power 700 kilometres to the diamond operations, would also power five remote communities and displace consumption of more than 100 million litres of diesel fuel a year. As proposed, the expansion would boost output from 18 to 56 megawatts. It would take three years to complete and provide some 700 northern jobs. The project is currently in the NWT environmental assessment process.

Economic Contribution of Diamond Mining

In spring 2009 MAC partnered with the NWT and Nunavut Chamber of Mines to produce a study on the diamond industry's socio-economic contributions to the NWT economy. Since the start of production to the end of 2008, the mines have produced 92 million carats, valued at \$11 billion. In the same period, capital and operating expenditures totalled \$10 billion, more than half of which was spent on northern and Aboriginal business procurement. Other statistics of note:

- From 1991 to 2008 the NWT GDP tripled, from \$1.6 billion to \$4.5 billion.
- In the past decade, the diamond industry provided more than 25,000 person-years of employment.
- From 1999 to 2007 the average NWT income increased from \$33,000 to \$51,000, with a parallel drop in the proportion of the population receiving government income support.

During the year MAC completed its own in-house update of employment and investment information from data reported in companies' socio-economic reports.

ENERGY TASK FORCE



Highlights

- Preparation of annual CIEEDAC report on energy consumption of the mining and smelting industry
- Monitoring of government progress in establishing targets and regulations for GHG emissions
- Continued measuring and reporting of GHG emissions by MAC member companies
- Finalization and distribution of guidance document to improve companies' energy and GHG management
- Delivery of workshop on energy and GHG management

The Energy Task Force encourages continuous improvement in energy efficiency and greenhouse gas (GHG) emissions management. MAC participates in the Canadian Industry Program for Energy Conservation (CIPEC). In past years MAC was also part of the federal government's Voluntary Challenge and Registry initiative, which ended in 2004 as the government moved towards regulation of GHG emissions.

Every year the Energy Task Force engages the Canadian Industrial Energy End-Use Data and Analysis Centre (CIEEDAC) to prepare energy consumption and GHG emissions data for the industry. A chart in the most recent report shows that GHGs per unit of smelter/refinery output improved by around 53% in the 18 years since 1990. This is an impressive improvement, averaging 3% per year, though it falls short of the 6% annual improvement target that could someday be reflected in federal regulations.

THE ENERGY TASK FORCE PROMOTES OVERALL ENERGY MANAGEMENT, INCLUDING IMPROVED ENERGY EFFICIENCY AND GREENHOUSE GAS INTENSITY PERFORMANCE.

In recent years climate change has gained prominence in both the political and the policy context, and political parties are giving the issue greater priority. In October 2006 the federal government tabled Bill C-30, *Canada's Clean Air Act*, which proposed to regulate both air pollutants and GHG emissions. MAC and its members were involved in consultations on the bill and appeared before the parliamentary committee studying it in February 2007. At the committee stage, opposition parties proposed over 100 amendments to the bill, which was allowed to die.

In April 2007 the government announced a new regulatory framework, "Turning the Corner," to replace the proposed legislation. A key feature of the new framework was that it required an 18% improvement in GHG intensity between 2007 and 2010. Within the mining industry, this target would apply to base metal smelters and iron ore pellet plants.

In the 2008 budget the government allocated \$66 million to implementing this regulatory framework. Through 2009 the government let it be known that development and implementation of its GHG regulatory process would be delayed so as to mesh more smoothly with GHG targets, policies and tools that might develop in the United States. At the end of 2009, it remained unclear as to what, if anything, might emerge from the U.S. Congress and administration on climate change.

Throughout this drawn-out legislative and regulatory process, MAC has highlighted the importance of global competitiveness, the uniqueness of specific

facilities and situations, and members' progress on energy efficiency and GHG mitigation. MAC has also made the federal government aware that the mining industry seeks a simple, low-cost, single-window reporting system under the federal GHG regulatory regime. Given the many different targets and tools that have emerged at the provincial level in recent years, it is evident that developing a national policy and reporting system will be very difficult.

MAC and the Energy Task Force continue to emphasize the role that energy efficiency and process investment could play in dealing with climate change, clean air and productivity issues. To that end, MAC has highlighted the usefulness of federal incentives and programs for energy efficiency. In January 2007 the federal government announced three initiatives under the ecoENERGY label that fund broader investment in energy efficiency, clean energy technology and renewable energy supply.

MAC members have worked in recent years to inventory, measure and report on their climate change actions, which positions the industry well for future reporting requirements. An annual inventory of GHG emissions reported by participating members is published each year in the *Towards Sustainable Mining Progress Report*.

In 2008 and 2009, MAC engaged Stratos, a sustainability consultancy, to produce a TSM guidance document for energy and GHG management and to deliver training workshops for companies. The aim of both initiatives was to improve the energy and GHG performance of mining companies. MAC also developed a paper on the carbon tax theme for circulation and discussion. The Energy Task Force helped guide these two processes.



ENVIRONMENT COMMITTEE



Highlights

- Changes to the National Pollutant Release Inventory
- Discussion of delays and uncertainty with federal project review
- Tripartite framework for a comprehensive air management system

In 2009 the Environment Committee met in June and October.

NPRI Changes

The committee's priority during the year was the National Pollutant Release Inventory (NPRI). A court ruling in April 2009 directed Environment Canada to change the way tailings and waste rock are considered for the purpose of reporting to the NPRI, retroactive to 2006. MAC wrote Environment Canada in May to outline the issues that would need to be addressed in implementing the ruling, and discussed these issues with officials at the committee meeting in June. Environment Committee members took part in consultations on an initial proposal in July and submitted comments.

The new NPRI reporting requirements for 2006 through 2009 were published in the *Canada Gazette* in December 2009, with a reporting deadline of June 1, 2010. MAC members participated in teleconference briefings and reviewed an interpretation guide issued by Environment Canada. Intense work continues on understanding the requirements, which will cumulate in MAC guides being drafted for members. The Environment Committee is still examining the implications for members' facilities and, along with

THE ENVIRONMENT COMMITTEE ADDRESSES GENERAL ENVIRONMENTAL ISSUES AFFECTING THE INDUSTRY.

the MAC Public Affairs Committee, is analyzing communication needs.

Federal Project Review

The Environment Committee has been monitoring the development of federal project review ever since the Major Projects Management Office (MPMO) opened in February 2008. Among other things, MAC has attended MPMO workshops to discuss the long-term options for federal project review.

The Environment Committee has also been preparing for the mandatory parliamentary review of the *Canadian Environmental Assessment Act*, which should begin in June 2010. MAC reviewed the implications of a Supreme Court decision on project scoping under the *Act*.

MAC continued to convey to the federal government the industry's concern with the lack of timeliness and certainty in the federal project review process. This concern has gained broad recognition, including in the fall 2009 report from the Commissioner of the Environment and Sustainable Development.

Also on the federal front, the Environment Committee monitored progress on the federal regulatory framework for greenhouse gases and discussed related developments in various provinces and regions.

Air Management System

Throughout 2009 MAC continued its role in the multi-party process—involving federal and provincial governments, industry, and environmental and health NGOs—to develop a comprehensive air management

system. MAC is a member of the steering committee and of several working groups for this initiative.

Affected members were involved in intensive sector subgroups in the fall of 2009. In October the Canadian Council of Ministers of the Environment asked for further elaboration on the proposal for the ministers' consideration in 2010.

The main elements of the framework are the following:

- nationally agreed-upon ambient air quality standards
- provincially led planning in air zones where air quality is under pressure
- consideration of all significant sources of air pollution, including diffuse and mobile sources and transboundary pollution, with each level of government regulating or managing the sources it is responsible for
- nationally consistent base-level performance requirements for large industrial sources

Other Issues

International developments that may affect domestic policy or world markets for mineral products are always issues for MAC to monitor. Of particular importance in 2009 were Europe's chemical policy (REACH) and the metal-related activities of the OECD, UN organizations and the North American Commission for Environmental Cooperation.

To boost its effectiveness, MAC belongs to several formal and informal industry groups. They include the Industry Coordinating Group on the *Canadian Environmental Protection Act*, the Resource Associations Group, the Industry Steering Committee on Climate Change and Clean Air, the North American Metals Council and the International Council on Mining and Metals.

For more on MAC's environmental initiatives and the reduction of releases from member facilities, see the *Towards Sustainable Mining Progress Report*, available on MAC's website (www.mining.ca).



LAND ACCESS COMMITTEE



Highlights

- Continued involvement in *Species at Risk Act* implementation
- Consultations on reform of *Migratory Birds Convention Act*
- New TSM performance indicators for biodiversity conservation

Species at Risk Act

MAC continued its role in the multi-stakeholder advisory committee that is helping with implementation of the *Species at Risk Act*. The committee met November 26–27, 2009, to discuss issues such as listing, recovery planning and compensation.

Industry associations chose MAC to represent them on a working group that is advising Environment Canada on the development of a recovery strategy for boreal caribou. The group, which met for the first time on September 24–25, 2009, represents industry associations and environmental NGOs. Its purpose is to provide a link with industrial facilities and civil society groups as Environment Canada proceeds with cross-country consultations on the recovery strategy.

MAC is also working with various industry associations and environmental groups to develop joint recommendations for the federal standing committee conducting the five-year review of the *Species at Risk Act*.

Migratory Birds Convention Act

In 2008 the federal government launched consultations on the development of new regulations for the *Migratory Birds Convention Act (MBCA)*. First enacted in 1916, the

THE LAND ACCESS COMMITTEE ADDRESSES LAND USE AND ACCESS ISSUES OF CONCERN TO THE MINING INDUSTRY AS WELL AS ISSUES RELATED TO BIODIVERSITY CONSERVATION.

MBCA forbids the taking of migratory birds or the destruction of nests—an absolute prohibition akin to the harming of fish habitat under the *Fisheries Act*. The *MBCA* was created in response to over-hunting and did not consider how migratory birds might be affected by resource extraction.

In 2002 environmental groups successfully challenged the federal government before the Commission for Environmental Cooperation, arguing that the government was not enforcing the *MBCA* as written. As a result, the government amended the *MBCA* in 2005 to authorize the development of regulations that permit the incidental take of migratory birds.

The consultations now underway will focus on a permit system that considers how operations impact the whole population of migratory birds as opposed to individual birds.

MAC continues to be part of the North American Bird Conservation Initiative, which met in April and October 2009.

New Biodiversity Conservation Indicators

During the year MAC's biodiversity task force completed the new biodiversity performance indicators for the TSM initiative. The indicators were field tested in the summer of 2009, followed by a lessons-learned workshop in the fall. The revised protocol was reviewed by the MAC Science Committee, the TSM initiative leaders and the TSM Governance Team, and was approved by the MAC Board of Directors in November 2009.

METALS WORKING GROUP



Highlights

- Information sessions on new European legislation for chemicals management (REACH)
- Increased involvement in the Industry Coordinating Group on the *Canadian Environmental Protection Act (CEPA)*

In 2009 the Metals Working Group met by teleconference every two months, and in person in June during the meetings of MAC's Environment and Science committees.

Back in 2007 MAC, jointly with Environment Canada and Pollution Probe, sponsored an intern to work on chemicals management. During MAC's portion of the term, the intern, Julie Sommerfreund, worked at the Nickel Institute in Europe on the implementation of Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH). This work received support from the Metals in the Human Environment Strategic Network.

On Sommerfreund's return to Canada, MAC and Pollution Probe dedicated the last months of the internship to organizing information sessions on REACH. MAC extended the internship to allow time to organize sessions for interested NGO, Ontario government and federal officials. These sessions were held in spring and summer 2009.

THE METALS WORKING GROUP ADDRESSES CANADIAN REGULATORY AND POLICY DEVELOPMENTS CONCERNING THE ASSESSMENT AND MANAGEMENT OF SUBSTANCES.

In addition to the REACH information sessions, the Metals Working Group invited Environment Canada officials to describe their plans for metals under the Chemicals Management Plan. The Working Group also reviewed, and advised MAC on, *CEPA*'s Section 71 information requests issued in 2009, and continues to help MAC prepare for the communication needs expected to arise from reporting changes to the National Pollutant Release Inventory.

Mike Dutton (Vale Inco) and Jason Nugent (Intrinsik Environmental Inc.) represented MAC on the Industry Coordinating Group on *CEPA*.

ORPHANED MINES WORKING GROUP



Highlights

- Release of NOAMI's 2002–2008 performance report
- First annual general meeting of NOAMI Advisory Committee
- Publication of proceedings of 2008 risk assessment workshop
- Release of capacity-building toolkit to help local communities understand abandoned mines
- Refinement of online inventory of orphaned and abandoned mines
- Continued work on toolkit of legislative approaches

Through NOAMI, MAC works with others to find solutions to the legacy of orphaned and abandoned mines in Canada, including the associated liabilities, human health concerns and clean-up costs. NOAMI was launched in 2002 at the request of mines ministers and is jointly funded by MAC, the Prospectors and Developers Association of Canada (PDAC) and several federal, provincial and territorial government departments. It is administered by a small secretariat at CANMET, part of Natural Resources Canada.

NOAMI's work is guided by an advisory committee representing industry, government, and Aboriginal and environmental groups. The committee has produced reports on barriers to collaboration, funding models, a system of classifying abandoned sites, a pamphlet on community participation in site rehabilitation, an action framework to guide future remediation, and a website (www.abandoned-mines.org).

THE ORPHANED MINES WORKING GROUP WAS FORMED TO PURSUE MULTI-STAKEHOLDER SOLUTIONS, ACROSS JURISDICTIONS, TO THE LEGACY OF ORPHANED MINES. MEMBERS PARTICIPATE IN THE NATIONAL ORPHANED/ABANDONED MINES INITIATIVE (NOAMI).

Performance Report

As part of its communications strategy, NOAMI has produced a performance report documenting the initiative's activities and achievements in its first six years of operation, from 2002 to 2008. The report, available in both official languages, focuses on the current state of orphaned and abandoned mines in Canada, the achievements of NOAMI and jurisdictions active in the initiative, future challenges and opportunities in Canada, and NOAMI's future.

The report highlighted progress in the following areas:

- development of a web-based working model of a national inventory of orphaned and abandoned mines, in cooperation with jurisdictions
- information for regulatory improvement, including a toolkit of funding options for abandoned mine rehabilitation and a jurisdictional review that identifies existing legislation and policies relevant to orphaned/abandoned mines
- multi-stakeholder information sharing through four workshops, NOAMI newsletters and the website
- a series of legal-based publications on funding approaches and barriers to collaboration that evaluate funding and legislative policies
- capacity building for communities through a pamphlet on the guiding principles of community involvement, and a description of community case studies underpinned by lessons learned

Annual General Meeting of NOAMI Advisory Committee

The NOAMI Advisory Committee's first-ever AGM was held in Ottawa in May 2009. The full-day meeting focused on accomplishments to date, ongoing projects and future directions. NOAMI has made considerable progress towards addressing the problems associated with orphaned and abandoned mines; however, much is left to do. The committee discussed emerging issues, new projects, strategies and the renewal of the committee membership, and identified the prevention of new abandoned sites as a priority.

The AGM also marked the appointment of Robert Holmes, from the Government of Yukon, as the new NOAMI chair. Christine Kaszycki (Province of Ontario), NOAMI chair from 2002 to 2008, assumed the position of past chair, and Gregg Stewart (Province of British Columbia) became vice-chair. The committee has adopted a new model for executive appointments: each position is now a two-year term, with an officer progressing from vice-chair to chair to past chair. This approach will ensure consistent leadership and a shared workload.

Proceedings of Risk Assessment Workshop

In November 2008 NOAMI hosted a multi-stakeholder workshop (reported on last year) to explore different perspectives on risk assessment. About 100 people attended from Aboriginal groups, NGOs, academia, the mining industry, consulting firms and federal, provincial and territorial governments.

Workshop proceedings and presentations are now available on CD-ROM and as a report on the NOAMI website. The proceedings focus on three types of risk assessment: human health, ecological and geotechnical/safety. Three case studies explore risk assessment in the Sudbury Soils Study (Ontario), the Lynn Lake East Tailings Management Area (Manitoba) and the Yankee Girl mine site remediation project (British Columbia).

Community Capacity-Building Toolkit

NOAMI has developed a capacity-building toolkit to help communities participate in decision-making related to orphaned and abandoned mines. The toolkit gives communities a better understanding of the socio-economic and environmental issues, community engagement and government processes associated with this topic.

The Centre for Indigenous Environmental Resources in Winnipeg was contracted to develop and pilot the toolkit with three diverse rural communities: Ymir, British Columbia (near the Yankee Girl mine); Virginiatown, Ontario (near the Kerr-Addison mine); and Chibougamau, Quebec. The communities took part in workshops and focus groups to assess, build on and adapt the toolkit so that it is useful and transferable to others.

The next phase of the project involves evaluating the toolkit's resource material to determine how to develop a guidebook for local communities.

National Inventory

One of NOAMI's early tasks was to gather information for a national inventory of active, closed and orphaned/abandoned mines. The inventory, based on compatible inventories in each province and territory, will cover all inactive mineral sites. It will include a system for categorization and priority ranking, as well as agreed-upon definitions and terminology for orphaned and abandoned sites. The inventory is to be a web-based portal to existing inventories, with an easy-to-use map interface.

NOAMI is committed to completing the inventory within a year. Once finished, the site will need jurisdictional approval before going live.

Toolkit of Legislative Approaches

NOAMI continues to work on the toolkit of legislative approaches that will help Canadian jurisdictions develop policies and legislation for orphaned and abandoned mines. The toolkit will be based on the *Report on the Legislative, Regulatory, and Policy Framework Respecting Collaboration, Liability, and Funding Measures in Relation to Orphaned/Abandoned, Contaminated, and Operating Mines in Canada (2007)*. This exhaustive synthesis of jurisdictional analyses includes an assessment of gaps, limitations, barriers and opportunities for remediation, as well as a summary of observations.

Prevention of New Orphaned/Abandoned Mines

The NOAMI Advisory Committee has begun to examine the main components of mine closure and the transfer of mining lands back to government through issuance of a release such as an exit ticket. Many mining sites, after planned closure, will be left with engineered structures (e.g., tailings dams, waste dumps with covers, engineered stream channels) that will require long-term monitoring and maintenance, possibly in perpetuity. This responsibility represents a long-term liability. More clarity and certainty of process is needed regarding the responsibilities of the operator and of government regulatory agencies.

The Advisory Committee's project will look into a policy framework that addresses mine closure, specifically the management of long-term liabilities.

Communication and Links

During 2009 links between NOAMI and other initiatives were identified and strengthened. Here are some highlights:

- The newsletter *NOAMI Nugget* was redesigned and issued in October 2009. There will be at least two editions per year.
- The NOAMI secretariat is compiling a list of international initiatives that deal with orphaned and abandoned mines. Among them are Pasivos Ambientales Mineros in South America, the National Association of Abandoned Mine Land Programs in the U.S., the United Nations Environment Programme (UNEP), the Roundtable on the Restoration of Legacy Sites, the Post-Mining Alliance in the UK, and Fundación Chile.
- NOAMI will develop links to various Government of Canada groups, such as the Social License Task Group (established by the Intergovernmental Working Group on Minerals and Metals), the Green Mining Initiative and the Canadian Mining Innovation Council.

Corinne Unger, a 2009 recipient of the prestigious Australian Churchill Fellowship, visited the NOAMI secretariat (in particular Gilles Tremblay) as part of her six-week study tour of abandoned mine sites. The purpose of the tour was to learn about land rehabilitation at abandoned mines and post-mining land use from leading programs in Austria, Germany, the UK and Canada.

In studying NOAMI, Unger was interested in how a national multi-stakeholder program can be structured to support the remediation of abandoned mines at a provincial level, and how local communities can be involved. Members of the NOAMI Advisory Committee interviewed included Elizabeth Gardiner from MAC, Mike Nahir from Indian and Northern Affairs Canada and Gregg Stewart from the BC Contaminated Sites Program. A report on Unger's findings is posted on the Churchill Trust website (www.churchilltrust.com.au).



PUBLIC AFFAIRS COMMITTEE



Highlights

- Ongoing advocacy, guidance and strategic support for MAC's federal public policy agenda
- Advocacy in response to Bill C-300 and corporate social responsibility issues
- Historic Memorandum of Understanding with Assembly of First Nations
- Another successful Mining Day on the Hill
- Continued support of MAC's TSM initiative

MAC's advocacy in 2009 focused on many areas, among them competitiveness, regulatory review, infrastructure, innovation, human resources, geosciences, Aboriginal participation in mining, regulatory reform, the National Pollutant Release Inventory and issues related to corporate social responsibility. Throughout the year, mini-lobby days organized by Mining Works for Canada successfully reinforced key priorities.

Federal Advocacy

General outreach to Members of Parliament, as well as grassroots lobbying, with more attention to the backbench across party lines, was a priority in 2009. Reaching out to caucus committees to ensure that MAC's issues were understood was an integral component of the government relations strategy. MAC met throughout the year with committee chairs, party critics and key staff in both the Leader of the Opposition's office and opposition caucus groups.

MAC appeared before two House of Commons standing committees in 2009. The first was in the spring, before the Subcommittee on Canadian Industrial Sectors, to discuss the subcommittee's

THE PUBLIC
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INCLUDING
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WORKS FOR
CANADA
PROGRAM.

study of the crisis faced by certain industrial sectors in Canada (including aerospace, energy, forestry, high tech, and manufacturing and mining). The second appearance was later in the year, before the Standing Committee on Foreign Affairs and International Trade. The topic was Bill C-300, "An act respecting corporate accountability for the activities of mining, oil or gas in developing countries" (discussed below). Evidence from testimony can be found on the MAC website (www.mining.ca).

Corporate Social Responsibility

MAC is committed to working with all interested parties to implement the federal government's response to the National Roundtables on Corporate Social Responsibility (CSR) and the Canadian Extractive Industry in Developing Countries. The government's response, titled *Building the Canadian Advantage: A Corporate Social Responsibility (CSR) Strategy for the Canadian International Extractive Sector*, addresses many of the recommendations put forward by the Advisory Committee on Corporate Social Responsibility, a multi-stakeholder group that advised the government in this area. Two MAC staff members took part in the Advisory Committee.

Among the recommendations supported by the federal strategy are the following: enhancing support for capacity building in developing countries; endorsing voluntary international CSR standards; and creating a CSR centre of excellence. MAC supports the government's strategy because it is directionally correct and is an important first step in meeting the round-table objectives.

However, Bill C-300, which at the time of writing was at the committee stage (having passed second reading in spring 2009), is not in keeping with the spirit and intent of the Advisory Committee's recommendations. Instead of taking a collaborative, policy-based approach, Bill C-300 takes a legislative and punitive approach to corporate accountability, one that ignores the need for an enabling environment to improve performance. Instead of helping companies operate in compliance with CSR guidelines, Bill C-300 requires ministers to investigate complaints and then issue a "compliant" or "non-compliant" ruling within eight months. Companies found non-compliant will have their Export Development Canada project funding and their Canada Pension Plan investments withdrawn immediately, and will have no opportunity to correct their non-compliance. Companies may face reputational risk, with no distinction between arguably trivial or serious findings of non-compliance.

Further, instead of working with host countries to improve their governance capacity, Bill C-300 will base CSR compliance legislation on a set of international CSR standards still being defined and agreed upon by the international community. Regardless of their own laws, host countries will have to accommodate Canada's largely unwritten CSR laws before projects that rely on Canadian support can proceed.

MAC will continue to strengthen its own commitment to CSR through the MAC Towards Sustainable Mining initiative.

Assembly of First Nations

One of the greatest achievements for MAC in 2009 was the signing of a Memorandum of Understanding with the Assembly of First Nations (AFN). The historic event took place on March 9, 2009, at the Inter-Nation Trade and Economic Summit in Toronto. The MOU was signed by Jim Gowans (De Beers), Chair of MAC's Board of Directors, and Phil Fontaine, then AFN National Chief. It was witnessed by Ron Greenway (Teck), Treasurer of MAC, and Regional Chief Wilton Littlechild.

The MOU is intended to help the mining industry build its engagement with First Nations economies by creating employment and business opportunities. The MOU will strengthen the AFN's Corporate Challenge, a program that creates partnerships within Canada's corporate world to increase investments, procurement and employment for First Nations. It will also reinforce MAC's TSM initiative, which aims to improve the mining industry's sustainable development performance and which includes a policy framework on mining and Aboriginal peoples.

Mining Day on the Hill

The annual Mining Day on the Hill event was once again a highlight, providing an excellent opportunity for MAC members to connect with Members of Parliament. This year's event focused on economic competitiveness and included advocacy concerning Bill C-300 with Opposition MPs.

In total, 52 MAC delegates attended the event in Ottawa, with 11 teams participating in over 50 meetings. High-calibre meetings on the Bill C-300 issue involved four ministers, two deputy ministers, the Prime Minister's Office, the Office of the Liberal Opposition, and important Liberal MPs.

This year MAC teamed up with the Economic Club of Canada for the annual luncheon. Don Lindsay, President and CEO of Teck Resources, was the keynote speaker for the sold-out event. The Hon. Lisa Raitt, then Minister of Natural Resources, provided introductory remarks.

Support for TSM

Throughout the year the Public Affairs Committee supported the TSM initiative by attending various trade shows. MAC was part of the PDAC (Prospectors and Developers Association of Canada) convention, the AFN Inter-Nation Trade and Economic Summit, the CIM (Canadian Institute of Mining, Metallurgy and Petroleum) mining and society show, and the annual conference of the Canadian Aboriginal Minerals Association. The events were all held in Toronto.

As part of the TSM work plan, a subgroup of MAC industry members from the Public Affairs Committee joined TSM initiative leaders to create a communications strategy for TSM. The strategy will build on a document prepared by the TSM Community of Interest Advisory Panel, which is also working on the communications plan, and will be rolled out in short-term and long-term phases.

Although budget restraints prohibited traditional mine tours in 2009, MAC was able to arrange a facility tour for Minister Raitt and Assistant Deputy Minister Stephen Lucas at Teck's Product Technology Centre in Mississauga, near Minister Raitt's riding. The successful tour allowed the minister to see first-hand the importance of innovation and the sector's significance to urban centres.

SCIENCE COMMITTEE



Highlights

- More amendments to *Metal Mining Effluent Regulations* (MMER)
- Second national assessment of environmental effects monitoring (EEM) data
- Continued research and technology transfer through Mine Environment Neutral Drainage (MEND) program
- Release of global guide to acid rock drainage
- Water and mining a priority issue for MAC

The work of MAC's Science Committee complements that of the Environment Committee and the Towards Sustainable Mining initiative. For more detailed information on all of these areas, see the *Towards Sustainable Mining Progress Report* and the MAC website in general (www.mining.ca).

The Science Committee met twice in 2009. The major issues it dealt with follow.

Metal Mining Effluent Regulations

The *Metal Mining Effluent Regulations* (MMER), promulgated under the federal *Fisheries Act*, came into force in 2002 and apply to about 100 metal mines and facilities operating in Canada. The regulations impose effluent discharge limits for cyanide, arsenic, copper, lead, zinc, nickel and radium-226, and prohibit the discharge of effluent that is acutely lethal to fish (rainbow trout). The maximum monthly mean concentration of total suspended solids has been set at 15 mg/L, and a pH range of 6.0 to 9.5 is required.

RECOGNIZING THE IMPORTANCE OF SOUND SCIENCE AND ITS ROLE IN UNDERPINNING EFFECTIVE PUBLIC POLICY, THE **MAC SCIENCE COMMITTEE** WORKS TO MINIMIZE THE MINING INDUSTRY'S IMPACT ON AQUATIC AND TERRESTRIAL ECOSYSTEMS. THE COMMITTEE ADDRESSES ISSUES SUCH AS BIODIVERSITY, SPECIES AT RISK, MINE SITE REMEDIATION, EFFLUENT QUALITY, RISK ASSESSMENT AND THE WORK OF THE MAC METALS WORKING GROUP.

The regulations also require environmental effects monitoring programs to determine whether mine effluent affects fish, fish habitat or fisheries resources. More on EEM follows below.

The *MMER* have undergone a number of amendments to date:

- **October 2006:** The first amendments were published in the *Canada Gazette*, Part II. The most significant added the Aur Resources (now Teck Resources Limited) Duck Pond tailings impoundment area (TIA) to Schedule 2. On May 9, 2007, the Duck Pond mine officially opened.
- **June 2007:** The transitional authorizations issued to the Iron Ore Company of Canada and Wabush Mines under Section 39 of the *MMER* were extended by 18 months. The intent was to allow the mines to comply with the prescribed effluent standards for total suspended solids while the government fulfilled its obligation to consult with affected Aboriginal communities.
- **July 2008:** Two TIAs were added to Schedule 2 of the regulations, for the Doris North project (Newmont Mining) and the Meadowbank project (Agnico-Eagle Mines) in Nunavut. The environmental assessments, which included extensive local and regional consultation, had concluded that both projects should proceed.
- **February 2009:** The TIAs associated with the Carol mine (Iron Ore Company of Canada) and the Scully mine (Wabush Mines), both in Newfoundland and Labrador, were added to Schedule 2.

• **June 2009:** The *MMER*'s scope was expanded to include certain hydrometallurgical facilities by amending the definitions of "mine," "operations area" and "effluent." The proposed Sandy Pond TIA (Vale Inco Newfoundland and Labrador) for the Commercial Nickel Processing Plant in Long Harbour, Newfoundland, was added to Schedule 2.

There were two other *MMER* developments of note during 2009.

In January Environment Canada hosted a multi-stakeholder consultation and information session for the Ruby Creek molybdenum project (owned by Adanac Molybdenum) in British Columbia. A proposed amendment to the *MMER* would add upper Ruby Creek to Schedule 2 as a TIA. It is not known when this amendment will be gazetted.

In October two multi-stakeholder consultations were held, in Prince George and Ottawa, on a possible amendment involving the Mount Milligan copper-gold project (owned by Terrane Metals) in north-central British Columbia. The amendment would designate King Richard Creek and Alpine Creek as a TIA under Schedule 2. Again, it is not known when this amendment will be gazetted.

Since well before the existing *MMER* were promulgated in 2002, MAC has conducted careful, focused and aggressive lobbying for the judicious deposition of tailings in natural water bodies on a site-specific basis. In turn, Environment Canada and the Department of Fisheries and Oceans have agreed that the process for designating TIAs for Schedule 2 needs to be rethought and redesigned. MAC continues to encourage industry-government deliberations to bring about a process for adding TIAs to Schedule 2 as expeditiously as possible following completion of an environmental assessment.

Environmental Effects Monitoring

The purpose of an EEM study is essentially to determine the effects, if any, on fish, fish habitat and fisheries resources.

The EEM program consists of two parts. Part 1 involves studies on effluent characterization, water quality monitoring and sublethal toxicity testing. For Part 1 studies, which are used as supporting information to help interpret biological data, reports are submitted annually, on March 31. Part 2 focuses on biological monitoring, including a fish survey, a benthic invertebrate community survey (to assess impacts on fish habitat) and a survey of mercury tissue levels in fish (to assess impacts on the usability of fisheries resources).

When the EEM program was being developed, Environment Canada agreed to review the program's overall effectiveness approximately three years after it began, once the first phase of biological monitoring was finished. The first phase was completed in June 2006, and interpretive reports were submitted in either June 2005 or June 2006, depending on whether mines submitted historical data.

Environment Canada assessed the first round of EEM data, and a multi-stakeholder team reviewed the program and made 42 recommendations. The results of this first national assessment of Phase 1 data are available in the EEM section of Environment Canada's website (www.ec.gc.ca/eem/).

Since then, a second national assessment of metal mining EEM studies (conducted 2006–2009) was held. Its key objectives were as follows:

- to determine the type and magnitude of mine effluent effects on adult fish and benthic invertebrate communities
- to compare fish and invertebrate response patterns between the first and second national assessments
- to evaluate critical effect sizes for use in the metal mining EEM program

The initial findings of the second assessment were presented in late September 2009 at the 36th Aquatic Toxicity Workshop in the Charlevoix region of Quebec, and again in December 2009. The final results of this assessment are not yet publicly available. Ongoing analysis will provide more detailed information on national trends and the other factors being assessed.

As mentioned above, the purpose of an EEM study is to determine effects on fish, fish habitat and fisheries resources. Once effects are confirmed by two studies, and the extent and magnitude are known, mines must do an investigation of the cause (IOC). There are currently five mines in the IOC phase, with more expected to conduct IOC studies soon.

MAC and Environment Canada co-sponsored a multi-stakeholder workshop on December 8 and 9, 2009, in Gatineau, Quebec, to explore issues associated with the investigation of cause phase of the metal mining EEM program. The workshop encouraged discussion of the policy, process, scientific and technical aspects of IOC,

including environmental studies, potential causes of effects, regional perspectives, case studies, tools and approaches. The workshop proceedings will provide future guidance for conducting IOC studies.

Related Aquatic Effects Issues

Selenium. Selenium is becoming an issue for a wide range of mining, industrial and agricultural operations and is gaining attention in many jurisdictions across the country. In future, selenium may be added to the list of parameters for required effluent and water quality monitoring under the *MMER*. MAC monitors the work of the Canadian Industry Selenium Working Group and the North American Industry Selenium Working Group.

Thiosalts Consortium. Thiosalts, formed during the processing of sulphur-rich ore, have relatively low toxicity but may oxidize in the receiving environment, producing sulphuric acid and lowering the pH. They may therefore indirectly affect fish and benthic communities. CANMET (part of Natural Resources Canada) coordinates the government-industry Thiosalts Consortium, which aims to develop technology to prevent, treat and monitor thiosalts. Research will help find ways of limiting thiosalt production and will identify and develop control technologies. MAC is involved in the consortium's work as required.

Environmental Code of Practice for Metal Mines. Environment Canada has published this code, in English and in French, under Section 54 of the *Canadian Environmental Protection Act*. Adopting the code's recommendations is voluntary; however, Environment Canada intends to assess the extent to which companies implement the recommendations two or three years after publication. MAC monitors the industry's experiences with the code.

MEND Program

Since the Mine Environment Neutral Drainage (MEND) program began in 1989, it has contributed enormously to understanding acidic drainage and its prevention, and to increasing the transfer of information and technology. Still, acidic drainage

remains the most serious environmental issue facing the mining industry, government and the public, with potential liability reaching hundreds of millions of dollars. The mining industry continues to bear annual costs associated with treating acidic drainage.

The MEND program, administered by a small secretariat at CANMET, is highly respected in Canada and abroad. Canada is the only country to address acidic drainage and metal leaching through a focused research program directed by a multi-stakeholder steering committee from industry, government and NGOs.

Over the past several years, MEND has made great progress in addressing the research priorities identified by the Canadian mining industry, by federal, provincial and territorial governments, and by civil society. Along with research projects, MEND conducts technology transfer activities such as workshops, conferences, presentations and newsletters. It also transfers information through its website, hosted by Natural Resources Canada.

MEND belongs to a global alliance for acidic drainage research that includes INAP (International Network for Acid Prevention), the U.S. Acid Drainage Technology Initiative, ACMER (Australian Centre for Minerals Extension and Research), PADRE (Partnership for Acid Drainage Remediation in Europe) and the South African Water Research Commission. The alliance may soon be joined by organizations representing China, Brazil and Indonesia.

Supported by major mining multinationals, the global alliance allows for better sharing of information, pooling of resources and leveraging of funds. The synergies created by this organization further underscore the importance of the MEND program.

The 8th ICARD (International Conference on Acid Rock Drainage) was held in conjunction with the Securing the Future conference in Skellefteå, Sweden, from June 23–26, 2009. Over 300 delegates from 42 countries participated in the conference. The technical program included over 140 presentations and 70 posters, ranging from basic understanding of acid rock drainage to policies for sustainable mining. Canada was well represented, with many delegates and presentations from the MEND network.

The GARD Guide

For the past few years INAP, with support from the global alliance mentioned above, has sponsored the development of a global guide to acid rock drainage. The *GARD Guide*, as it is known, was officially launched at the 8th ICARD. It describes proven techniques for the characterization, prediction, monitoring, treatment, prevention and management of acidic drainage produced by sulphide mineral oxidation, and it also addresses metal leaching.

The guide has a number of objectives. It will help industry practise continuous improvement in environmental protection. It will support government efforts to assess and regulate mining activities. It will also enable the public and other stakeholders to better understand acid prevention plans and practices.

The guide applies to all commodities, from base and precious metals to uranium and diamonds, and to all phases of mining, from exploration to post-closure. It takes into account climatic, environmental and other geographic factors.

The *GARD Guide* (available at www.gardguide.com) is accessible to practitioners around the globe. It is now entering the rollout phase, which should result in upgrades and revisions.

NRTEE Program on Water and Canada's Natural Resource Sectors

Early in 2009 the National Round Table on the Environment and the Economy (NRTEE) launched a two-year research program to examine the relationship between water and its use by the energy, mining, forestry and agriculture sectors. The program will also consider changes in water supply, availability and distribution stemming from climate change and rising demand. A primary goal of the program is to catalyze the design and implementation of new policies and approaches through which water can be better managed to foster ecosystem health and the sustainability of the resource sectors. MAC participated in a workshop in late February 2009 to help shape the program and is represented on the program's Expert Advisory Committee.

During the latter part of 2009, NRTEE staff worked with individual sectors to ensure that they were well versed in relevant issues, had access to the best information and could integrate environmental and economic considerations through a collaborative process.

Because the timelines are tight, the Expert Advisory Committee held several meetings and teleconferences during the summer and fall. A number of multi-stakeholder sectoral roundtables were held, each resulting in a sectoral issue paper. An issue definition report will be published in the first half of 2010, and recommendations to governments and the four sectors will come in November 2010.

The mining sector workshop was held in Ottawa on

October 16, 2009. It was very successful thanks to excellent representation from the industry as well as MAC's TSM Community of Interest Advisory Panel.

As summarized in the issue paper produced afterwards, the meeting focused on identifying current and emerging issues related to freshwater use and availability within the sector, and on characterizing the state of water use data in the sector. Also discussed were recommendations on any critical policy issues the NRTEE might wish to follow up on. The issue paper noted the following:

Although participants were very interested in issues related to water footprint management and the intersection between water quality and quantity, they believe that these issues are being adequately addressed by other organizations working in the mining sector and there is no need for the NRTEE to work in these areas. Issues pertaining to water management technology are also thought to be adequately covered by other organizations.

On February 1, 2010, the NRTEE and the Water Policy and Governance Group of the University of Waterloo co-hosted a workshop in Toronto on the changing role of the natural resource sectors in Canadian water governance. Over 30 representatives attended from the natural resource sectors, governments, NGOs and First Nations groups. The workshop explored the changing landscape of industry-government collaboration in Canadian water governance and the implications for the natural resource sectors. Mike Vaydik (NWT and Nunavut Chamber of Mines), Gord Macdonald (Diavik Diamond Mines) and Allison Rippin-Armstrong (Starfield Resources) represented the mining sector. A summary report will be posted on the NRTEE website.

The NRTEE initiative is one of many taking place globally now. Water is a hugely important strategic issue, and the sustainability of water as a resource is being studied by industrial sectors, governments and NGOs in many countries. In MAC's view, the time is right to take a discerning look at how our industry uses water, how we practise stewardship and what related information is publicly available. To this end, besides participating in the NRTEE program, MAC is working with ICMM (International Council on Mining and Metals) on a water accounting, reporting and footprinting project related to mining. MAC is also in the early stages of developing some form of guidance under the TSM initiative.

TAILINGS WORKING GROUP



Highlights

- Updated version of *A Guide to the Management of Tailings Facilities* to be released
- *A Guide to Audit and Assessment of Tailings Facility Management* to be released
- Presentations on the guides and TSM performance indicators at workshops and conferences

In 1998 MAC released *A Guide to the Management of Tailings Facilities*, now used in managing such facilities in Canada and abroad. Five years later, to meet the industry's need for more guidance on developing site-specific protocols and manuals, MAC followed up with *Developing an Operation, Maintenance and Surveillance Manual for Tailings and Water Management Facilities*. Both guides are available in English, French and Spanish for free, either in hard copy or on MAC's website (www.mining.ca).

These two guides provide a foundation for managing tailings responsibly, from a facility's initial conception and site selection, through design and operation, to eventual decommissioning and closure. The guides have been recognized internationally for setting high standards for the industry. They also underscore MAC's commitment to sustainable development and its continuing efforts to improve environmental and safety performance.

The Tailings Working Group recently updated *A Guide to the Management of Tailings Facilities*. The revised guide was finalized in 2009 and will be officially released in 2010.

THE TAILINGS WORKING GROUP WAS FORMED TO REVIEW THE MANAGEMENT OF TAILINGS AND MINE WASTE, TO DEVELOP INDUSTRY GUIDELINES FOR THE SAFE AND ENVIRONMENTALLY RESPONSIBLE OPERATION AND MANAGEMENT OF TAILINGS AND WATER MANAGEMENT FACILITIES, AND TO PROMOTE AWARENESS OF EFFECTIVE FACILITY MANAGEMENT AND RISK ASSESSMENT THROUGHOUT THE MINING INDUSTRY. THE TAILINGS WORKING GROUP HAS ALSO MADE A SUBSTANTIAL CONTRIBUTION TO MAC'S TOWARDS SUSTAINABLE MINING (TSM) INITIATIVE.

Between 2004 and 2006, to support the TSM initiative, the Tailings Working Group developed a set of performance indicators based on the two tailings guides. Finalized in 2007, the indicators provide a basis for measuring progress towards full implementation of MAC's tailings management framework. Under TSM, MAC members self-audit against these and other performance indicators, with the results being subject to external verification. The indicators are published in the *TSM Assessment Protocol: A Tool for Assessing Tailings Management Performance*.

More recently, the Tailings Working Group completed a larger, more detailed document that provides protocols for auditing and assessing conformance to the framework presented in *A Guide to the Management of Tailings Facilities* (the 2009 version). The new document, *A Guide to Audit and Assessment of Tailings Facility Management*, was finalized in 2009 and will be released in 2010. It describes protocols for both an audit of tailings facility management and an additional qualitative assessment of that management.

While developing the guides, members of the Tailings Working Group were active in sharing information. They conducted workshops for MAC members and non-members, gave national and international presentations and communicated with other organizations. They did all of this in addition to developing, and later refining, the tailings management protocol and performance indicators for TSM.

Again in 2009, presentations were given on the MAC guides and the TSM tailings management indicators at workshops and conferences. Among them were the 8th International Conference on Acid Rock Drainage (ICARD) and the Securing the Future conference, held simultaneously in Skellefteå, Sweden, in June; and the 13th Brazilian Mining Congress, held in Belo Horizonte in September.

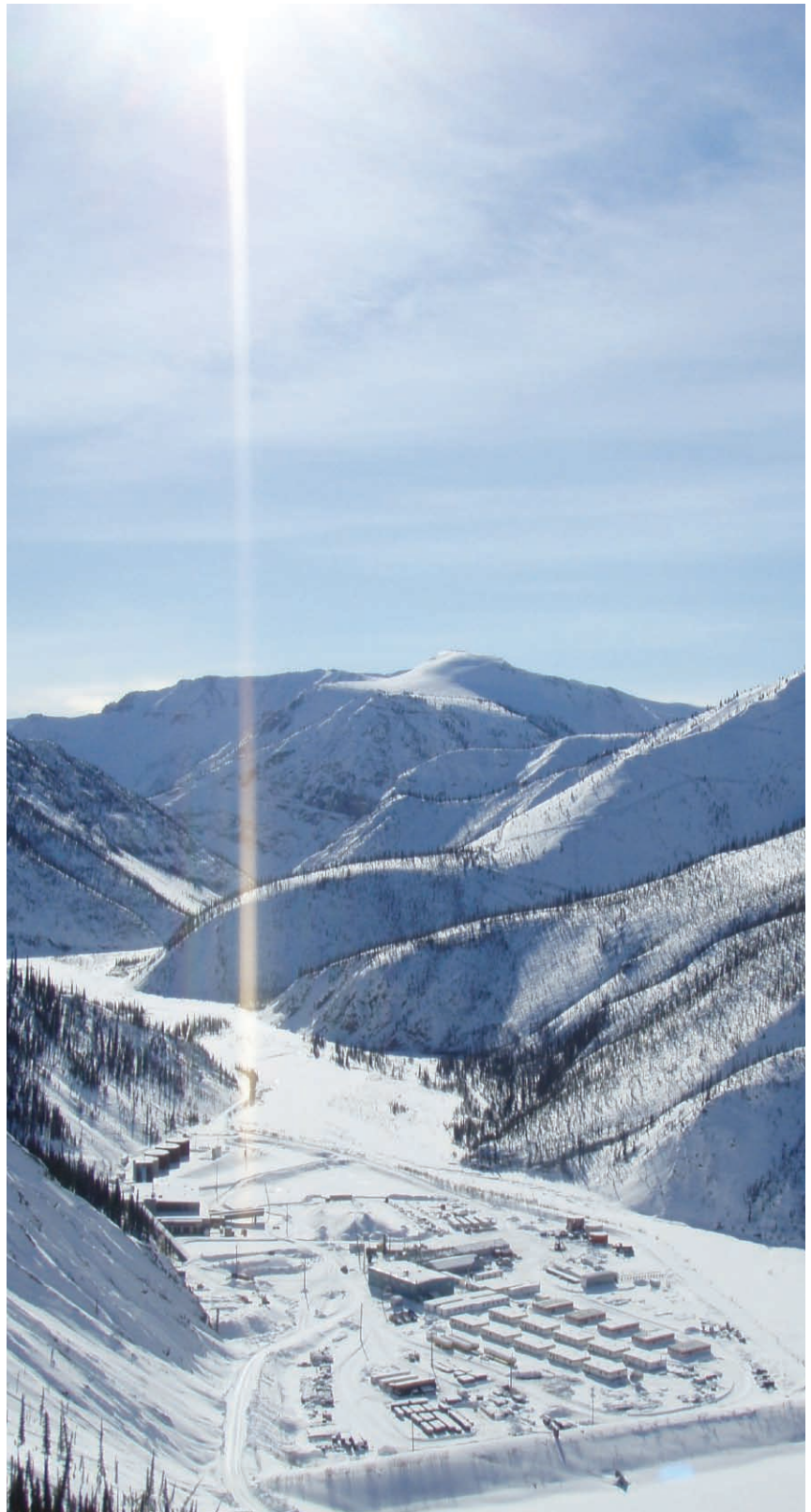
In 2009 the Tailings Working Group met via teleconference in the spring and in Calgary, at the offices of Shell Canada, at the end of October.

Agenda items included the following:

- plans for rolling out the new tailings guides
- ongoing liaison with the Canadian Dam Association (CDA) and the International Commission on Large Dams (ICOLD)
- a review of industry reporting against the TSM performance indicators for tailings management
- jurisdictional regulatory and policy developments
- information updates and reviews, such as on the National Pollutant Release Inventory (NPRI) tailings and waste rock reporting issue

The meetings also focused on technology transfer and outreach, selected member company case studies and the future of the Tailings Working Group.

Members of MAC's Tailings Working Group believe that the failure to manage a tailings facility properly is the single largest risk to an operation and to the industry in general. Members also believe that the Tailings Working Group will not have accomplished its mandate until every MAC member has in place a fully implemented tailings management system (including an operation, maintenance and surveillance manual) that complies with the MAC guides. To this end, members continue, through their networking and leadership activities, to promote improved tailings management at home and abroad.



TAXATION COMMITTEE



Highlights

- MAC input into federal budget through pre-budget submissions, mines ministers briefings and other activities
- Commitment to maintaining timelines for geoscience investment and corporate tax rate reductions
- Extension of super-flow-through share tax incentive until 2012
- Ongoing examination of the at-depth exploration/development issue
- Release of new ENTRANS study

After a series of pre-budget submissions, mines ministers' briefings and other activities in recent years, MAC and the Taxation Committee welcomed a number of improvements announced through recent federal budgets and other vehicles:

- continued reduction of the corporate income tax rate from 21% to 15% by 2012
- investment of \$100 million over five years in geological mapping, primarily in Canada's North, and renewal of a smaller related program
- extension of the 15% mineral exploration tax credit for investment through 2012 (super-flow-through)
- formal interpretation of the tax treatment of costs of certain tangible properties in underground mines consistent with that sought by MAC
- classification of certain consultation, environmental and feasibility expenses as eligible for Canadian exploration expense treatment
- significant investment in infrastructure, which may include projects directly linked to mineral development

THE TAXATION COMMITTEE MONITORS TAX ISSUES OF NATIONAL IMPORTANCE, LOBBIES FOR TAX CHANGES TO ENHANCE INDUSTRY COMPETITIVENESS AND SERVES AS A USEFUL NETWORK FOR MEMBERS TO EXCHANGE INFORMATION ON TAX AND FISCAL ISSUES.

- creation of a regional development agency for the North and investment of \$100 million in an Aboriginal skills initiative

Canada is facing the challenge of declining reserves. In light of the belief that more reserves can be found at depth near existing mines, Natural Resources Canada and MAC members are examining the risks and returns of activities in this area to determine whether tax changes (in particular, extra incentives) are warranted. With luck, this effort will conclude before the 2011 federal budget.

This past year MAC completed its third annual study, with ENTRANS Policy Research Group, of the payments made to governments by the Canadian mining industry. The resulting report shows that the industry (metal and non-metal mines, smelters) paid the following amounts to Canadian governments in 2008:

Royalties and similar payments	\$5.0 billion
Corporate income tax	\$4.4 billion
Personal income tax	\$2.1 billion
Total	\$11.5 billion

With the addition of a fourth component of the industry, fabricated metal product manufacturing, total payments increase by another \$2.1 billion. This component was not included in the ENTRANS study, even though it is part of the mining and mineral manufacturing industry as defined by Natural Resources Canada.

The ENTRANS report also highlights the mining industry's impact on specific regions of Canada. The industry has become a significant contributor to the government revenue base in Newfoundland and Labrador, New Brunswick, Manitoba, Saskatchewan, Alberta, British Columbia and the Northwest Territories.

The mining industry contributes a considerable sum to governments in the form of municipal taxes, fuel taxes and payroll taxes. In addition, the industry purchases a significant amount of goods and services from an estimated 3,100 supplier companies in Canada, ranging from engineering and environmental consultants to equipment companies and financial firms.



TRANSPORTATION COMMITTEE



Highlights

- Focus on the ongoing federal review of level of freight rail service, including submissions to consultants undertaking relevant studies
- Participation in alliances such as Coalition of Rail Shippers to seek competitive transportation infrastructure
- Ongoing dialogue with federal government on infrastructure issues
- Continued input into regulatory and other developments affecting transportation

Each year Canadian exports of aluminum, gold, nickel, copper, zinc, iron ore, coal, uranium, potash and diamonds amount to tens of billions of dollars. These mineral and metal products account for a majority of the volume handled at Canadian ports and some 60% of rail freight revenue.

A low-cost, efficient system of marine, rail and truck transportation is essential to the competitiveness of the Canadian mining industry. MAC and the industry are therefore pleased with the amendments to the *Canada Transportation Act (CTA)* adopted back in March 2008. The changes bring better balance to the competitive situation between shippers and railroads (the latter enjoy a monopoly or dual monopoly in many regions of the country). The amended legislation strengthens the ability to arbitrate disputes over rail fees and ancillary charges.

As part of a promised review of the level of freight rail service, the federal government is studying the level of service provided by CN and CP to identify

THE
**TRANSPORTATION
COMMITTEE**
CONTRIBUTES
TO THE FEDERAL
POLICY,
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OF MINERALS
AND METALS TO
ENHANCE THE
COMPETITIVENESS
OF CANADA'S
MINING INDUSTRY.

problems, examine best practices, and recommend commercial, regulatory or other remedies to improve levels of service. The government commissioned four studies and established a three-person panel to review the information and conduct its own consultations before preparing recommendations. The final report, *Analysis of Railway Fulfillment of Shipper Demand and Transit Times*, was released in March 2010.

MAC has met with Transport Canada officials and consultants during the past year to provide input from the mining industry. The review process will evolve over the coming year, and the panel is expected to finish its work by fall 2010.

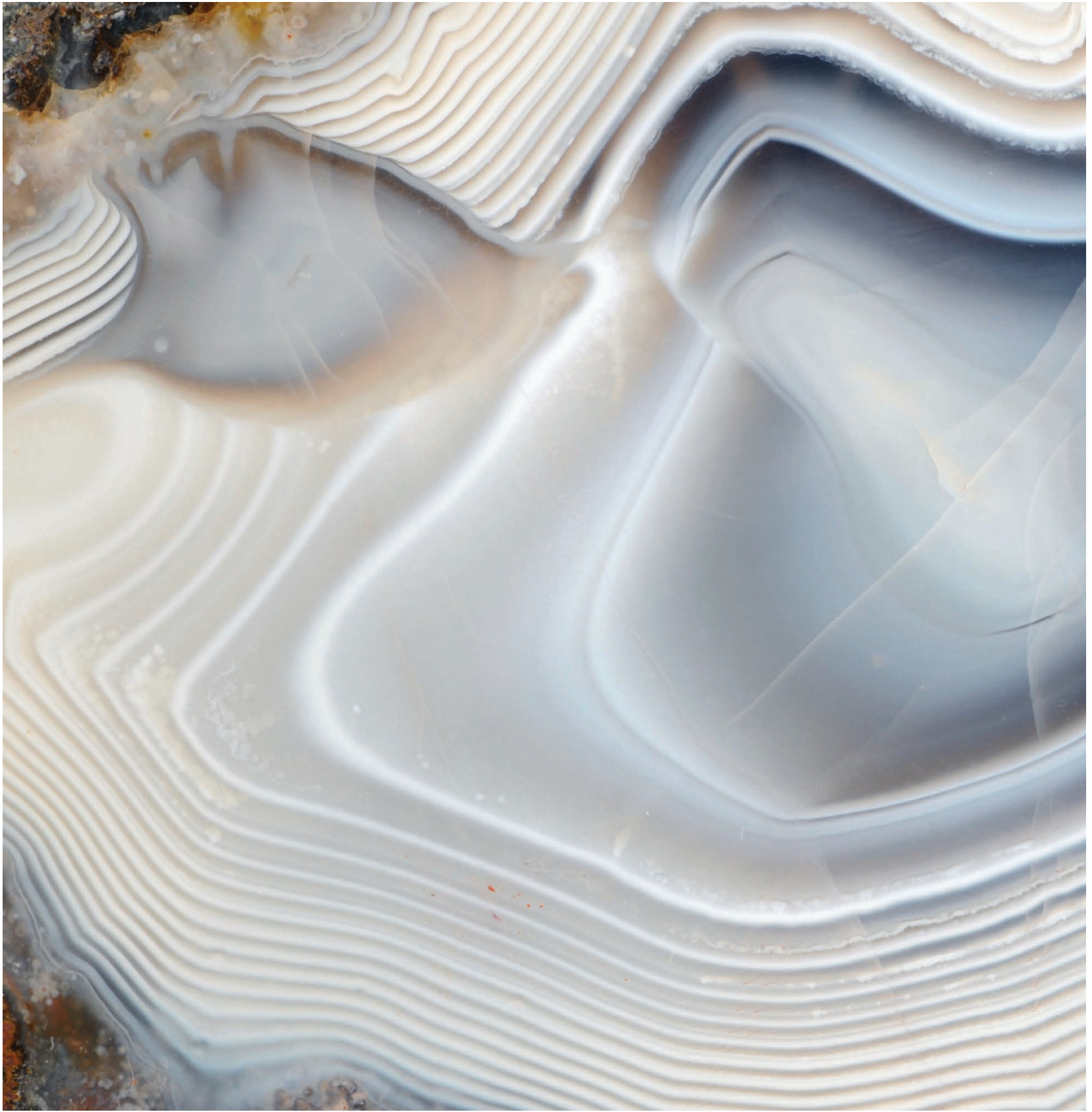
In pushing for the *CTA* amendments and an effective review of service levels, MAC has been involved in the Coalition of Rail Shippers. This coalition advances shippers' interests in the area of federal regulatory and policy decisions. It represents large users of rail service, including the chemical, fertilizer, propane, forest products, agri-food, mining and import auto industries.

MAC continues its dialogue with the federal government over infrastructure issues, including the Pacific Gateway and other projects that could open regions of Canada to enhanced mineral exploration and economic development.

In other issues, a member of the Transportation Committee sits on the federal government advisory committee that deals with Transport Canada concerning the transportation of dangerous goods. MAC is also tracking an evolving environmental

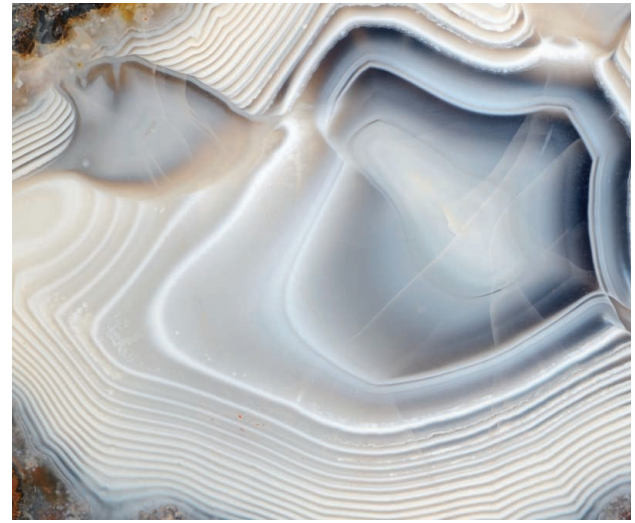
regulatory initiative in the northern U.S. states that could impact Seaway and Great Lakes shipping. MAC provided input to government officials on a possible legislative end to a CN rail strike in late 2009. Finally, MAC is monitoring the issue of railroads passing the BC carbon tax on to customers, with a legal challenge from some shippers being one possible course of action.





OTHER WORK AREAS

CORPORATE SOCIAL RESPONSIBILITY



Between June and November 2006, the Government of Canada held a series of round tables on corporate social responsibility (CSR) and the Canadian extractive sector in developing countries.

Two MAC staff members participated on the Advisory Committee on Corporate Social Responsibility, which included representatives from industry, labour, academia, the responsible investment sector and other civil society groups. The committee was created by the government to provide advice on improving the sector's corporate social responsibility in developing countries. To capture the round-table dialogue, the Advisory Committee compiled a consensus report, released in March 2007.

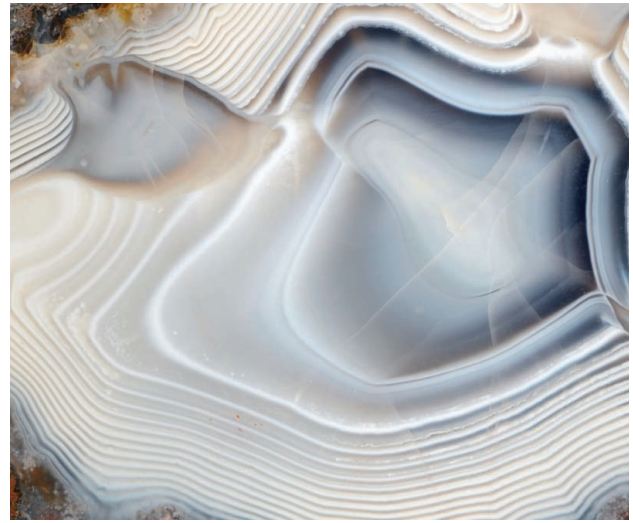
In March 2009 the government unveiled its CSR strategy, entitled *Building the Canadian Advantage*. While the government did not adopt all of the Advisory Committee's recommendations, MAC felt the strategy was a step in the right direction and began to work with the government and other stakeholders to ensure that it was properly implemented.

Besides meeting regularly with officials, MAC has co-sponsored two multi-stakeholder events on the topic of CSR with groups such as the Canadian Network on Corporate Accountability and the Canadian Environmental Network. At both events MAC members appeared as speakers and participated in the discussions that ensued.

MAC also plans to meet with the newly appointed CSR Counsellor to provide input into that role. Finally, MAC sits on the interim executive committee of the Centre for Excellence in CSR, which will be a "go-to" place for CSR information for extractive companies.



INTERNATIONAL TRADE AND INVESTMENT



The mining industry ranks alongside financial services and oil and gas as the most international of Canada's industry sectors. The Canadian mining industry accounts for 19% of all exports of Canadian goods, 12% of Canada's stock of direct investment abroad and some 60% of the world's mineral exploration companies. Three-quarters of the world's mining equity financing transactions are handled through the Toronto Stock Exchange. Billions of dollars in annual export revenues are derived from each of iron and steel, aluminum, nickel, copper, gold, uranium, coal, potash, zinc, diamonds and iron ore.

This success is influenced in part by a network of government support delivered through Canada's trade infrastructure—namely, the overseas network of embassies and trade commissioners, trade finance capacity through Export Development Canada, and an array of free trade agreements and foreign investment protection agreements (FIPAs).

In recent years the federal government has adopted an ambitious agenda to broaden and modernize this infrastructure. For example, the government aims to double the number of FIPAs in place, from 23 to 46, over a five-year period. FIPAs are bilateral agreements that set investment-treatment obligations on each country. They also give foreign investors access to independent rules and arbitrators should disputes arise between the investor and the host government. These mechanisms provide Canada's overseas investors with an added layer of security and, while the actual enforcement components are

rarely used, the mere existence of a FIPA helps guide foreign governments with a set of rules on fairness and transparency.

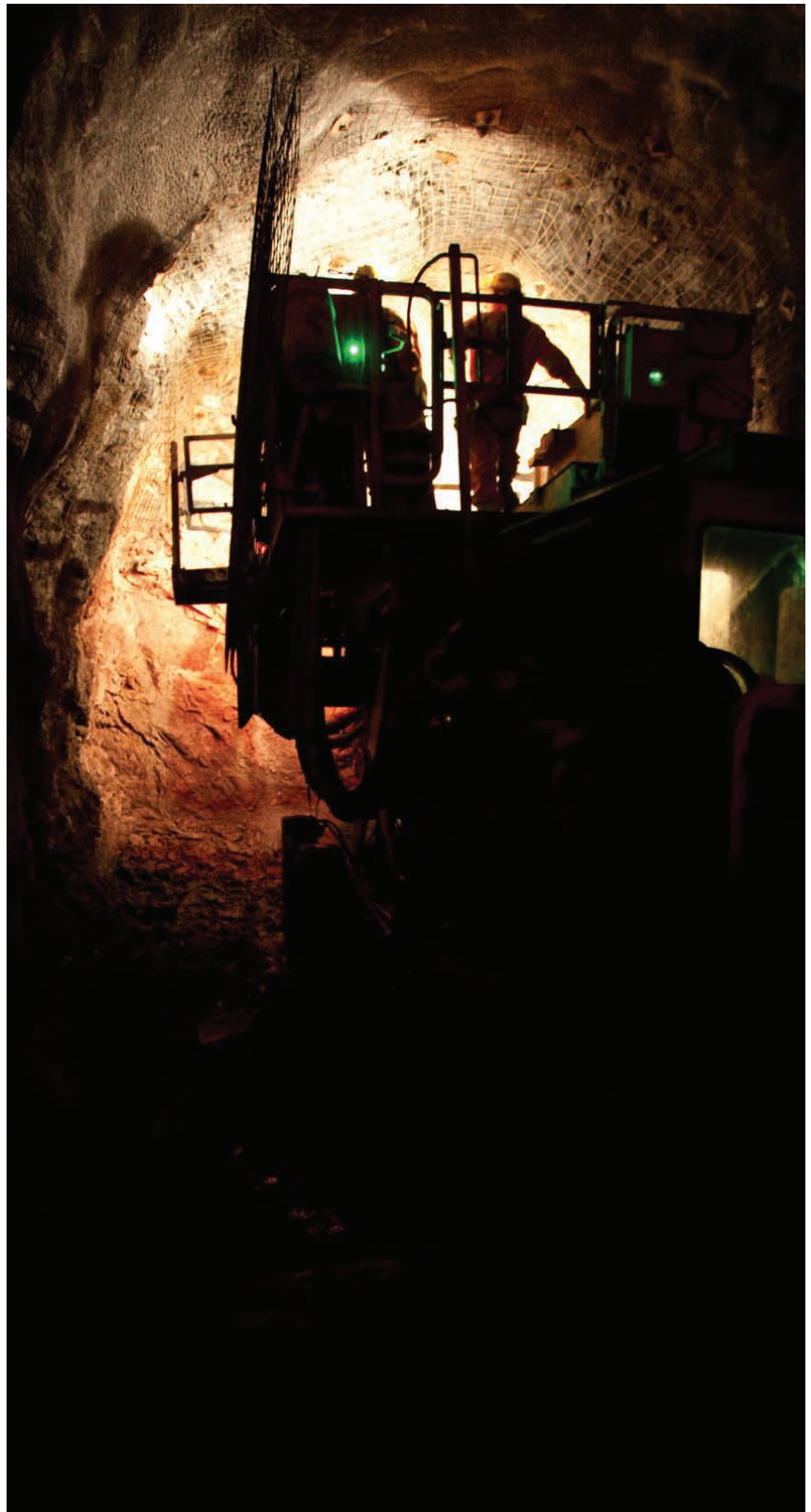
FIPAs with India, Jordan, Madagascar, Kuwait and five new EU states have recently been concluded by the federal government. Negotiations with China, Indonesia, Mongolia, Poland, Tanzania, Vietnam, Bahrain and Tunisia are ongoing. In some of these cases, the mining industry is the main impetus for the launch of negotiations. As well, negotiations are being explored with Malaysia, Kazakhstan, Ghana, Rwanda, Nigeria, Mali, Cameroon, Zambia, Botswana, United Arab Emirates, Saudi Arabia and Cuba. Chinese relations are particularly important: China now accounts for almost 30% of world demand for metals, compared to around 5% in the 1980s.

In the broader area of free trade agreements, the government has begun negotiations towards a comprehensive economic agreement with the European Union. This will be an extensive undertaking, one that will face challenges in meeting the targeted timeframe. Among other free trade agreement activities, agreements with Peru and Colombia are particularly relevant to the mining industry. Successfully concluded agreements can help mining companies by lowering their cost of imports, minimizing technical barriers, enhancing investment security and improving regulatory cooperation, among other things.

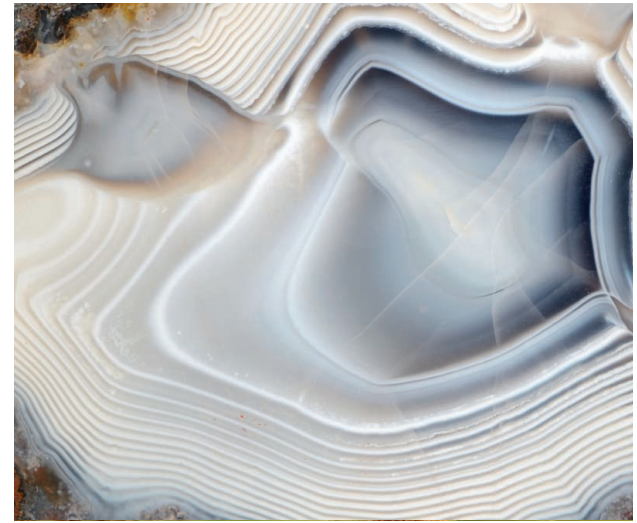
MAC is actively engaged in dialogue with the federal government on a range of international trade and investment issues and will continue to be involved in files such as the Canada-EU agreement as it evolves over the coming years. Other trade-related items, such as progress in the multilateral WTO Doha Round negotiations, and a policy response on the international corporate social responsibility issue, will be monitored closely by MAC, with interventions as appropriate.

In its meetings and discussions with foreign governments, MAC typically highlights the importance of efficient regulatory processes, modern infrastructure, investment in geological mapping and openness to foreign investment. Two-way flows of foreign investment can provide important conduits for gaining access to new technology, management skills and foreign market opportunities.

MAC has also been involved in OECD discussions concerning trade in raw materials and the emergence of trade barriers. There are growing signs of protectionism in countries like China, which has introduced export taxes and other barriers to enhance the flow of raw materials to the domestic market for value-added purposes. The U.S., the EU and Mexico have launched a challenge against China at the World Trade Organization with respect to these practices. Canada and many other countries have joined the challenge as third parties.



MINING INDUSTRY HUMAN RESOURCES COUNCIL



Highlights

- Launch of two guides to educate the mining industry and Aboriginal communities about working together
- Release of video library and clips that encourage interest in mining careers
- First virtual career fair for the mining industry
- Completion of national occupational standards (NOS) for underground miners, mineral-processing operators and surface miners; other NOS in development
- Continued development of national forecasting system for the mining labour market
- Studies underway on human resources challenges associated with highly qualified people and with mineral and metal exploration

MiHR contributes to the strength, competitiveness and sustainability of the Canadian mining sector by leading the collaboration of industry stakeholders as they develop solutions to national human resources challenges. MiHR is governed by an 18-person board of directors to ensure that the Council's stated mission, values and activities deliver tangible results for industry. Board members represent a cross-section of mining industry employers, organized labour, mining associations, equity groups and educators from across Canada.

MiHR's strategic plan covers three priority areas:

- attraction, retention, transition
- skills, learning, mobility
- research for industry sustainability

THE MINING INDUSTRY HUMAN RESOURCES COUNCIL (MIHR) IS THE NATIONAL HUMAN RESOURCES SECTOR COUNCIL FOR CANADA'S MINING INDUSTRY. IT COLLABORATES WITH COMMUNITIES OF INTEREST TO IDENTIFY AND ADDRESS HUMAN RESOURCES CHALLENGES FACING THE MINERALS AND METALS SECTOR.

Projects delivered in these areas, with industry collaboration and support, will help address the human resources challenges facing the mining industry.

Strategic Priority: Attraction, Retention, Transition

This priority area requires MiHR to address several labour market issues identified in previous research—specifically, the lack of diversity and the anticipated skills shortage in the sector, as well as the myths and misconceptions about the Canadian mining industry held by youth, parents, educators and career counsellors. Activities in this area aim to diversify the mining workforce by increasing the participation of under-represented groups (e.g., women, Aboriginal peoples, immigrants) and to raise awareness about career opportunities in the sector.

In the past year MiHR launched two products alongside an awareness campaign to educate the mining industry and Canada's Aboriginal communities on working together:

- *Mastering Aboriginal Inclusion in Mining*: educates mining companies on how to recruit, retain and advance more Aboriginal workers
- *The Mining Industry Human Resources Guide for Aboriginal Communities*: details the dozens of careers available in the mining industry and the training and education they require

A new video library is encouraging interest in and changing people's perceptions of the mining industry. Workers from various mining companies (including Cameco, Caracle Creek International Consulting,

IAMGOLD, Iron Ore Company of Canada and Teck), filmed during their workday, talk about why they chose their careers and why they continue to thrive in the mining industry.

In a similar vein, MiHR came up with an innovative way of transferring valuable industry knowledge and experience to career seekers. The Council developed a suite of over 100 clips of mining supervisors, managers and executives who provide insight into the sector's attributes and the 18 key skills that workers need.

Finally, MiHR delivered the first virtual career fair for the mining industry. This new venue for helping mining employers find the next generation of professionals proved very popular, with 90% of participants interested in making it an annual event.

Ahead in 2010, the industry's career brand, "Explore for More," will offer sponsorship on the website www.acareerinmining.ca. This will help industry further engage with career seekers. Employers will be able to participate in another virtual career fair, and will benefit from ongoing tools to connect industry with potential workers, including the Virtual MineMentor program and the Speakers Bureau.

Strategic Priority: Skills, Learning, Mobility

This priority area addresses the mining sector's needs related to skills recognition, harmonization of training and labour mobility. To date, certain mining occupations have been described inconsistently from one company or location to another. As a result, training programs across the country are neither consistent nor comparable. MiHR is helping employers face their recruitment challenges by standardizing skills recognition, training, workers' experience and labour mobility.

For the past three and a half years, MiHR and a group of stakeholders have been building a suite of national occupational standards (NOS), which will create a common understanding of the skills, competencies and knowledge needed to work safely and proficiently in various mining occupations. The

NOS for underground miners, mineral-processing operators and surface miners are now complete, and others are in development. These NOS will become the benchmarks for conducting workplace assessments and for certifying workers whose skills and knowledge meet (or exceed) the newly defined industry standards.

In 2010 the worker certification program will be piloted at four or five sites across Canada to test its policies, procedures, assessment tools and the certification process. Pilot testing allows the Standing Committee on Certification to evaluate the program, make changes that ensure the program is efficient and effective, and produce recommendations for the program's full implementation across Canada.

Strategic Priority: Research for Industry Sustainability

This priority area addresses the lack of up-to-date labour market information on the Canadian mining industry, especially when it comes to highly qualified people and mineral exploration. Projects in this area involve conducting research, as well as aggregating and analyzing different data sources and disseminating the findings, to provide industry stakeholders with increased intelligence and to ensure that MiHR's programming responds to industry needs. Identifying gaps in labour market supply and demand will enable industry and others to take practical steps to mitigate the risks associated with a shortage (or a surplus) of labour.

To date, MiHR's Mining Industry Workforce Information Network (MIWIN) has produced labour market forecasts for the mining sectors in British Columbia, Saskatchewan and Ontario. In October 2009 development of a cross-Canada forecasting capability began. As part of this effort, MiHR surveyed all MAC members to gather information about the occupational structure of their workforce, their retirement projections and other factors that will impact their future hiring needs.

Studies are also underway to look at the short- and long-term HR challenges associated with highly qualified people, and the key HR issues in the mineral and metal exploration industry.

MiHR is readying powerful research products for 2010. The national report on mining labour market demands will be released in the summer, followed by an online function that allows users to create custom employment forecasts.

The studies on highly qualified people and mineral exploration will move forward into the second phase: industry research. Employers and other stakeholders will provide details of their HR challenges and needs, size of the workforce and HR management strategies. The resulting report will analyze HR challenges and opportunities and will present recommendations for an industry action plan.

For more information on the Mining Industry Human Resources Council or any of its projects, visit the MiHR website (www.mihr.ca).



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