



# 2017 Annual Report

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# MINING ASSOCIATION OF CANADA



The Mining Association of Canada  
ADVOCACY STEWARDSHIP COLLABORATION



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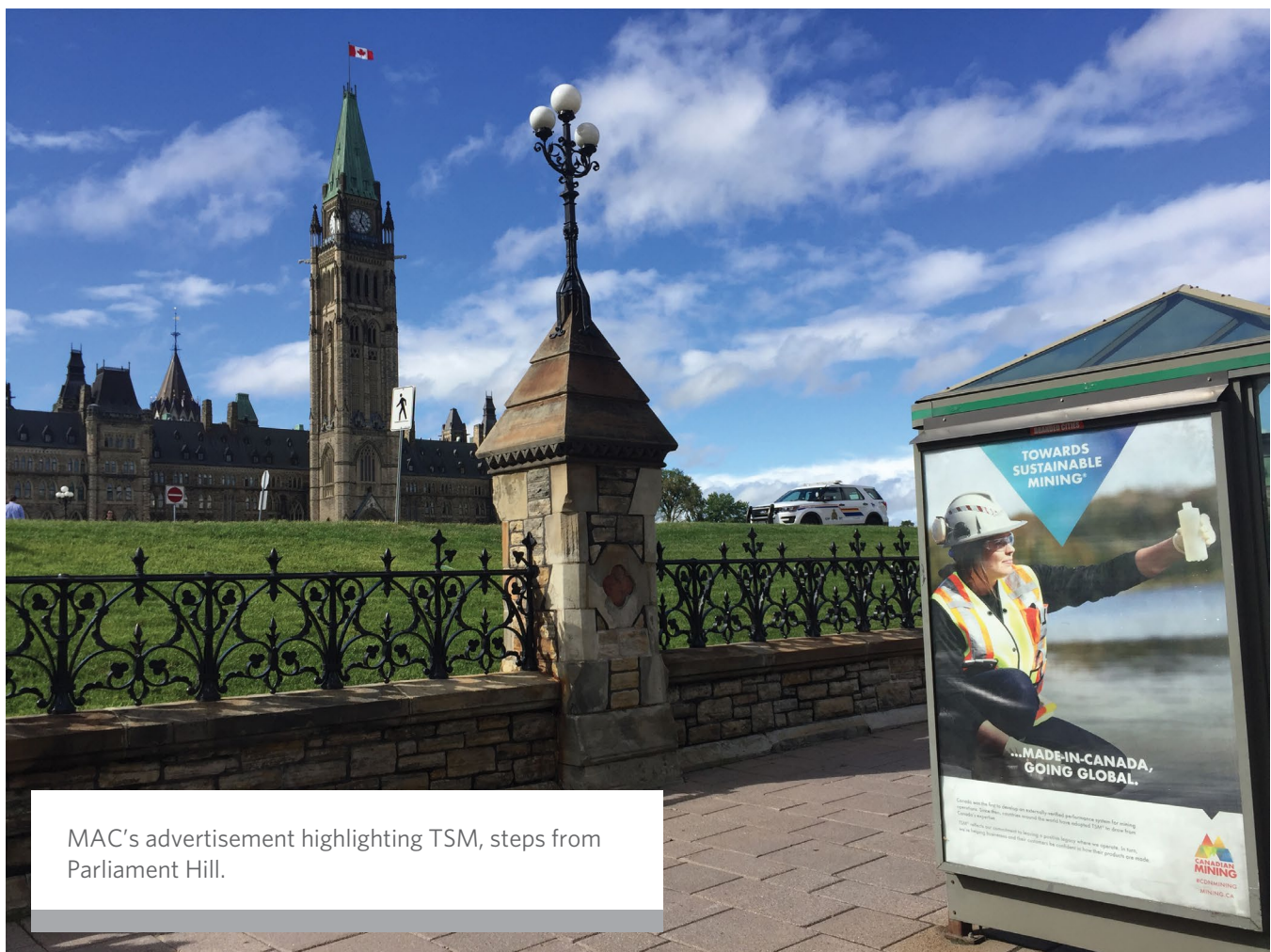


## THE MINING ASSOCIATION OF CANADA (MAC)

The Mining Association of Canada (MAC) is the national organization for the Canadian mining industry. Its members account for the majority of Canada's production of base and precious metals, uranium, diamonds, metallurgical coal and mined oil sands, and are actively engaged in mineral exploration, mining, smelting, refining and semi-fabrication.

Representing members committed to sustainability, MAC's *Towards Sustainable Mining*® (TSM®) initiative is an award-winning and world-leading standard that fosters continuous performance improvement in environmental and social mining practices.

MAC promotes the interests of the industry nationally and internationally, works with governments on policies affecting minerals, informs the public, and promotes collaboration to solve common issues and foster progress. MAC works closely with provincial and territorial mining associations and other industries, as well as with environmental and community groups across Canada. ■



MAC's advertisement highlighting TSM, steps from Parliament Hill.

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## MESSAGE FROM THE CHAIR AND THE PRESIDENT AND CEO

Anne Marie Toutant, Chair of the Board of Directors, and Pierre Gratton, President and CEO

It's amazing the difference a year can make. When thinking about all that transpired in 2017, it was a standout year for several reasons—some good, some disappointing and some whose impacts are still uncertain.

In 2017, the global mining industry had significantly more spring in its step. Many commodity prices rebounded, sending an encouraging signal that the downturn of the last few years was finally in our rear-view mirror. While not uniformly felt across the industry, 2017 was a far more optimistic year as many companies shifted gears and looked towards growth.

Looking forward, the Canadian mining industry's economic prospects are strong over the long term. Demand for mining products is projected to increase as the middle classes of the world's most populous countries continue to emerge. Another significant growth opportunity is the global transition to a low carbon future, which will serve to increase the demand for minerals and metals as the building blocks of clean technologies.

With a turnaround upon us and growing demand for mining products, MAC stressed that there was no time to waste for Canada to seize opportunities in mining. In fact, Canada cannot afford to lose them. Unfortunately, in 2017, we learned of indicators that confirmed our suspicions: that Canada is not as competitive as it used to be. Canada's relative share of mineral exploration investment has declined for several years in a row, and planned investments have been halved with almost no new projects entering federal environmental assessment over the past two years. Meanwhile, other countries, such as Australia, are gladly stepping up to the plate.

Fortunately, we know that this can be turned around. What's needed are strategic policies that would encourage sustainable mining development instead of sending investments running to other countries. Federal and provincial mines ministers have heard our concerns, which led to a commitment in August 2017 to develop a new Canadian Minerals and Metals Plan. MAC and its members are contributing to its development, which is expected to be finalized in early 2019. We are hopeful that this plan will help Canada re-gain its leadership in mining by identifying the policy actions needed for growth in our sector, a bedrock of the Canadian economy.



Anne Marie Toutant, Chair of the Board of Directors.

Although this initiative is a step in the right direction, we are mindful that it will not be a quick fix for all the challenges facing Canada's mining industry. Furthermore, while the plan is being developed, policy developments impacting our sector are still ongoing. Indeed, regulatory uncertainty arising from a plethora of regulatory and policy initiatives at all levels of government are truly at the heart of the issue.

With the federal government approaching the mid-point of its term, there was a flurry of activity throughout 2017 as it worked to meet its commitments, many of which were highly relevant to our sector.

Front and centre was the review of key environmental legislation, including the *Canadian Environmental Assessment Act*, the *Fisheries Act* and the *Navigation Protection Act*. In light of the review, MAC doubled its advocacy activity with Environment and Climate Change Canada year-over-year.

Many other policy files demanded significant attention from MAC throughout the year, including climate change





Pierre Gratton, President and CEO.

and carbon pricing, infrastructure, transportation, Indigenous affairs, innovation, trade, international development and various regulatory files. Of particular note is transportation, where MAC engaged heavily in partnership with other shippers to try to secure amendments to the *Canada Transportation Act* to impose some limits on railway market power. As well, MAC has been heavily engaged on a host of climate change related initiatives, including federal carbon pricing legislation and the associated emissions intensive trade exposed mechanism, as well as on the development of a clean fuel standard and new regulations for stationary diesel generators.

Advocating for the industry's needs and staying on top of all policy developments certainly kept us busy in 2017. In fact, MAC was the most active lobbying organization throughout the summer—typically a quiet period for advocacy—and was amongst the most active organizations throughout the year. MAC's records show that 2017 was the busiest on record, tallying 300 engagements with senior federal government officials, and Parliamentarians and their staff. MAC's President and CEO, Pierre Gratton, was once again listed by the *Hill Times* in its 2017 *Top 100 Lobbyists* list.

Beyond advocacy, MAC's sustainability work continued to progress and be recognized in 2017. Our made-in-Canada TSM initiative continued to expand globally. This award-winning mining sustainability standard is now being implemented in five other countries on five continents, including Finland, Argentina, Botswana, the Philippines and Spain. Implementation in these countries is with the support of MAC member companies, who operate internationally and wish to advance TSM in these locations. MAC freely shares our TSM program with these countries to help improve the environmental and social performance of their domestic mining industries. This sharing of expertise in sustainable mining practices is a powerful way that MAC is helping build capacity within the global mining industry.

While TSM's main objective is to drive performance improvement at the mine-site level and to leave a positive legacy where we operate, it is, in turn, helping businesses and their customers be confident in how their products are made. In 2017, TSM was included in Apple's Supplier Responsibility Standards—a significant recognition of our program and its ability to demonstrate responsible sourcing of minerals and metals.

The responsible sourcing movement is growing. Customers increasingly want to know that the raw materials for their products are mined responsibly. TSM can help businesses meet their customers' needs as it produces site-level performance data in key environmental and social areas. These include how companies engage with local and Indigenous communities, how they manage biodiversity conservation and tailings, and how they protect worker and community safety and health. MAC is currently working with other standards, including ResponsibleSteel™, the Responsible Jewellery Council, the Responsible Business Alliance and the Initiative for Responsible Mining Assurance, to share its TSM expertise and help establish a responsible supply chain for minerals and metals.

In 2017, we continued to deliver on the commitments we made following the Mount Polley tailings incident. Informed by thorough reviews of MAC's tailings management requirements and guidance, we released an updated edition of our internationally-recognized *Guide to the Management of Tailings Facilities*. The new guide is a key way that MAC and its members are working towards the goal of zero catastrophic failures of tailings facilities.





We owe a debt of gratitude to the members of the Independent Task Force and MAC's Tailings Working Group whose skill, dedication and enthusiasm resulted in significant improvements to our guide.

On climate change, MAC and its members committed to undertake more than a dozen additional actions based on recommendations from the Community of Interest Advisory Panel—an independent, multi-stakeholder group that advises MAC on TSM and on issues of mutual interest. In late 2016, the Panel issued an advisory statement to MAC that recognized our commitment to being a constructive partner in the fight against climate change and identified potential opportunities to build on the industry's progress over the past two decades. The collaboration is an excellent example of what can be achieved by industry and its communities of interest working together. Thanks to the Panel's thoughtful and constructive recommendations, MAC and its members committed to undertake more than a dozen new actions to help tackle climate change.

Innovation proved to be a core focus last year. In response to a Government of Canada superclusters initiative, mining companies—including members and innovation partners of MAC—rallied together on the CLEER (Clean, Low-Energy, Effective, Engaged and Remediated) proposal. Impressively, the CLEER proposal was one of nine projects that was shortlisted by the federal government and the only proposal focused on clean resources. While the project was ultimately not selected, Canada's mining industry remains committed to transforming the sector through innovation. The process of developing the CLEER initiative was a turning point for our sector. It sparked an enthusiastic response from Canada's mining and mining supply industries and involved an unprecedented level of collaboration on innovation in our sector.

MAC's achievements in 2017 were due to the collective efforts of many people. These individuals include our Board of Directors, Executive Committee and TSM Governance Team, and the committed industry experts who give their time and lend their expertise to MAC committees, task forces and working 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 and experience, they deliver tangible outcomes that benefit the entire industry. Their work is much appreciated by the Board and members of MAC.

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. ■





## HIGHLIGHTS

- Continued performance improvement in *TSM* protocols across the membership, with seven facilities achieving *TSM Leadership Award* status.
- Completed improvements in *Tailings Management Protocol*, implemented *Child & Forced Labour Protocol*, and advanced *Water Stewardship Protocol*.
- Engagement of MAC's Community of Interest (COI) Panel in advancing *TSM*:
  - MAC responded to the 2017 COI Panel climate change statement by publicly committing to a number of actions focusing on *TSM*, policy advocacy and company-level action related to climate change mitigation and adaptation.
  - The COI Panel advanced their *TSM* improvement work on Water Stewardship and the effectiveness of Stakeholder Engagement, and conducted Post-Verification Reviews of Glencore and Rio Tinto.
- MAC's *TSM* initiative continues to be sought after internationally, both as a standard for other countries and as a confirmation of responsible mining:
  - *TSM* was adopted in Africa and Asia with the addition of licensing agreements with the Botswana Chamber of Mines and the Chamber of Mines of the Philippines.
  - *TSM* was referenced by Apple in their updated *Supplier Responsibility Standards* and implemented a new protocol focusing on preventing child and forced labour with the aim of making *TSM* more relevant to manufacturers looking for responsibly sourced metals and minerals.

## REPORT FROM THE CHAIR OF THE TSM GOVERNANCE TEAM

Peter Read, Vice President, Strategic Planning, Syncrude Canada Ltd.

*The TSM Governance Team examines opportunities for improving the mining industry's performance and reputation with key communities of interest.*

### IMPROVING PERFORMANCE

The 2017 *TSM Progress Report* shows steady improvement in company results for 2016, compared to 2015.

Notable highlights include:

- 98% of companies reported publicly on their engagement and dialogue activities with Indigenous and local communities, compared to 94% in 2015.
- 93% have a crisis management and communications plan in place, compared to 86% in 2015.
- 72% reported publicly on biodiversity conservation activities and performance, compared to 66% in 2015.
- 56% established and met energy and GHG emissions performance targets, compared to 44% in 2015.

### CELEBRATING OUTSTANDING PERFORMANCE

#### **TSM LEADERSHIP AWARDS**

In 2017, seven mining facilities and two smelters operated by Glencore, New Gold, Rio Tinto, Syncrude and Teck Resources were recognized with *TSM Leadership Awards*.





The award is granted only when a facility meets or exceeds a Level A ranking for all indicators under TSM's six protocols. To be eligible for a *TSM Leadership Award*, a facility's results must have been externally verified.

This year, Teck's Cardinal River Operations, Greenhills Operations and Trail Smelter each received the highest level of TSM's *Leadership Awards* by achieving Level AAA performance and "yes" in both crisis management and communications planning in all of the program's 23 indicators during external verification. Only one other facility, Teck's Elkview Operations, has achieved this performance level.

### **TSM EXCELLENCE AWARDS**

The *TSM Excellence Awards* recognize innovative projects that raise the bar for corporate responsibility in the Canadian mining sector. In 2017, Vale's Voisey's Bay mine received the *TSM Community Engagement Excellence Award* and the Dominion Diamond Corporation won the *TSM Environmental Excellence Award*.

#### **Vale: Shipping Program Recognizes Inuit Connection to the Land-Fast Sea Ice**

Vale's Voisey's Bay was recognized for their work with the Innu and Inuit to ensure winter shipping has minimal interference with Aboriginal traditional lifestyles and that residents can safely cross the ship's track. Community input has been paramount to the program's success and is also reflected in other aspects of the agreement. For example, there are two six-week closure periods when shipping cannot take place: in the fall when ice is forming and in the spring when ice is breaking up. Closure periods have also been adjusted to reflect weather conditions and public holidays.

#### **Dominion Diamond: Transforming Waste Management**

Dominion Diamond's Ekati mine was recognized for their work in transforming how waste is managed at the site to improve sustainability and limit environmental impacts. Various actions throughout the years have significantly reduced the mine's waste and greenhouse gas (GHG) emissions and have inspired communities and other mining companies in the region to follow Dominion's lead. Nearly 75,000 kilograms of plastics and 193,000 kilograms of oily rags have been diverted from incineration and recycled, thus reducing emissions from the mine's two incinerators. In 2015, Dominion installed an in-vessel composter and by the end of 2016, more than 67,000 kilograms of organic waste had been diverted, reducing GHG emissions by 210 tonnes CO<sub>2</sub> equivalent and diesel consumption by 74,000 litres. Thanks to the in-vessel composter, Dominion is often able to shut down one or both incinerators entirely, which has decreased scrubber water consumption by an estimated 25%.

### **TSM IMPROVEMENTS & DEVELOPMENTS**

#### **TAILINGS MANAGEMENT**

With the exception of an update to the *Developing an Operation, Maintenance and Surveillance Manual for Tailings and Water Management Facilities Guide* planned for 2018, work is now complete on strengthening the *TSM Tailings Management Protocol*. The new protocol is now available on MAC's TSM website and will begin to be phased in immediately. The enhanced protocol is available for voluntary self assessment in 2018 and will become mandatory in 2019.

The *Guide to the Management of Tailings Facilities*, which facilities must conform to in order to meet the requirements of the protocol, was also revised in 2017 and is available on the MAC TSM Website.

Detailed information about changes to MAC's tailings management requirements and guidance is provided in the report of the Tailings Working Group (page 25).

#### **PREVENTING CHILD AND FORCED LABOUR**

In June, the MAC Board approved the *Preventing Child and Forced Labour Protocol*. This protocol was developed to contribute to global efforts in preventing the use of child and forced labour in the mining supply chain, and to provide the information needed to demonstrate the responsible sourcing of minerals and metals. The protocol consists of two indicators, one for preventing child labour and another for preventing forced labour. MAC members will begin to verify their performance on these indicators in 2018.







Peter Read, Vice President, Strategic Planning,  
Syncrude Canada Ltd.

### WATER STEWARDSHIP

Throughout the year, the TSM Initiative Leaders worked to develop draft indicators and criteria for a Water Stewardship Protocol. The initial design includes four indicators focusing on 1) Water Governance 2) Operational Water Management 3) Watershed-Scale Planning and 4) Water Reporting and Performance. It is anticipated that this protocol will be finalized in 2018.

### TSM INTERNATIONAL GROWTH PLAN

In November, MAC finalized a new three-year plan to guide the international growth of TSM and focuses on positioning the growth of TSM globally as a means of demonstrating Canada's leadership in the area of socially responsible mining practices. It also helps position individual companies that have been applying TSM for many years in Canada as leaders in the industry. The plan also positions the international expansion of TSM as a strategic way for the Government of Canada to promote the Canadian mining industry and to do so according to a performance-based system with a thirteen-year track record of success in Canada. With this in mind, work was also begun to develop an application for funding support under the Government of Canada's Global Opportunities for Association program.

### WORK OF THE COMMUNITY OF INTEREST ADVISORY PANEL

The Community of Interest (COI) Advisory Panel played a key role in TSM's design from the very beginning, and continues to be integral to its evolution and implementation. The COI Panel is an independent, multi-interest group that advises MAC on the TSM initiative and identifies emerging issues or concerns relevant to the mining sector.

The Panel meets regularly throughout the year, including two in-person meetings annually. These meetings are an opportunity for the Panel to provide input into TSM developments, to conduct its annual review of a sample of companies' verified TSM performance results and to discuss topics of shared interest with members of the MAC Board. In 2017, the Panel chose to focus on two topics, climate change and water stewardship.

### CLIMATE CHANGE

In November 2016, the Panel published its statement of advice, called *Rising to the Challenge: Advisory Statement on Climate Change*, containing a number of recommendations for MAC to consider aimed at shaping MAC's climate change activities. The focus for 2017 was on MAC's response. Over the course of the year, MAC worked with members of its Climate Change Task Force and members of the COI Panel to develop a response to the Panel's statement of advice. This response provided MAC with an opportunity to document actions already taken and to commit to additional actions to help fight against climate change, including 13 actions under the six areas below:

- **TSM:** Review the TSM program to identify further opportunities to incorporate climate change-related action and guidance; and encourage performance improvement in GHG reductions.
- **Operations Level:** Seek opportunities to expand the use of low emissions technologies; advocate for government investment in mining innovation to expedite progress; conduct climate change risk assessments; and implement appropriate adaptation measures.





- **Local and Indigenous Communities:** *Explore ways to assist communities in increasing access to and managing renewable energy technologies; and support community development of energy efficient, healthy and locally sustainable food supplies.*
- **Supply Chains:** *Encourage the mining supply chain to develop innovative and low energy technologies; communicate the role of mining products in the transition to a low carbon future; and assess opportunities for the industry to work with others to recycle products containing minerals and metals.*
- **Public Policy Engagement:** *Share MAC members' innovative initiatives related to climate change, energy and community development; enhance Canadians' understanding of the link between minerals, metals and energy products in low carbon solutions; advocate for public policies that lead to an effective price on carbon and stimulate demand for low carbon infrastructure; and work alongside other organizations to achieve common goals.*
- **Disclosure of Climate Risks and Opportunities:** *Continue to disclose climate-change related information, including GHG emissions data; and identify ways to further enhance data disclosure.*

### **WATER STEWARDSHIP**

Due to MAC's decision to begin work on a *TSM Water Stewardship Protocol*, the Panel opted to focus its entire spring meeting on providing advice to help MAC shape the early stages of development of indicators and criteria for this new protocol. The focus of this meeting was on analyzing four prominent and operational water-related standards that mining companies apply and provide MAC with views on the strengths and weaknesses of each standard. The four standards comprise ICMM's Position Statement on Water Stewardship, the Alliance for Water Stewardship, the Finnish *TSM Water Protocol* and the Carbon Disclosure Project Water Program. As MAC's work on the water protocol is anticipated to extend into 2018, the COI panel will continue to engage on this subject as the protocol develops.

### **POST-VERIFICATION REVIEW**

Each year, the COI Panel conducts a review of a sample of companies' verified results to analyze company systems and practices, which is referred to as the Post-Verification Review Process (PVR). At the October meeting, the Panel reviewed the 2016 results of Glencore and Rio Tinto. This year the fall meeting was held at Glencore's Raglan mine in Northern Quebec. This also marks the first time a company undergoing the PVR has hosted a COI Panel meeting at the same time, offering additional insights to Panel members by allowing them to see, first hand, what the company is describing during the PVR process.

### **GLOBAL ADOPTION & UPTAKE OF TSM**

MAC continues to help build capacity within the global mining industry by sharing its expertise in sustainable mining practices. One of the most effective ways MAC and its members have been doing this is by freely sharing the *TSM* initiative with mining associations in other countries that are seeking tools to improve the environmental and social performance of their mining industries.

In 2017, MAC further built on the international growth of *TSM* by seeing it expand into Africa and Asia, firmly establishing *TSM* in five countries on five continents. In February, the Botswana Chamber of Mines became the first mining association in Africa to adopt *TSM* and in December, the Chamber of Mines of the Philippines became the first mining association in Asia to adopt it. As of the end of 2017, *TSM* is being implemented in Canada, Finland, Argentina, Botswana and the Philippines.

International interest in *TSM* continues to grow, and MAC is currently engaging with other governments and associations across the globe.

### **TSM'S GROWING PLACE IN A RESPONSIBLE METALS AND MINERALS SUPPLY CHAIN**

In January 2017, MAC and *TSM* received a significant confirmation through the publishing of a new responsible sourcing standard from Apple.





Apple's Supplier Responsibility Standards established expectations throughout the company's supply chain setting expectations in eight areas for mining: child labour, forced labour, conflict, occupational health & safety, community health & safety, water consumption, tailings and pollution. Apple assessed ten third-party standards, five of which apply to large scale mining. *TSM* was the only multi-issue standard developed by the mining sector to be included. With the adoption of the new Preventing Child and Forced Labour Protocol, *TSM* now addresses six of the eight key areas in Apple's Standards.

*TSM*'s inclusion in Apple Standards has opened up a number of doors to increase the profile of *TSM* and position it as a key standard to address the manufacturing sector's desire for responsibly sourced metals and minerals. One of the opportunities MAC pursued in 2017 was to accept an invitation to join ResponsibleSteel to help them develop the mining component of their standard. MAC has also initiated engagement with the Responsible Business Alliance, formerly known as the Electronic Industry Citizenship Coalition, with the intent to establish alignment and equivalency between *TSM* and the Alliance's Risk Readiness Assessment.

For more information about *TSM* and to download the latest edition of the *TSM Progress Report*, visit [www.mining.ca/tsm](http://www.mining.ca/tsm). ■



**NOT LONG AGO,  
THIS WAS ONCE  
PART OF  
A MINE**

**...TODAY, IT'S A  
VIBRANT ECOSYSTEM.**

Eldorado Gold is undertaking one of the largest reclamation projects in Greece. In addition to other rehabilitation efforts, an area the size of 35 soccer fields is being restored back to nature at Eldorado's Olympias site. This includes areas that were mined by previous operators. Native plant species are grown at the company's 15-hectare nursery, which serves the mine and the wider community.

For Canada's mining companies, reclaiming the land we borrow is a responsibility we take as seriously as creating jobs and building vibrant communities.

Learn more at: [mining.ca/reclamation](http://mining.ca/reclamation)





## HIGHLIGHTS

- Committee work focused on the reviews of federal legislation, including the *Canadian Environmental Assessment Act*, the *Fisheries Act*, the *Navigation Protection Act* and the *Canadian Environmental Protection Act*. This work was spearheaded by the MAC Reviews Task Force.
- MAC engaged regularly with government officials on the reviews of environmental legislation and participated on the Multi-Interest Advisory Committee formed in 2016 to serve as a consultative body to government.
- MAC monitored and responded to developments related to the *Species at Risk Act*, including the five-year review of the Boreal Woodland Caribou Recovery Strategy and the proposed conservation agreement for southern mountain caribou.

## ENVIRONMENT COMMITTEE

Chair: Mark Freberg, Director, Permitting & Closure, Teck Resources Limited

*The Environment Committee addresses general environmental issues and legislation affecting the industry.*

In 2017, the Environment Committee met jointly with the MAC Science Committee in Ottawa in February, May and September. Committee meetings were augmented with informational webinars and by work through task forces.

The MAC Reviews Task Force had a busy year as the reviews of the *Canadian Environmental Assessment Act*, the *Fisheries Act*, and the *Navigation Protection Act* progressed. The timeliness and workability of these federal Acts are critical to the future of the industry.

The MAC Species at Risk Task Force was also active on developments related to the Southern Mountain Caribou and Boreal Woodland Caribou, and the Species at Risk Act Recovery Strategies and Management Plans.

The Committee continued its work related to air pollution, climate change, the Chemicals Management Plan, Federal Environmental Quality Guidelines, Environmental Emergency Regulations, the National Pollutant Release Inventory and the review of the *Canadian Environmental Protection Act*. The Committee engaged with officials of Environment and Climate Change Canada, the Canadian Wildlife Service, Fisheries and Oceans Canada, the Canadian Environmental Assessment Agency, Health Canada, Transport Canada and Justice Canada as well as with the Museum of Nature, the Biodiversity Institute of Ontario, Indigenous and environmental non-government organizations.

To support sharing of promising innovation, the Committee greatly appreciated a webinar on Goldcorp's plans for the all-electric Borden mine.

### REVIEWS OF KEY ENVIRONMENTAL LEGISLATION

The House of Commons Standing Committee on Fisheries and Oceans tabled a report on February 24 recommending changes to the *Fisheries Act*. The House of Commons Standing Committee on Transportation tabled a report on March 23 recommending changes to the *Navigation Protection Act*. The report of the Expert Panel reviewing federal environmental assessment processes was published on April 5. MAC analyzed the three reports and submitted comments to the responsible Ministers. MAC also shared its analysis with other industry associations to encourage broader industry engagement.

The government published a Discussion Paper at the end of June, responding to the Expert Panel and House of Commons Committee reports. MAC submitted written comments on the Discussion Paper and met with officials and the Minister of Environment and Climate Change over the summer of 2017 to explain our analysis.







In addition to formal comments and discussion with officials, MAC participated actively in the Multi-Interest Advisory Committee formed the previous year to assist in the legislative reviews.

Along with substantive recommendations and analysis of problems experienced by the mining industry with the current federal processes, MAC's advocacy continued to stress in all the legislative reviews the need for transition planning, and adequate capacity for implementation of any legislative changes.

### SPECIES AT RISK

MAC reviewed and submitted comments on the proposed Action Plan for Boreal Woodland Caribou released for consultation in August and contributed to the five-year review of the implementation of the Boreal Woodland Caribou Recovery Strategy. MAC's submission focused on the industry's contribution to advancing science. MAC also submitted comments on the proposed conservation agreement for southern mountain caribou. Recognizing that the mining industry is an important stakeholder, MAC was invited to participate in the National Boreal Caribou Knowledge Consortium.

The Species at Risk Advisory Committee, renewed in April, formed several working groups to look at specific issues. MAC is a member of the Committee and is the industry co-lead for the working groups on permitting and offsets and on a *Species at Risk Act* knowledge plan.

Tara Shea, MAC's Director of TSM and policy lead on Species at Risk, was appointed to the National Advisory Panel for the Pathway to 2020 process. The Panel was formed to advise federal, provincial and territorial governments on how to meet Canada's target of 17% protected areas for terrestrial and freshwater by 2020.

### CHEMICALS MANAGEMENT PLAN/CANADIAN ENVIRONMENTAL PROTECTION ACT

The House of Commons Standing Committee on Environment and Sustainable Development tabled a report on its review of the *Canadian Environmental Protection Act (CEPA)* in late June, recommending extensive changes to the Act. MAC submitted comments to Environment and Climate Change Canada on the recommendations relevant to our industry and worked with other industry associations to analyze the report.

MAC engaged regularly with government officials on the development of relevant Federal Environmental Quality Guidelines and assessments under the Chemicals Management Plan. Analysis of the final assessment of cobalt and its compounds indicated that comments submitted by industry were taken into consideration and led to the correction of errors, in addition to other improvements.

### OTHER ACTIVITIES

To boost its effectiveness, MAC belongs to several formal and informal industry and multi-stakeholder groups. Lyle Safronetz (Vale) represented MAC on the Workplace Hazardous Materials Information System Current Issues Committee. Brady Balicki (Cameco) was appointed to the National Boreal Caribou Knowledge Consortium. Justyna Laurie-Lean (MAC) was the representative on a number of fora, including: the Industry Coordinating Group on CEPA; the Environmental Health Industry Coordinating Group; the Industry Steering Committee on Clean Air and Climate Change; the North American Metals Council; the Multi-Interest Advisory Panel; the multi-stakeholder National Pollutant Release Inventory Work Group; and the Stakeholder Advisory Committee on the Chemicals Management Plan.

For more information on MAC's environmental initiatives and the reduction of releases from member facilities, please see the latest *TSM Progress Report*, available at [www.mining.ca/tsm](http://www.mining.ca/tsm). ■





## HIGHLIGHTS

- Ongoing outreach and relationship building with key federal decision makers with responsibility for Indigenous issues.
- Enhanced monitoring and engagement in the implementation of the extensive federal policy agenda relating to Indigenous peoples.
- Continued partnership with the Macdonald-Laurier Institute on its research project, *Aboriginal People and the Natural Resource Economy* in Canada.
- Participation in several Indigenous business development fora to promote increased Indigenous inclusion and opportunities in the mining sector.

## ABORIGINAL AFFAIRS COMMITTEE

**Chair: Kara Flynn, Vice President, Government and Public Affairs, Syncrude Canada Ltd.**

*The Aboriginal Affairs Committee (AAC) works to identify, evaluate and offer informed advice to the MAC Board of Directors on strategies to foster and strengthen the relationship between Aboriginal people and the mining industry in Canada.*

The federal government continues to work towards meeting their ambitious pledge to “complete the unfinished work of Confederation”, through a “renewed, nation-to-nation relationship with Aboriginal communities”. Flowing from this commitment, in 2017 the government established a number of initiatives in support of the recommendations of the Truth and Reconciliation Commission that seek to assess and review existing federal laws and proposed legislation to ensure consistency with the broader principles of the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP).

There are far-reaching implications of these pledges on mining sector activities, regulatory processes and interests. Foremost among them are recently proposed federal environmental assessment process changes. The AAC worked closely with MAC’s Reviews Task Force to ensure the significant expertise and experience of AAC members supported the development of MAC’s positions and responses to consultations on key Acts and subsequent touchpoints.

The AAC and MAC continued to engage with the Macdonald-Laurier Institute (MLI) on its multi-year research project, *Aboriginal People and the Natural Resource Economy* in Canada.

### ADVOCACY ACTIVITIES

In 2017, MAC advocacy activities relating to Aboriginal Affairs focused on the ongoing roll-out of federal initiatives in support of the government’s commitments and agenda relating to Indigenous peoples and Reconciliation, and their potential impacts on Crown consultation policies, guidelines and consultation in practice, and coordination between provincial/territorial and federal governments. The AAC also renewed focus on the implications relating to the operationalization of UNDRIP and Free, Prior and Informed Consent (FPIC) in the Canadian context.

MAC continued to advocate for clarity with respect to industry reporting requirements under the *Extractive Sector Transparency Measures Act* (ESTMA), which requires mining companies to disclose payments made to Indigenous governments and entities in Canada and around the world.

Given that the mining industry is, proportionally, the largest private sector employer of Indigenous people in Canada, MAC continued to advocate for enhanced government support for skills training initiatives, including the Aboriginal Skills and Employment Strategy (ASETs) and other programs.





## OUTREACH ACTIVITIES

Throughout 2017, MAC participated in targeted outreach activities and events with the objective of enhancing relationships with key Indigenous organizations, communities and leaders, including the Assembly of First Nations (AFN), the Metis National Council (MNC) the Inuit Tapiriit Kanatami (ITK), the Canadian Council of Aboriginal Business (CCAB), Reconciliation Canada, and the Canadian Aboriginal Minerals Association (CAMA).

MAC continues to support Indspire, an Indigenous-led charity that is improving educational opportunities for First Nation, Inuit and Métis students through various initiatives. MAC was a sponsor of the 2017 Indspire Awards, an annual event broadcasted nationally that celebrates accomplished Indigenous individuals. ■



**EMPOWERING  
ABORIGINAL  
WOMEN**

**...INSPIRING THE  
NEXT GENERATION.**

Through the Tamatumani program, Vicki Amidlak became the first Inuit woman to work as an underground miner at Glencore's Raglan Mine. She has risen to a senior position and is inspiring others to follow in her footsteps. In 2018, Tamatumani, which means "second start" in Inuktitut, celebrates 10 years of recruiting Aboriginal talent and growing their careers.

Canada's mining industry is a top employer of Aboriginal people. Our diversity is our strength.

Learn more at: [mining.ca/reconciliation-in-action](http://mining.ca/reconciliation-in-action)

Photographer: Michel Lauzon



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## HIGHLIGHTS

- The PAC achieved objectives set out in the Committee's 2017 Work Plan to provide support in each of the proposed activity areas: engagement with government, events, communications vehicles, and the development and dissemination of messaging that communicates mining industry value.
- Reflective of MAC's deep engagement in the federal policy ecosystem, the Association topped lobbying activity throughout much of the year.
- MAC's 2017 Canadian Mining campaign showcased our members' innovation efforts and commitments to sustainability as well as the sector's rich contributions across the country in light of Canada's 150<sup>th</sup> anniversary.
- MAC held successful advocacy days, including *Mining Day on the Hill* in November and events during National Mining Week in May. MAC members met with Parliamentarians and senior officials from key federal government departments.

## PUBLIC AFFAIRS COMMITTEE

Chair: Tom Ormsby, Head of External and Corporate Affairs, De Beers Canada

*The Public Affairs Committee (PAC) provides advice and guidance on MAC's government relations and communications programming.*

### FEDERAL ADVOCACY

The Public Affairs Committee (PAC) was instrumental in the continued execution of MAC's government relations strategy. A significant amount of the committee's work focused on developing messaging and materials used to brief federal decision makers on the Canadian mining industry's opportunities and challenges. The Committee also monitored policy developments and actively participated in advocacy activities throughout the year.

In 2017, MAC engaged in a high level of advocacy with the federal government due to the active policy environment relevant to the mining industry. MAC was the most active lobbying organization throughout the summer—typically a quiet period for advocacy—and was amongst the most active organizations throughout the year. MAC's records show that 2017 was the busiest on record for registerable meetings, tallying 300 engagements with senior federal government officials, Parliamentarians and their staff. MAC's President and CEO, Pierre Gratton, was once again listed by the *Hill Times* in its 2017 *Top 100 Lobbyists* list.

In terms of subject matter, front and centre was key environmental legislation, including reviews leading to proposed legislative changes to the *Canadian Environmental Assessment Act 2012*, the *Fisheries Act* and the *Navigation Protection Act*. MAC government relations and communications efforts were successful in influencing key policy iterations as part of the federal government's consultation on the Acts. However, the legislative process continues in the current Parliament. In light of the review, MAC doubled its advocacy activity with Environment and Climate Change Canada year-over-year.

Other policy files that demanded significant attention in 2017 included various federal climate change and carbon pricing initiatives, legislation amending the *Canada Transportation Act*, various initiatives relating to northern infrastructure and development, mining innovation, and developments flowing from the government's commitment to a renewed relationship with Indigenous Peoples.

### COMMUNICATING THE INDUSTRY'S CHALLENGES AND OPPORTUNITIES

Through various communications tools, and consistent with objectives set out in the MAC Strategic Plan, MAC spent 2017 underscoring the need for good policy decisions for Canada to regain its leadership in mining and attract new







investment to expand the industry's contributions to Canada. MAC underscored that time is of the essence as recent indicators suggest that Canada is not as competitive as it used to be and that the sector worldwide is entering an upswing. The results of MAC's most recent public opinion research showed an increasing public understanding of the positive economic impacts of mining.

The year 2017 brought with it upward pressure on mineral and metal prices, returning a cautious optimism to the global mining industry. Looking forward, the Canadian mining industry's economic prospects are strong over the long term.

Demand for mining projects is forecast to increase as the middle classes of the world's most populous countries continue to emerge. Another significant growth opportunity is the global transition to a low carbon future, which will serve to increase the demand for minerals and metals as the building blocks of clean and low energy technologies. Pending the right conditions, Canada could seize significant growth opportunities in mining in the years ahead.

MAC and the Committee's communications work supported MAC's advocacy efforts and highlighted the importance of the fiscal and regulatory environment for boosting Canada's attractiveness for new mineral investments.

From reviews of federal environmental legislation, to the pan-Canadian climate change policy, to transportation and infrastructure developments, 2017 was an active year. MAC underscored that the government's actions and decisions in these areas will impact the sector's competitiveness, positively or negatively depending on how they are implemented. As such, MAC and its members spent 2017 urging the federal government to:

- *Improve the federal project review process so that it is effective and timely, from pre-environmental assessment (EA) to post-EA permitting, with meaningful consultation with Indigenous communities.*
- *Invest in critical infrastructure in remote and northern regions, across the territories and in the northern parts of the provinces.*
- *Improve Canada's transportation network to more efficiently move mineral and metal products to market.*
- *Structure climate change policies so that they meaningfully reduce GHG emissions while protecting emissions intensive and trade exposed sectors to prevent "carbon leakage"—the shifting of production and the associated economic benefits from countries that are acting on climate change to those that are not.*
- *Enhance funding for Indigenous skills training initiatives to enable Indigenous job seekers to access well-paying and highly-skilled jobs in mining.*
- *Support the industry's innovation priorities.*

MAC's communications work also focused on promoting its members' commitments to sustainability, the industry's strong record of Indigenous participation, and the sector's vast contributions to the Canadian economy:

- *MAC members employ best practices in environmental protection and community engagement through the TSM initiative, which has been expanding internationally.*
- *Canada's mining industry employs 403,000 people directly and 193,000 workers indirectly.*
- *The mining industry is the largest private sector employer of Indigenous peoples in Canada on a proportional basis, and a major customer of Indigenous-owned businesses.*
- *There are more than 400 active agreements between mining companies and Indigenous communities. These agreements help ensure mining projects bring long-lasting benefits to local communities through support for education, skills training, employment, business development, and more.*
- *The mining industry is deeply interconnected to other sectors of the Canadian economy, with more than 3,700 companies supplying goods and services to the Canadian mining industry.*





→ In 2016, Canada's mining sector contributed \$57.6 billion to the national GDP, and accounted for 19% of the value of Canadian goods exports.

MAC worked with other organizations inside and outside of the mining industry on partnered communications initiatives, including national and provincial mining associations, government departments, NGOs, think-tanks and business associations.

In 2017, MAC became a partner of the Canada Science and Technology Museum, sponsoring a new mining exhibit within the Transforming Resources Gallery, which focuses on mining innovation and sustainability.

### CANADIAN MINING CAMPAIGN

Since 2012, MAC has produced annual Canadian Mining campaigns to promote the contributions of Canada's mining sector amongst federal decision makers and the general public.

**DRIVING  
TOWARDS A  
LOW-CARBON  
FUTURE**

**...AND A RESPONSIBLE  
ONE TOO.**

The Towards Sustainable Mining® program is driving performance improvement in how mining operations protect the environment and engage with their communities. Through TSM®, we are providing the responsibly-sourced minerals and metals that power electric vehicle technology.

TSM® reflects our commitment to leaving a positive legacy where we operate. In turn, we're helping businesses and their customers be confident in how their products are made.

Learn more at: [mining.ca/responsible-sourcing](https://mining.ca/responsible-sourcing)

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The PAC provided input into the development and execution of the 2017 campaign, which showcased the industry's commitments to innovation and environmental stewardship, profiling standout initiatives from our members. The campaign also highlighted the sector's vast contributions to regions across the country in light of Canada's 150<sup>th</sup> anniversary.

### MAC EVENTS

MAC staff attended and participated in domestic and international events throughout the year to promote Canada's mining industry, and highlight its challenges and opportunities.

The PAC helps identify speaking opportunities at key mining events and functions and supports MAC events through their attendance, promotion and, at times, sponsorship. Throughout the year, MAC participated in several mining conferences across Canada, including the PDAC Convention, CIM Convention, Nunavut Symposium, AME BC's Mineral Exploration Roundup, the Energy and Mines Ministers' Conference, and the South Africa Indaba Mining Conference.

MAC also held several advocacy events to brief federal decision makers on top issues facing the sector.

### **NATIONAL MINING WEEK**

MAC held an advocacy day during the 21<sup>st</sup> annual National Mining Week in May 2017. MAC members participated in 20 meetings with government officials, Parliamentarians and their staff. Our delegates focused their engagements on the review of federal environmental assessment processes and the importance of the regulatory environment to the Canadian mining industry's competitiveness.

MAC also partnered with Natural Resources Canada and the Prospectors & Developers Association of Canada on the fourth annual Mineral Outlook Dialogue Conference, also held during National Mining Week. The focus of the 2017 installment was "Positioning Canada's Mineral Exploration and Mining Industry for Long-Term Global Leadership", and included interactive break-out sessions where participants provided views on the Canadian mining industry's future to 2035.

### **MINING DAY ON THE HILL AND ANNUAL RECEPTION**

MAC's flagship *Mining Day on the Hill* event was held in November 2017. MAC member delegates from across the country participated in 50 meetings with Parliamentarians, political staffers and government officials from key federal departments.

The theme of the event was "Harnessing Canada's Mining Advantage". Delegates highlighted that the transition to a lower carbon future and a stronger global economy are generating significant opportunities for the global mining industry, and identified the actions that the Government of Canada should take to seize them.

The Mining Day program concluded with MAC's annual reception, which was well attended by industry representatives, stakeholders, government officials and Parliamentarians. MAC partnered with the City of Sudbury for the event, which showcased several mining-related innovations and organizations from the region. Also in attendance was a group of mining students from Laurentian University that had recently won the Ontario Mining Association's Mined Open Innovation Challenge.

### ANNUAL OPINION POLLING ON CANADIAN ATTITUDES ON MINING

To understand how Canadians view our sector, MAC conducted its sixth annual national public opinion poll in 2017. The PAC provided input into the poll's development and helped assess the findings to inform MAC's activities and priorities for the year ahead.

Results continued to indicate that Canadians have a favourable view of the industry, its vast economic and societal contributions to Canada, and its role in providing the building blocks of useful, modern products.

Canadians expressed support for a healthy and growing mining industry, and one that is adopting best practices in protecting the environment, engaging with communities and operating under a robust regulatory system. ■



## HIGHLIGHTS

- MAC engaged with:
  - Environment and Climate Change Canada (ECCC) on proposed amendments to the *Metal Mining Effluent Regulations* (MMER), and submitted comprehensive comments following the publication of the proposed amendments in the *Canada Gazette*, Part I.
  - Government regarding concerns about the delays in the regulatory process used to add water bodies to Schedule 2 of the MMER.
  - ECCC on their proposal for *Fisheries Act* regulations for coal mines, and on the possible development of regulations related oil sands mining.
- MAC supported the Canada Mining Innovation Council's request for Government of Canada funding for the Towards Zero Waste Mining™ innovation strategy.
- MAC is an active supporter of key environmental initiatives, including the Mine Environment Neutral Drainage program, the National Orphaned and Abandoned Mines Initiative, and the Canadian Ecotoxicology Workshop.

## SCIENCE COMMITTEE

Chair: Kent England, Manager, Environment and Licensing, Cameco Corporation

*The primary focus of the Science Committee is the application of sound science and technology towards mitigating and/or minimizing the impacts of mining on aquatic and terrestrial ecosystems.*

During 2017, the MAC Science Committee met jointly with the MAC Environment Committee in February, May and September to collaborate on issues related to the Fisheries Act, the MMER and the Environmental Effects Monitoring (EEM) Program.

### METAL MINING EFFLUENT REGULATIONS

In May 2017, proposed amendments to the MMER were pre-published in the *Canada Gazette*, Part I for a 60-day comment period. The proposed amendments would:

- apply to both metal mines and diamond mines, with the same effluent discharge limits;
- have lower limits for "new mines";
- have more stringent requirements that would apply beginning in 2021:
  - lower limits for arsenic, cyanide and lead;
  - effluent discharge limit for un-ionized ammonia of 1.0 mg/L (grab sample); and
  - requirement that effluent to be non-acutely lethal to *Daphnia magna*. Failures while on monthly monitoring would not be out of compliance;
- include changes to the EEM requirements; and
- add a requirement to measure selenium in fish tissue if selenium in effluent is above a specified concentration.







MAC submitted detailed, comprehensive comments on the proposed amendments. One significant concern was the application of EEM to mines in the Northwest Territories with existing requirements for Aquatic Effects Monitoring Programs (AEMP) as part of the water licences issued under the *Mackenzie Valley Resource Management Act*.

**MAC and members with diamond mining operations in the NWT have emphasized that:**

- *The site-specific objectives of AEMP and EEM are very similar, but AEMPs have several features that EEM lacks, notably strong Indigenous input across the AEMP life cycle.*
- *During the MMER Review, ECCC agreed that “Diamond mines will be able to grandfather their EEM programs providing they are sufficiently similar to those required by EC”.*
- *There is no added environmental benefit to requiring both AEMP and EEM, but it would result in increased cost and would potentially impact on relations with Indigenous communities.*
- *MAC recommended that mines in the NWT with existing AEMP requirements as part of their water licences be exempt from the MMER EEM requirements.*

**Potential Application of MMER to non-contact water:**

- *Amended MMER could be interpreted to apply to non-contact water that is being diverted, and that contains a deleterious substance (e.g., suspended solids).*
- *MAC recommended that the MMER provide legal certainty that non-contact water is not effluent.*

**Proposed limit for un-ionized ammonia:**

- *ECCC has not provided adequate justification.*
- *Proposed limit is lower than that in the Wastewater Systems Effluent Regulations, but wastewater systems are a much larger source of releases.*
- *MAC recommended that MMER limit be the same as the limit for wastewater treatment systems.*

**Public availability of EEM data:**

- *ECCC has a national database of EEM results but will not release data. MAC and other stakeholders have been asking for many years that ECCC make this database public.*
- *MAC recommended that ECCC:*
  - *establish a publicly accessible national database of all EEM results submitted since 2003.*
  - *ensure that EEM Interpretative Reports are available from ECCC upon request.*

**Selenium in fish tissue:**

- *MAC recommended that:*
  - *proposed requirements not come into force until technical guidance has been developed.*
  - *there be a mechanism to discontinue testing of selenium in fish tissue.*





## METAL MINING EFFLUENT REGULATIONS - SCHEDULE 2

The MMER include a mechanism to allow water bodies that are frequented by fish to be used for the management of mine tailings and waste rock. Since 2002, the legal mechanism to do this has been to amend the Regulations to add the water body to Schedule 2 of the Regulations. Under the previous 1977 *Metal Mining Liquid Effluent Regulations* (MMLER), Ministerial approval was required.

The vast majority of water bodies added to Schedule 2 since 2002 have been small ponds or creeks, or portions of creeks. At many proposed Canadian mines, the size of planned tailings facilities is such that it would not be possible to find a suitable location for a tailings facility that would not impact a fish-frequented water body.

The amendments process is cumbersome and can lead to considerable delays and uncertainty. MAC members with projects in the Schedule 2 “pipeline” are very concerned about these timelines and the potential impacts of delays on their projects.

In 2017, MAC engaged with ECCC officials and Minister’s office staff, Natural Resources Canada and the Treasury Board Secretariat on this matter, and voiced concern about delays in the amendments process, which comes after essential technical and consultation elements have been addressed, and after the completion of environmental assessments for those projects subject to federal, provincial or territorial environmental assessment requirements.

In 2017 there was progress on two fronts related to Schedule 2.

First, for the last two sets of amendments completed, related to the Blackrock Project in Quebec and the Rainy River Gold Project in Ontario, the time from publication of the proposed amendments in the *Canada Gazette*, Part I until the amendments process was completed was just over 4 months. This is a considerable improvement.

Second, there was progress with respect to the application of the policy document on *Streamlining the Approvals Process for Metal Mines with Tailings Impoundment Areas*, first introduced in 2012. Until 2017, no project had been able to take advantage of the streamlined process, which would allow exemption from publication in the *Canada Gazette*, Part I, shortening the amendments process by several months. In May 2017, ECCC sent notification that the policy would be applied to amendments associated with the Dumont Nickel Project in Quebec. The amendments were published in *Canada Gazette*, Part II in December.

In the summer of 2017, MAC was engaged by the ECCC Minister’s office to discuss the possible adoption of a risk-based approach for the streamlined process. As of the end of 2017, a draft revised policy had not yet been released by ECCC.

## PROPOSED FISHERIES ACT REGULATIONS FOR COAL MINES

In January 2017, ECCC released a consultation document: *Proposed Regulatory Framework for Coal Mining*. This proposal was an outcome of the 2012-2015 10-Year Review of the MMER led by ECCC. The proposed regulations would apply to both metallurgical and thermal coal mining facilities, and the document stated that the proposed regulations would be modelled after the MMER, with several elements similar to the MMER:

- *End-of-pipe effluent discharge limits, possibly for selenium, nitrate and total suspended solids;*
- *Requirement that effluent be non-acutely lethal to rainbow trout and *Daphnia magna*; and,*
- *Requirement for environmental effects monitoring.*

The document also introduced concepts not in the MMER:

- *Possible linking of effluent limits for selenium to selenium concentrations in fish tissue and receiving waters.*
- *Possible mechanism for compliance flexibility for suspended solids that accounts for exceptional precipitation or high flow events.*



- Possible requirement to segregate mine wastes containing elevated levels of selenium for new mines and expansion projects.
- Possible requirements for water quality in the receiving environment at some mines.

MAC submitted comments and questions to ECCC about the proposal and urged ECCC to continue to engage with industry and other stakeholders following the receipt of comments.

A more detailed proposal was released by ECCC in November 2017, with plans for stakeholder engagement in early 2018.

### OILS SANDS WATER RETURN

Oil sands mining members have expressed concern about legal uncertainty and risk under subsection 36 (3) of the *Fisheries Act* and have identified a future need to be able to release water from oil sands tailings facilities in accordance with specified legal (provincial and federal) requirements. Release of water is essential to be able to close and rehabilitate oil sands tailings facilities.

MAC and members have been attempting to engage with ECCC and with provincial government officials on this matter for several years, but there has been limited progress.

In early 2017, ECCC identified to MAC their policy lead on this matter, which facilitated more direct communications with ECCC. In November 2017, MAC and members held a one-day technical workshop with ECCC officials. Representatives from Suncor and Syncrude participated, as well as representatives from the Canadian Oils Sands Innovation Alliance (COSIA). This workshop provided information for ECCC officials on oil sands mining operations, water management, and the need to be able to release water. It also provided updates on research and development initiatives related to water treatment, and updates on environmental monitoring. Finally, in late 2017, ECCC confirmed that they will begin work with stakeholders to find a regulatory solution to this issue.

Engagement on this will continue in 2018.

### INNOVATION, AND SUPPORT FOR MINING INDUSTRY SUPERCLUSTER BID

The Canada Mining Innovation Council (CMIC) is a national non-profit organization that is working to develop and implement strategies for investment in mining research, development and innovation (RDI) in Canada. One of CMIC's key programs is Towards Zero Waste Mining™, aimed at stimulating technology innovation in Canada to achieve zero waste in the industry within 10 to 20 years, with an integrated focus on productivity, energy and the environment. The approach will foster a gradual progression and adoption of innovative technologies, promoting more efficient and sustainable operations and reducing the environmental impact of mining projects.

As a supporting member of CMIC, MAC is represented on the CMIC Board of Directors and the CMIC Environment Committee. MAC works with CMIC to facilitate advocacy meetings with senior levels of government.

CMIC, along with CEMI (Centre for Excellence in Mining Innovation) were key partners in developing the Canadian mining industry's proposal for the Government of Canada's Innovation Superclusters Initiative. This proposal, CLEER: Powering Clean Growth through Mining Innovation, was one of only nine proposals shortlisted to apply in the second phase of the selection process.

CLEER (Clean, Low-energy, Effective, Engaged and Remediated) linked existing regional clusters, including established mining centres in Ontario, British Columbia, Alberta, Saskatchewan and Quebec. The objectives of CLEER focus on water use, energy intensity and environmental footprint, with aggressive targets of at least a 50% reduction in each area by 2027.

The final CLEER proposal was submitted on November 24, 2017, and MAC was very active in advocating for the CLEER bid in various meeting with MPs, political staff and officials.





Unfortunately, it was announced on February 15, 2018 that the CLEER proposal was not selected.

CMIC projects will continue to proceed, and CMIC and others will work to identify a path forward that capitalizes on the energy and synergy that was generated within the mining industry through the development of the CLEER proposal.

#### NATIONAL ORPHANED AND ABANDONED MINES INITIATIVE

The National Orphaned and Abandoned Mines Initiative (NOAMI) works towards supporting policy development to eliminate future mine abandonment, and improved mine closure and remediation. NOAMI also provides education and engagement opportunities for Aboriginal communities. MAC supports NOAMI as a member of its Advisory Committee, and provides administration and financial support.

The NOAMI Advisory Committee is currently examining the future direction and role of the program, having accomplished most if not all of the objectives of NOAMI when the program was launched in 2002.

#### CANADIAN ECOTOXICOLOGY WORKSHOP

The 2017 Canadian Ecotoxicity Workshop (CEW) was held in October and included a session on Mining and the Environment co-chaired by representatives of MAC, a MAC member and a MAC associate member. The session included 19 technical presentations and a discussion session.

MAC plans to co-chair a similar technical session at CEW 2018.

MAC is also represented on the CEW Advisory Committee.

#### MINE ENVIRONMENT NEUTRAL DRAINAGE PROGRAM

Since its establishment in 1989, the Mine Environment Neutral Drainage (MEND) program has served as a credible driver of research to enhance understanding of acidic drainage and its prevention. It has accomplished this through a strong focus on innovative, peer-reviewed research driven by a multi-stakeholder steering committee that has maintained two objectives: increasing information and technology transfer. MEND has made great progress in addressing research priorities identified by the Canadian mining industry, civil society, and federal, provincial and territorial governments.

MAC chairs the multi-stakeholder MEND Steering Committee and is the sole source of funding for MEND.

A key MEND project, a study of tailings management practices, was completed in 2017. This report provides an important source of information on the advantages and disadvantages, and potential applications of alternatives to managing tailings as slurry, such as filtered tailings.

In 2017, MEND undertook an update of a 1993 MEND review of sediment monitoring methods that can be applied to understanding biogeochemical interactions in subaqueous tailings. A first draft of the update has been prepared and the project is expected to be completed by early spring, 2018.

Building on this study, MEND is planning a project in a closed, subaqueous tailings facility where there has been natural biological colonization. ■







## HIGHLIGHTS

- The TWG completed work on the third edition of MAC's *Guide to the Management of Tailings Facilities* (the Tailings Guide). The revised *Tailings Management Protocol* and the third edition of the Tailings Guide were released in November 2017.
- The TWG began revising MAC's *Developing an Operation, Maintenance and Surveillance Manual for Tailings and Water Management Facilities* (the OMS Guide) to update it, align it with the third edition of the Tailings Guide, and to address recommendations identified during internal and external reviews.
- Reflective of MAC's global reputation as a leading expert and contributor to tailings management, MAC was invited to present at several mining conferences and tailings fora in Canada and internationally.

## TAILINGS WORKING GROUP

Chair: Mike Davies, Senior Advisor, Environment, Teck Resources Limited

*The Tailings Working Group (TWG) reviews the management of tailings and mine waste to allow the identification of best practices that can then be used to develop industry guidelines for the safe and environmentally-responsible operation of tailings and water management facilities. The TWG also promotes effective facility management and risk assessment at MAC member facilities and throughout the broader mining industry. The TWG contributes to MAC's TSM initiative, specifically with the development and implementation of the TSM Tailings Management Protocol, and with joint delivery of tailings management workshops.*

### TAILINGS MANAGEMENT REVIEWS AND REVISIONS

In 2016, MAC's TWG undertook revisions to the Tailings Guide, based on the results and recommendations of internal and external reviews of the tailings management component of TSM, MAC's tailings management requirements and guidance. The tailings management component of TSM is comprised of:

- *the TSM Tailings Management Protocol;*
- *A Guide to the Management of Tailings Facilities;*
- *Developing an Operation, Maintenance and Surveillance Manual for Tailings and Water Management Facilities; and*
- *the Table of Conformance.*

Revisions to the Tailings Guide were undertaken in collaboration with the TSM Governance Team and the TSM Initiative Leaders and were concurrent with revisions to the *TSM Tailings Management Protocol*, which were undertaken by the TSM Initiative Leaders.

The third edition of the Tailings Guide:

- *retains a strong focus on management systems, while strengthening technical components;*
- *integrates a risk-based approach into the tailings management framework, with tailings facilities managed commensurate with risks (physical and chemical) that they pose;*
- *emphasizes the importance of selection and implementation of site-specific best available technologies (BAT) and best available/applicable practices (BAP) for tailings management;*
- *places greater emphasis on designing and operating for closure;*





- stresses the need for independent review and provides guidance as to what forms this should take, dependent upon the risk profile for the given facility;
- improves alignment with the ISO 14001 standard for Environmental Management Certification; and
- strengthens key management components, including change management; critical controls for risk management; and performance evaluation.

The TWG is currently undertaking revisions to the OMS Guide to address recommendations of the internal and external reviews of the tailings management component of TSM and to:

- align with the revised Tailings Guide and establish clear linkages with the tailings management framework (absent from the current OMS Guide);
- integrate a risk-based approach and critical controls management into the OMS Guide;
- reflect a life cycle approach to OMS manual development, implementation and review;
- help ensure that OMS manuals are effective tools for change management;
- underscore the importance of developing OMS manuals on a site-specific basis, to reflect the unique conditions and circumstances of that site;
- provide stronger guidance on developing and reviewing OMS manuals to ensure that they are clear, readily accessible, and up-to-date;
- reflect current approaches to surveillance, with greater emphasis on:
  - identification of surveillance parameters and frequencies based on risk and critical controls; and
  - analysis of surveillance data and the use of data in decision making; and
- establish clear linkages between OMS and emergency preparedness and response planning.

Revisions will reflect lessons learned and the evolution of best practice associated with OMS manuals since the OMS Guide was originally released in 2003.

The TWG is aiming to complete the second edition of the OMS Guide by the end of 2018.

### SHARING OUR TAILINGS MANAGEMENT EXPERTISE

Since the first tailings guide was published in 1998, MAC has become a recognized leader in tailings management. As a result, MAC and its members are sought-after speakers at conferences and tailings fora in Canada and across the globe.

During 2017, MAC and its members gave presentations on its tailings management initiatives at a variety of Canadian and international events, including:

- presentation to officials of the government of Argentina in Buenos Aires;
- Seminário técnico Gestão de Rejeitos na Mineração, Belo Horizonte, Brazil;
- CIM Annual Convention and workshop on “State of Practice in Tailings Management”, in Montreal, QC; and
- Tailings and Mine Waste 2017, Banff Alberta.



### PLANS FOR 2018

In 2018, MAC will provide comprehensive training for members and associate members on the revised *Tailings Management Protocol* and the third edition of the Tailings Guide. MAC will also continue to promote and provide training on the tailings management component of *TSM* at various national and international events including:

- *Swedish Association of Mines seminar on tailings management (Stockholm, Sweden);*
- *Canadian Institute of Mining and Metallurgy annual convention (Vancouver, BC);*
- *Paste 2018 (Perth, Australia);*
- *Tailings 2018 (Santiago, Chile); and*
- *Tailings and Mine Waste 2018 (Keystone, Colorado).* ■





## HIGHLIGHTS

- Engaged with the federal government to underscore the importance of the fiscal environment to Canada's competitiveness for new mineral investment, and areas where government support is needed, including infrastructure investments in Canada's remote and northern regions.
- Actively participated in consultations with the federal government on the budget and the review of federal tax expenditures through MAC's pre-budget submission, engagement with mines ministers and government officials, and other activities.
- Engaged with Finance Canada to address a scoping issue associated with proposed changes to the taxation of passive income.
- Resolved a tax deductibility issue with Finance Canada and the Canada Revenue Agency.

## TAXATION COMMITTEE

Chair: Jocelin Paradis, Vice President, Tax, Rio Tinto Canada

*The Taxation Committee monitors finance-related issues of national importance, advocates for tax changes to enhance industry competitiveness, and serves as a useful network for members to exchange information on tax and fiscal issues.*

### KEY INFRASTRUCTURE ANNOUNCEMENTS

The future of Canada's mineral industry lies increasingly in remote and northern regions, and the current infrastructure deficit acts as a major barrier to opportunities for greater wealth discovery and production. Exacerbating this is the historic under-eligibility of the territories to access federal infrastructure programs due to "public use" program criteria and "per-capita" funding formulas.

Characterized by disparate communities, extreme temperatures, and virtually no infrastructure or people for hundreds of kilometres, Canada's remote and northern regions have some of the highest per-capita living costs in the country. Similarly, industry research has identified it costs upwards of six times more to explore and 2 to 2.5 times more to build new mines in northern regions compared to their southern counterparts.

In July 2017, Minister Garneau announced the Trade and Transportation Corridor Initiative (TTCI), which dedicates \$400 million for trade-enabling infrastructure in the territories. In the same month, Minister Sohi announced the Investing in Canada Plan, which allocated funding on a per-capital "plus" model. These announcements signaled the government's recognition of the challenges faced by remote and northern communities and operations, and the need for strategic investments to address them. MAC communicated its support for these commitments, viewing them as important steps in the right direction, and consistent with the asks that we and our industry partners have been advancing, and being consistent with our advocacy efforts in this space.

### FEDERAL BUDGET ENGAGEMENT

Finance Minister Bill Morneau tabled the Liberal government's second Budget on March 22, 2017. Budget 2017 featured a diverse range of priorities, including skills, innovation, job creation and communities, with the prominent theme of "cleaner economic growth" carrying over from Budget 2016. Included were several commitments that MAC had been advocating for, including:

- *The one-year renewal of the 15% Mineral Exploration Tax Credit – an important tax incentive for the junior exploration sector.*
- *Legislation to enact the Canada Infrastructure Bank.*







- *Funding to support the Indigenous Guardians program, which will give Indigenous Peoples greater responsibility and resources to manage their traditional lands and waterways and will facilitate partnerships with Indigenous communities in monitoring ecological health, maintaining cultural sites, and protecting sensitive areas and species.*

Consultation for Budget 2017 began in June 2016, and MAC participated in it through a formal pre-budget submission. MAC's submission identified key areas where government support could enhance the Canadian mining industry's competitiveness:

- *Ensuring adequate departmental resources to support a coordinated and efficient federal project permitting regime.*
- *Recognizing the infrastructure needs of remote and northern regions, and advance strategic investments to support economic development.*
- *Making capacity-building investments to better enable Indigenous communities to fully participate in the opportunities generated by the mining industry.*

### TAX DEDUCTIBILITY

Throughout 2017, MAC engaged with the federal government on a tax deductibility issue that, as structured, presented considerable challenges to mining companies that were required to pay additional mining tax retroactively for the previous tax year. MAC's engagements with Finance Canada and the Canada Revenue Agency resulted in the development of regulatory amendments that addressed the issue. MAC expects that the amendments will be formally addressed in 2018.

### TAXING PASSIVE INCOME

In summer 2017, Minister Morneau proposed rules to address the taxation practices of small businesses operating in Canada. Part of that package included proposals that would change how passive income is treated by affected businesses. At issue was concern over the scope of application of these rules, and their potential to be captured by multi-national companies. MAC engaged constructively with decision makers at Finance and Natural Resources Canada on our concerns, which were addressed in Budget 2018. ■



Rio Tinto Diavik Mine Infrastructure, North Slave  
Region, Northwest Territories.







## HIGHLIGHTS

→ MAC engaged:

- in government consultations to address key rail freight policy issues.
- with Transport Canada and the International Maritime Organization (IMO) on marine shipping developments that impact the Canadian mining industry.

## TRANSPORTATION COMMITTEE

Chair: Brad Johnston, General Manager, Teck Coal

*The Transportation Committee contributes to the federal policy, legislative and regulatory environment for the transport of minerals and metals to enhance the competitiveness of Canada's mining industry.*

The mining industry is one of the largest users of Canada's transportation sector and, as such, is a major stakeholder in transportation policy. Mining is the single largest industrial customer group of Canada's railways and is a major user of Canada's ports. Annually, the industry accounts for approximately 50% of total rail freight revenue generated and is the largest single shipping sector by volume by both rail and marine modes.

Accounting for approximately 20% of Canada's total export value annually (over \$91 billion in 2016), a low-cost, effective and reliable system of marine, rail and truck transportation is essential to the Canadian mining industry's international competitiveness. This is critical as Canada competes against other countries that have significantly shorter logistical supply chains. It is also key to enabling the industry to take advantage of current and future trade agreements.

### RAIL

Rail freight transportation has been challenging on several fronts. In recent years, rail service, safety and liability challenges and events have been the subject of significant national media attention and the object of public concern. This has included the Lac-Mégantic disaster in July 2013, the back-log of shipments throughout the winters of 2013-2014 and 2017-18, and other long-standing rail service issues faced by many sectors, including the mining industry. These challenges have led the federal government to undertake large-scale reforms through legislation and associated regulations. MAC is monitoring policy developments relevant to the mining industry and engaging frequently with government to address the sector's ongoing challenges.

### BILL C-49, TRANSPORTATION MODERNIZATION ACT

In spring 2017, Minister Garneau tabled Bill C-49, the *Transportation Modernization Act* – the third piece of legislation tabled in six years to address system challenges in the rail freight market. In September, the bill was referred to the House of Commons Standing Committee on Transportation, Infrastructure and Communities, and MAC appeared before committee to share its perspectives on the bill. While the package of reforms was superficially encouraging, MAC voiced concern that some measures did not go far enough, and that some of the proposed changes contain structural limitations that will prevent the government from achieving its intended objectives through the legislation. While a report recommending amendments was issued by the Standing Committee, none of the amendments that MAC proposed were included.

The bill was referred to the Senate, where the Senate Committee on Communications and Transportation began its study of the proposed legislation. Partnering with 8 other associations on a package of two amendments, MAC continued to advocate in the Senate in late 2017 and into 2018. The two amendments aim to rebalance the bargaining positions for railways and their customers in the rail freight market by:





- *Giving shippers a right to a cost assessment during the Final Offer Arbitration Process; and*
- *Giving the Canadian Transportation Agency investigative powers to assess and address supply chain disruptions.*

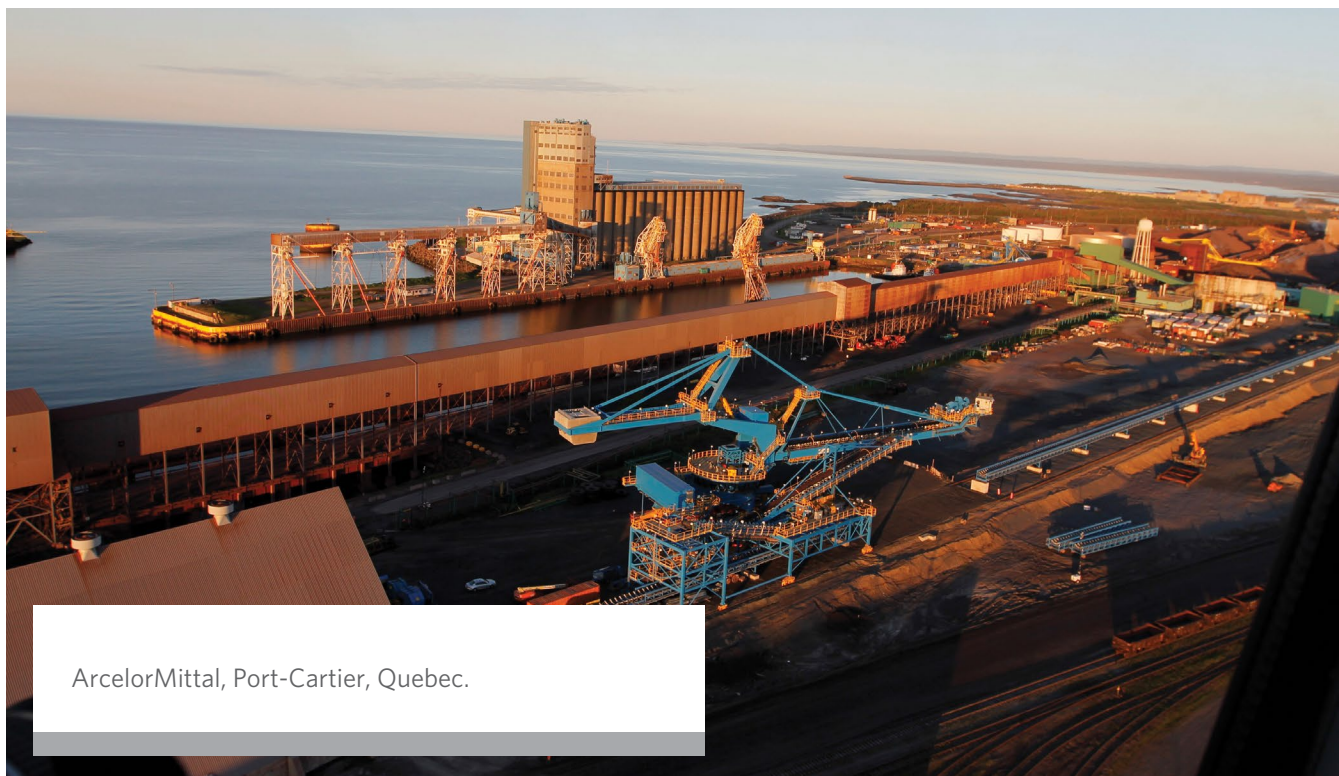
### MARINE

MAC's engagement on marine shipping issues focuses on international policy and regulatory developments from the IMO, and the subsequent implementation of these measures domestically into Canadian laws and regulations. Working in partnership with the International Council on Mining and Metals, international commodity associations and key domestic stakeholders, 2016 saw MAC focus on amendments to the International Maritime Solid Bulk Cargoes Code (IMSBC Code), and new requirements for product moisture-testing and management procedures.

The IMO is the United Nations' special agency responsible for the global safety and security of shipping and the prevention of marine pollution by ships. A recent amendment to the International Maritime Solid Bulk Cargoes (IMSBC) Code introduced criteria for identifying materials that are hazardous only in bulk. One of these criteria, corrosivity, requires the use of United Nations Test C.1, which was developed for liquids and solids that may become liquid. However, it has never been validated for solids, such as mineral concentrates. In response, MAC has developed a highly collaborative research program to develop a suitable test protocol. MAC participated as a member of the Canadian delegation to the IMO on this topic in September 2017 and is also actively engaged with industry partners and Transport Canada regulators in the development of a workable test solution.

### GENERAL

MAC also participates in an ongoing policy and regulatory discussion on the Transportation of Dangerous Goods, road and aviation modes of transportation, and trade enabling infrastructure policies and programs that are delivered by Transport Canada. ■





## HIGHLIGHTS

- Announced a new MAC membership commitment on human rights, consistent with the Voluntary Principles (VPs) on Security and Human Rights Initiative.
- Met with the UN Working Group on Business and Human Rights to discuss MAC's activities related to supporting human rights and how MAC has responded to the Mount Polley tailings breach.
- Continued engagement with Global Affairs Canada on developments related to Canada's Extractive Sector CSR Strategy.

## INTERNATIONAL SOCIAL RESPONSIBILITY COMMITTEE

**Chair: Christian Del Valle, Director, Corporate Affairs and Stakeholder Engagement, Goldcorp Inc.**

*The International Social Responsibility Committee's mandate is to review international issues that affect the interests of the members, as well as identify emerging issues, set priorities, and develop policy advice and strategies for the MAC Board of Directors.*

### COMMITMENT TO THE VOLUNTARY PRINCIPLES ON SECURITY AND HUMAN RIGHTS

In early 2017, MAC announced the establishment of a new membership commitment related to the VPs. The announcement was made during the annual Voluntary Principles Initiative Plenary meeting, which MAC was invited to participate in as a guest. This is a global first for an industry association, which was acknowledged by Fund for Peace, the global NGO lead on the VPs.

As part of events around the plenary meeting, MAC hosted a workshop for MAC member security professionals on new VPs implementation tools. The workshop was conducted by the Geneva Centre for the Democratic Control of Armed Forces (DCAF) and the International Committee of the Red Cross (ICRC) and is part of MAC's efforts to establish a community of practice on security issues. Establishing a community of practice to support security practitioners was one of the key components of MAC's new commitment. While MAC was taking these early steps to establish a Community of Practice, a group of MAC members and other mining related security practitioners were setting up an organization known as the Mining Security Working Group and after discussion with MAC members, it was decided that rather than set up a parallel forum, MAC should support this new working group as a way of meeting this part of its commitment to the VPs.

### CANADA'S EXTRACTIVE SECTOR CSR STRATEGY

Throughout 2017, the CSR Strategy and the possible creation of an ombudsperson continued to be the most prominent international policy priority for MAC. The ISR Committee remained focused on ensuring that any changes made by the new federal government to fulfill their campaign commitment to establish an ombudsperson were aimed at establishing a reasonable, transparent and fair process focusing on dispute resolution on the ground.

As of the end of 2017, while Global Affairs Canada (GAC) had indicated that an announcement establishing a human rights ombudsman was imminent, no announcement had been made. Over the course of the year, MAC engaged regularly with GAC and the Office of the Minister of International Trade to share our position that while we support the establishment of a human rights ombudsperson, it should be a non-judicial mechanism based on Joint Fact Finding (JFF) as the primary tool. MAC also indicated that in exceptional circumstances, defined as instances where companies choose not to participate constructively, there could be a role for unilateral investigation. In January 2018, the Minister of International Trade did announce the establishment of the Canadian Ombudsman for Responsible Business Enterprise (CORE) with both collaborative dispute resolution and investigative tools at its disposal. It is unclear when the CORE will be operational.







IAMGOLD, reclamation activities near the Essakane Gold Mine in Burkina Faso, West Africa.

## OUTREACH AND ENGAGEMENT

### UNIVERSITY OF OTTAWA STUDY ON MINING AND CONFLICT IN LATIN AMERICA

In June, MAC engaged with Professor Paul Alexander Haslam from the University of Ottawa on a new study he undertook examining the causes of conflict associated with mining in Latin America. This empirical research shows that Canadian mining companies in Latin America are less likely to experience community conflicts than other foreign companies. Further, a much greater percentage of mines without conflicts are Canadian rather than foreign. Whereas domestic firms tend to have fewer conflicts than foreign, the percentage difference between domestic firms and Canadian firms without conflicts is small, potentially also suggesting that Canadian firms may be doing a better job of achieving acceptability as a foreign investor than other foreign firms. Finally, Professor Haslam suggests that there is some evidence that Canadians perform better in weak environments. This study became an important part of MAC's advocacy in relation to the issue of the Human Rights Ombudsperson.

### FAITH-BASED ENGAGEMENT

In 2017, MAC continued its focused engagement with the faith-based community in Canada. A key part of this engagement has been establishing a constructive relationship with St. Paul's University. This year, that engagement centred around working with organizers at the university to organize and participate in a panel discussion on the future of environmental assessment and Truth and Reconciliation in Canada.

International efforts to increase engagement between mining companies and faith-based groups seem to be yielding positive results. In late 2017, the Church of England released a new investment policy on extractive industries that represents a thoughtful balance with respect to our sector. According to a summary provided by the Church:





*The new policy acknowledges the positive contribution that mining can make to development and the material that it provides for many of the products in modern life. However, it also highlights that extractives companies are particularly vulnerable to poor governance and ethical controversy, and harmful, long-lasting impacts on communities and the environment.*

For companies to benefit society and the common good, issues of responsibility, corporate governance and five ethical areas are highlighted throughout the document, namely:

1. *Human rights*
2. *Social and economic concerns*
3. *Health and safety*
4. *Corruption and taxation*
5. *Environment and ecology*

#### **MEETING WITH THE UN WORKING GROUP ON BUSINESS AND HUMAN RIGHTS**

In May, MAC met with the UN Working Group on Business and Human Rights. This meeting was part of a formal country visit to Canada involving meetings with government, industry and civil society and focused on issues both within Canada and with Canadian activities abroad. The Working Group was primarily interested in MAC's position on the CSR Strategy and the potential of an ombudsman as well as the Mt. Polley tailings failure. MAC provided a comprehensive presentation focused on our domestic and international work that seemed to leave at least one of the two working group representatives pleasantly surprised with all that we are doing.

While the final statement issued by the Working Group members at the end of their visit reinforced the NGO call for an ombudsperson, it also pointed to a number of examples of leadership by the Canadian mining sector including TSM, our work on revenue transparency, progress with indigenous communities and on human rights.

#### **OTHER PROJECTS**

Throughout 2017, the ISR Committee began work on Supply Chain Due Diligence focusing on driving responsible business among local suppliers and service providers; engaging with investors on environmental, social and governance reporting; and articulating how MAC and its members contribute to the Sustainable Development Goals. The ISR Committee also continued to work with members to quantify the amount value distribution to host communities by tracking the amount of money spent in host countries on taxes, payments to suppliers, wages paid to employees and contributions to communities.

#### **PLANS FOR 2018**

For the last five years, the ISR Committee's work has been on five key work areas including: leadership in human rights, government and stakeholder engagement, monitoring emerging issues and improving international social responsibility performance. Based on the current landscape for Canadian mining abroad and the anticipated establishment of a human rights ombudsperson in early 2018, the ISR Committee will refocus its efforts and resources towards ensuring the ongoing competitiveness of Canadian mining abroad, including by examining how MAC's leadership in responsible business conduct contributes to that competitiveness. ■







## HIGHLIGHTS

- MAC and its members engaged in a host of climate change policy and regulatory consultations, including on the proposed Clean Fuel Standard, the Federal Carbon Pricing Backstop, the Output-Based Pricing System, and Stationary Generators.
- The Committee worked actively and constructively with the Community of Interest Advisory Panel to identify ways to build upon MAC and its members' efforts to address climate change.

## ENERGY COMMITTEE AND CLIMATE CHANGE WORKING GROUP

Chair: Chris Adachi, Manager, Sustainability Implementation and Carbon Strategy, Teck Resources Limited

*The Energy Committee promotes overall energy management, including improved energy efficiency and greenhouse gas intensity performance, as well as develops MAC's positions and climate change policies and regulations.*

Throughout the year, MAC, the Energy Committee and the Climate Change Working Group closely monitored the significant climate change developments announced by the federal government and engaged with decision makers on how the government can best achieve its stated policy objectives.

### PRINCIPLES FOR CLIMATE CHANGE POLICY DESIGN

To assist the federal government in the development of an effective pan-Canadian climate change plan, MAC released *Principles for Climate Change Policy Design* in April 2016. In that document, in addition to supporting a revenue neutral price on carbon, MAC underscored the need for any climate change policy to ensure the competitiveness of emissions-intensive and trade-exposed (EITE) sectors, as well as the necessity of being sensitive to changing economic and geographical realities. For example, in remote and northern regions, where the energy infrastructure deficit is the most pronounced in Canada, diesel-reliant companies pay some of the highest energy costs in the country, with few viable options to economically fuel switch at the scale needed to avoid absorbing the carbon price as a penalty.

### CLIMATE CHANGE POLICY AND REGULATION

#### CLEAN FUEL STANDARD

In late 2016, the federal government announced its intention to develop a clean fuel standard. The intent is that the clean fuel standard would incent the use of a broad range of lower carbon fuels, energy sources and technologies, such as electricity, hydrogen, and renewable fuels, including renewable natural gas. The proposal, if implemented, would be the first time globally that such a standard would extend beyond transportation fuels and encompass buildings and industry. The objective is to achieve 30 megatonnes of annual reductions of GHG emissions by 2030.

Over the course of 2017, MAC participated in numerous consultations on this subject, including the development of a submission in response to the CFS Discussion Paper, released in February 2017. In December 2017, a draft regulatory framework was released. MAC submitted comments on this proposal and has been participating in regular Technical working group meetings since.

#### CARBON PRICING BACKSTOP

In October 2016, the federal government stated its intention to introduce new legislation and regulations to implement a carbon pollution pricing system – the backstop – to be applied in sub-national jurisdictions that do not have carbon pricing systems that align with the benchmark. MAC actively participated in consultations on the Federal Carbon Pricing Backstop Technical Working Paper, including the development of a submission to Environment and Climate Change Canada on the subject.





Late in 2017, the government announced its intent to develop an Output-Based Pricing System to protect emissions intensive and trade exposed sectors. MAC has been engaging regularly with decision makers on their proposal for mining and metal manufacturing standards over the course of 2018.

### **PROPOSED REGULATIONS FOR STATIONARY DIESEL GENERATORS**

ECCC is considering mandating Tier 4 post-exhaust technology requirements for stationary diesel generators and undertook early-stage pre-feasibility consultations on this subject over the course of 2017. MAC participated in several webinars and meetings, as well as developed a submission to provide comments on the proposal. More work is anticipated on this proposal in 2018.

### **COI PANEL'S ADVISORY STATEMENT ON CLIMATE CHANGE**

In November 2016, the Panel issued an advisory statement, *Rising to the Challenge*, encouraging MAC and its members to continue building upon its efforts, achievements and commitments in this space. The statement also recognized MAC and its members' commitment to be constructive partners in the global fight against climate change, citing MAC's recently released *Principles for Climate Change Policy Design*, which outlined the core elements of a successful carbon price regime to help inform the federal government as it developed the pan-Canadian climate change framework.

The Panel's statement recommended specific actions in six areas: MAC's TSM initiative; operations level; local and Indigenous communities; supply chains; public and policy engagement; and the disclosure of climate risks and opportunities.

Over the course of 2017, MAC engaged with members of the Panel to develop a formal response – released in October 2017 – where the industry committed to 13 actions in the climate change space. One of those actions, a commitment to deepen engagement with NRCan's Adaptation Platform Mine Working Group, has already been acted on. MAC applied and was approved for funding to develop a best-practice guidance to managing mining risk in a changing climate. ■

COI Panel, Glencore's Raglan Mine in Kangiqsujuaq, Quebec.





## HIGHLIGHTS

- The federal government created the Canada Infrastructure Bank and announced other infrastructure-related support for northern and Indigenous communities, both key recommendations from MAC.
- MAC participated and made a submission to consultations on the proposed Arctic Policy Framework.
- The NAC worked constructively with key decision makers on the issue of climate change, and the implications for remote and northern regions.
- The NAC monitored legislative developments affecting mineral project permitting processes in the Northwest Territories and the Yukon.

## NORTHERN AFFAIRS COMMITTEE

Chair: Vacant

*The Northern Affairs Committee (NAC) contributes to the federal policy, legislative and regulatory environment to enhance the competitiveness of mining companies operating in Canada's remote and northern regions and to facilitate sustainable growth in the Canadian mining industry.*

Mining is the largest private sector economic driver in Canada's North, employing approximately 8,500 people (1 in every 6 jobs). Direct GDP contributions in the Yukon, the Northwest Territories and Nunavut are approximately 13%, 18% and 21%, respectively, as of 2016. Mining has had a transformative effect on northern and Indigenous communities through generating employment, skills training and, in some cases, royalty or direct equity shares, all while paying taxes and royalties to governments. While these contributions are substantial, the potential is even greater. MAC research indicates that new investment could exceed \$35 billion given the right investment and market realities.

Locating, developing and operating mines in the northern regions of Canada's provinces and across the three territories is challenging. Raising awareness of the costs, challenges and opportunities that mining presents for northern Canada is a key priority of MAC's Northern Affairs Committee. The Committee's focus is to work with governments to ensure the industry has a clear, effective and efficient regulatory permitting process, and to highlight the need for strategic infrastructure investments.

### NORTHERN INFRASTRUCTURE DEVELOPMENTS

The future of Canada's mineral industry lies increasingly in remote and northern regions, and the current infrastructure deficit acts as a major barrier to opportunities for greater wealth discovery and production. Exacerbating this is the historic under-eligibility of the territories to access federal infrastructure programs due to "public use" program criteria and "per capita" funding formulas.

Characterized by disparate communities, extreme temperatures, and virtually no infrastructure or people for hundreds of kilometres, remote and northern regions have some of the highest per-capita living costs in the country. Similarly, industry research, detailed in the *Levelling the Playing Field* report, has found that it costs over six times more to explore and twice as much to build new mines in northern regions compared to their southern counterparts.

MAC is encouraged by, and advocated for, recent federal infrastructure investment decisions that recognize northern challenges and opportunities, including the Trade and Transportation Corridor Initiative (TTCI), which dedicates \$400 million for trade-enabling infrastructure in the territories, and the Investing in Canada Plan, which allocated funding on a per-capita "plus" model – both announced in July 2017. These are creative and much-needed investments in Canada's North.





Further, MAC advocated for and welcomed the creation of the Canada Infrastructure Bank (CIB). We continue to stress the importance of the CIB recognizing northern challenges and supporting economic development opportunities in remote and northern Canada and agree that projects should be evaluated on a merit basis. Additionally, consistent with many other federal policy areas, the CIB should recognize the unique circumstances of Canada's North and the significantly higher costs associated with living or operating in the territories.

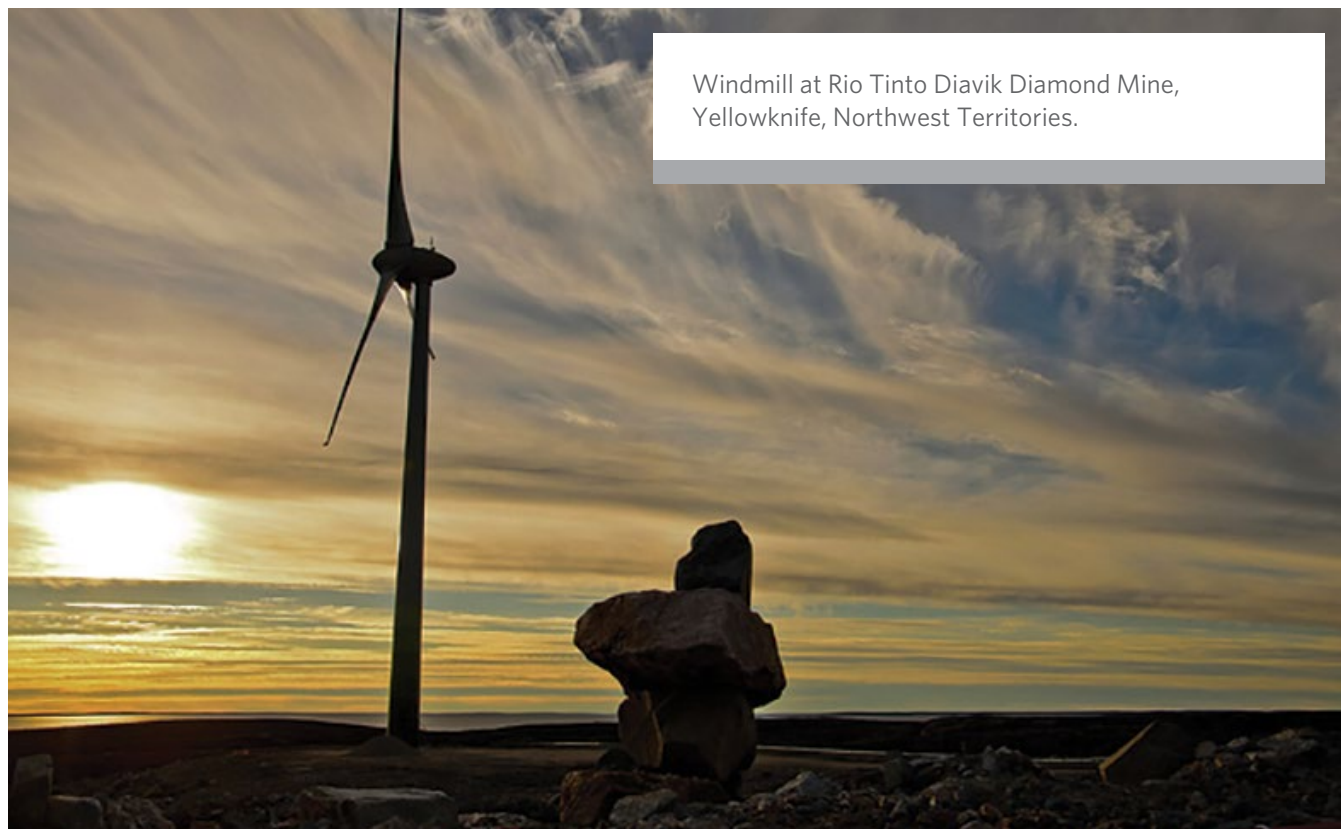
### ARCTIC POLICY FRAMEWORK

As part of the Shared Arctic Leadership report, which MAC participated in and which was released by Mary Simon in her capacity as a special ministerial representative to the Minister of Crown Indigenous Relations and Northern Affairs, the government launched consultations to develop an Arctic Policy Framework.

Late in 2017, MAC participated in an industry roundtable consultation on this subject, and developed a submission outlining the importance of economic development as an enabler of social benefits, and the mining industry as an enabler of Indigenous reconciliation in remote and northern communities.

### CLIMATE CHANGE

To assist government in the development of an effective pan-Canadian climate change plan, MAC released *Principles for Climate Change Policy Design* in April 2016. In that document, in addition to supporting a revenue neutral price on carbon, MAC underscored the need for any climate change policy to ensure the competitiveness of emissions-intensive and trade exposed sectors, as well as the necessity of being sensitive to the geographical realities of remote and northern regions. MAC has engaged with decision makers at all levels of government, in Ottawa and in the territories, to communicate the need to think differently about addressing climate change in the North.



Windmill at Rio Tinto Diavik Diamond Mine,  
Yellowknife, Northwest Territories.





High energy costs in the North have long served as a strong incentive to maximize energy and fuel efficiency, but evidence suggests that the proverbial “low-hanging” fruit are gone, meaning future improvements will be incremental and gradual, barring a technological breakthrough. Moreover, fuel switching opportunities in remote and northern Canada are limited and contingent on geographical considerations. Together, the infrastructure deficit and the state of currently available technologies do not provide sufficient options to displace diesel (and associated emissions) in the timeframe needed, nor on the scale required, so that companies absorb the carbon price almost exclusively as a cost of business. Further, extreme temperatures have not demonstrated the viability of the clean fuel standard for an industrial application in a pan-Canadian context.

Accommodating for remote and northern limitations in a manner that does not unduly penalize business is critical for any northern climate change scenario to have the intended effect. This is especially true for the highest cost operating jurisdictions in the country.

## REGULATORY ENVIRONMENT

### **NORTHWEST TERRITORIES**

With the enactment of the *Northwest Territories Devolution Act* in March 2014, the federal government has been moving forward with plans to amend regulations under the *Mackenzie Valley Resource Management Act* (MVRMA).

In December 2016, Minister Bennett announced that Indigenous and Northern Affairs Canada would review amendments to the MVRMA that were subject to recent court action. As part of this process, MAC partnered with the NWT Chamber of Mines to submit comments, the result of which was a commitment from Minister Bennett to ongoing dialogue with industry on how to improve the MVRMA. This process, and the amendments to reverse the amalgamation of the regional land and water boards, among others, are expected in 2018.

### **YUKON**

MAC participated in a consultation over whether the following four amendments (previously part of Bill S-6) to the *Yukon Environment and Socio-Economic Assessment Act* should be rescinded or not:

- *Time limits on the review process;*
- *Exempting a project under assessment when an authorization is renewed or amended, unless there has been a significant change to the project;*
- *Ability for the federal minister to provide binding policy direction to the Board; and*
- *Ability to delegate the federal minister’s powers, duties or functions under the Act to the territorial government.*

Concerns amongst First Nations communities and governments over the level of consultation led to calls for these four amendments in the Bill to be rescinded during the federal election campaign in 2015. MAC prepared a submission and engaged with departmental officials, politicians and Indigenous representatives on this subject. In advance of tabling Bill C-17 to repeal the four amendments in June 2016, the federal government, the Yukon government and the Yukon Assembly of First Nations signed an MOU that made provision for further dialogue on the reassessment provision, which was of great significance for MAC. MAC appeared before the Senate Committee on Energy and Natural Resources on its study of this bill in November 2017. The bill passed, but MAC was advised a new cooperative framework to address the above concerns, among others, was to be put in place early in 2018. ■







## HIGHLIGHTS

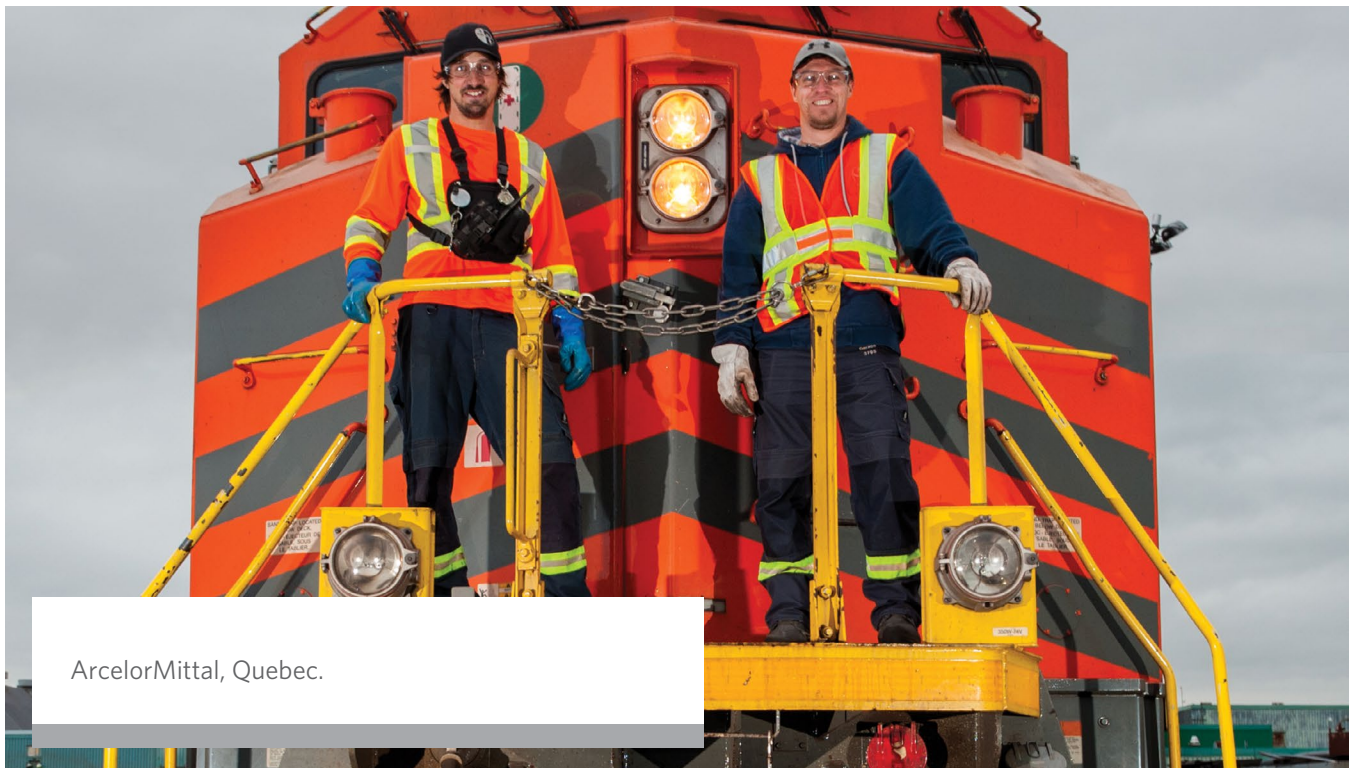
- Supported the federal government's negotiation of Foreign Investment Promotion, Protection Agreements and Free Trade Agreements.
- Monitored and responded to trade and economic developments.
- Partnered in a feasibility study for the development of a Canada-European Union Mineral Investment Facility.

## INTERNATIONAL TRADE AND INVESTMENT

*MAC monitors and participates in government trade activities and works to promote open flows of trade and investment to enhance the international competitiveness of the Canadian minerals and metals industry.*

The mining industry ranks alongside financial services and oil and gas as the most international of Canada's industrial sectors. The industry accounted for over 19% of the value of Canadian goods exports in 2016, and consistently accounts for a significant share of Canada's direct investment abroad. Canada is also a global hub for mining finance, with the Toronto Stock Exchange (TSX) and TSX Venture Exchange (TSX-V) hosting 57% of the world's publicly listed mining companies, and the exchange consistently transacts the majority of global mining equity financings on an annual basis.

Canada's success in mining is influenced in part by the federal government's trade efforts. This includes the overseas network of embassies and trade commissioners, the trade finance capacity through Export Development Canada, and an array of Free Trade Agreements and Foreign Investment Promotion and Protection Agreements.





## **FOREIGN INVESTMENT PROMOTION AND PROTECTION AGREEMENTS**

In recent years, the federal government adopted an ambitious agenda to broaden and modernize Canada's trade infrastructure, including through the negotiation of Foreign Investment Promotion and Protection Agreements (FIPAs). By late 2017, Canada had 37 FIPAs in place, had concluded negotiations with five additional countries, and remains engaged in ongoing negotiations with nine other countries.

FIPAs are bilateral agreements aimed at protecting and promoting foreign investment through legally binding rights and obligations. These agreements place investment-treatment obligations on each country and 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 enforcement components are rarely used, the mere existence of a FIPA gives foreign governments a set of rules on fairness and transparency.

### **INVESTMENT IN LATIN AMERICA**

Eight of Canada's 37 active FIPAs are with Latin American countries, reflecting the industry's presence in the region, as well as the continent's mineral wealth and potential. It is noteworthy that, as of 2016, Canadian companies held nearly \$88.5 billion in assets in Latin America, nearly half of the total value of Canada's overseas mineral assets.

### **INVESTMENT IN AFRICA**

Since 2010, the Canadian government has concluded, signed or brought into force 12 FIPAs with African countries. A further three of the nine FIPA negotiations currently ongoing are with African countries. In recent years, many African countries have been seeking to benefit from their natural resource endowments and have become more open to new mining investments and the expansion of existing mining projects. Some of the major resources mined in Africa are iron ore, diamonds, gold, platinum, uranium, copper and coal.

## **FREE TRADE AGREEMENTS**

The Canadian mining industry boasts a significant international presence. Its reliance on international market demand for its products makes the industry a major stakeholder in the trade policies, programs and services that Canada's Department of Global Affairs facilitates.

Canada's trade agenda has expanded aggressively in recent years, giving Canadian miners greater ability to expand into new and emerging markets, or to export their products more freely to an increasing number of destinations. MAC supports the following policy developments and, where appropriate, provides input to Canadian policy makers and negotiators.

### **NORTH AMERICAN FREE TRADE AGREEMENT**

In 1994, the North American Free Trade Agreement (NAFTA) came into effect, creating one of the world's largest free trade zones and laying the foundation for strong economic growth and rising prosperity for Canada, the United States and Mexico. Since then, Canada's trade with the US has risen by 254% to \$670 billion, while trade with Mexico has grown by a staggering 900% to \$41 billion. NAFTA has also created millions of jobs. According to the US Chamber of Commerce, about 14 million American jobs depend on trade with Mexico and Canada.

On May 18, U.S. President Donald Trump sent a letter to Congress announcing his intention to renegotiate NAFTA. To support decision makers, MAC participated in a mineral and metals sub-group organized by Global Affairs Canada and has been party to regular briefings. MAC supports Canada in seeking the maximum benefits that can be realized from a revised NAFTA.

### **COMPREHENSIVE ECONOMIC AND TRADE AGREEMENT WITH THE EUROPEAN UNION**

On September 21, 2017, the Canada-European Union Comprehensive Economic and Trade Agreement (CETA) came into force. The new agreement eliminates 98% of Canadian and EU tariffs and will phase out most remaining tariffs over time. The agreement also expands into the areas of investment, labour mobility and enhanced regulatory cooperation, as





well as lifts ownership restrictions on uranium. CETA is the first bilateral trade agreement in which Canada has included provisions on regulatory cooperation. By fostering cooperation earlier in the regulatory process, differences in approaches between Canada and the European Union may be reduced, resulting in fewer barriers to trade once regulations are in place. To support this process, MAC has partnered with Euromines and EY in a stakeholder driven research project to determine how best to launch and shape the provisions on regulatory cooperation pertaining to raw materials.

### **TRANS-PACIFIC PARTNERSHIP**

MAC supported the Trans-Pacific Partnership (TPP) and past efforts to develop that agreement. Originally, the TPP was a multilateral trade negotiation that comprised 12 countries: the United States, Australia, Japan, Mexico, New Zealand, Singapore, Malaysia, Vietnam, Peru, Chile, Brunei Darussalam, and Canada. Together, these countries represent a market of nearly 800 million consumers and a combined GDP of \$28.5 trillion – nearly 40% of the global economy.

In January 2017, the United States withdrew from the TPP. Acknowledging that Canada has had historically close trade ties with the United States, the value of TPP for mining companies was the expansion of trade relationships with a broader consortium of countries whose economies are growing rapidly, and whose future anticipated growth is strong. While the participation of the United States is uncertain at this point, a renewed TPP 2.0 agreement has strategic value for Canadian mining companies in expanding access to growing markets and diversifying reliance away from the United States.

### **FREE TRADE WITH CHINA**

On September 22, 2016, Prime Minister Justin Trudeau and Chinese Premier Li Keqiang launched exploratory discussions for a possible Canada-China Free Trade Agreement (FTA). On March 3, 2017, the government launched consultations to solicit views from Canadians on a possible FTA with China. MAC communicated its support for stronger trade relations with China, underscoring any agreement should seek: 1) trade free from tariffs; 2) trade free from regulatory barriers; and, 3) clear rules for two-way access to foreign investment, which is critical to business certainty.

China is Canada's third-largest market for the export of minerals and metals after the United States and the European Union, with an export value exceeding \$4.2 billion in 2016, approximately 5% of our overall total. As such, MAC encourages the Government of Canada to focus on enhancing economic and diplomatic relations, and to explore a possible free trade deal.

### **MERCOSUR**

MAC is supportive of the government's efforts to re-assess the viability of an FTA with MERCOSUR and participated in consultations on this subject. The assets of Canadian companies operating in Brazil and Argentina combined exceeded \$22.2 billion in 2015, underscoring the significance of these two countries, as they account for 5% and 8%, respectively, of the value of Canadian mining assets abroad. Further, research from a sample of eight MAC member companies indicated that their combined mining investment in Argentina and Brazil in 2016 exceeded \$1.9 billion.

Beyond investment and assets, MAC and its members are exporting best practices in mining sustainability to these countries. The most significant recent example of this is in Argentina, where the Argentinean Chamber of Mining Entrepreneurs adopted MAC's TSM initiative. Argentina's adoption of TSM represents a significant step forward in cooperation on responsible mining standards between Canada and a very significant mining jurisdiction in Latin America. ■





## MINING INDUSTRY HUMAN RESOURCES COUNCIL

Executive Director: Ryan Montpellier, Board Chair: Sean Junor, Cameco Corporation, Board Vice-Chair: Dean Winsor, Teck

The Mining Industry Human Resources Council (MiHR) is a non-profit, independent organization with a mandate to identify opportunities and address the human resource and labour market challenges within the Canadian minerals and metals sector. Financially supported by the MAC, the Government of Canada and program revenue, MiHR drives collaboration among mining and exploration companies, organized labour, contractors, educational institutions, industry associations and Indigenous groups to strengthen the competitiveness and sustainability of Canada's mining sector.

A 14-person Board of Directors governs MiHR and ensures that the organization's mission, values and activities deliver tangible results. Board members represent a cross-section of MAC member companies, contractors, organized labour and educational institutions from across Canada. MiHR also brings together a network of more than 250 mining industry volunteers to help inform its research and guide its project committees.

### KEY ACTIVITIES:

- **Labour Market Trends, Intelligence and Research:** To provide industry with a centralized, trusted and responsive knowledge centre for minerals and metals labour market trends, intelligence and research.
- **Optimizing Human Resources Supply:** To develop and distribute tools that help employers effectively engage all potential sources of labour, including women, Indigenous peoples and immigrants.
- **Standards and Workforce Readiness:** To develop and maintain a suite of National Occupational Standards and accompanying essential skills resources for select mining occupations.
- **Credentials and Recognition:** To recognize and promote the skills of individuals and the achievements and practices of employers and training providers.

### HIGHLIGHTS

#### LABOUR MARKET TRENDS, INTELLIGENCE AND RESEARCH

**National Labour Market Intelligence (LMI):** MiHR's LMI forecasting model is sector specific and recognized as the go-to labour market resource for industry and stakeholders. MiHR is expanding its LMI research, analysis and forecasting capabilities to produce intelligence in new, innovative ways that meet the needs of a broader group of stakeholders.

The expected outcomes are:

- Improved labour market forecasting with increased geographic breadth;
- Increased understanding of LMI and HR issues to align education and skills needs;
- Informing job seekers of relevant educational programs and enhancing data for key mining-specific and in demand occupations; and
- Increased understanding of trends and activities impacting the mining labour market to enable industry stakeholders to remain up to date, adopt important counter cyclical workforce planning strategies, and recognize the rate of technology adoption in the sector and its impact on the workforce.

MiHR also worked with the Prospectors & Developers Association of Canada (PDAC) on a survey of five distinct exploration stakeholder groups (employers, entrepreneurs, educators, students, affiliates/associations) to create more detailed LMI for the exploration sector than is available through public sources. The survey resulted in the publication of the Canadian Exploration HR Outlook report in the fall of 2017.





This research supports industry stakeholders in creating strategies to increase the sector's ability to engage new pools of talent in mineral exploration. The national survey is part of a larger strategy to learn from all sector stakeholders – not just mining extraction – enabling MiHR to better understand and address labour market issues related to the entire mining cycle.

**Regional LMI:** Agnico Eagle Mines Limited (AEM) contracted MiHR to undertake an analysis of labour market conditions in the Kivalliq region of Nunavut from both a demand and supply perspective. The study will identify potential strategies to enhance the ability of Inuit people to attain and maintain employment at AEM sites in the region.

### OPTIMIZING HUMAN RESOURCES SUPPLY

**Gearing Up: Developing Mining Talent Through Work-Integrated Learning:** MiHR submitted a proposal to the Government of Canada for this project in 2017. By uniting mining employers and post-secondary educational institutions, Gearing Up will create 850 new co-op and other work-integrated learning (WIL) opportunities in mining for post-secondary students studying science, technology, engineering and math (STEM) related fields. Wage subsidies up to \$7,000 are available to employers who create new WIL opportunities such as co-ops, internships, field placements, applied projects, capstone projects or case competitions.

**Gender Equity in Mining Works (GEM Works):** This project helps companies foster a mining industry where both women and men have the best opportunities for rewarding careers. It aims to expedite the institutional change necessary to improve gender equity through the application of tools, strategic human resources processes, and change agent activities. Using GEM Works tools, companies review internal policies and programs and remove barriers to create positive change for women in their workforce. Participating companies include Teck, Barrick, Agnico Eagle Mines, Mosaic, Taseko, Vale and Hatch. GEM Works experiences are being documented as case studies.

**Mining Professional Immigrant Network (M-PIN):** In collaboration with the Toronto Region Immigrant Employment Council (TRIEC) and Professions North/Nord (PNN), MiHR's three-year (2018-2021) M-PIN project will adapt, test and evaluate innovative methods to broaden engagement to better recruit and integrate immigrant talent into the Ontario mining industry. The project was developed in 2017 and planned for launch in early 2018.

**Green Jobs Program:** This two-year project helps youth gain work experience in sustainability-related jobs in the mining sector. It will provide 120 wage subsidies of up to \$15,000 to eligible mining employers who provide internships or new jobs to recent graduates.

### STANDARDS AND WORKFORCE READINESS

**National Occupational Standards (NOS):** MiHR, in collaboration with industry, develops and maintains NOS for key mining occupations. MiHR's existing NOS project funding (2014-2018) was used to review and update the four existing standards: Underground Miner; Surface Miner; Minerals Processing Operator and Diamond Driller. MiHR and industry also developed three new standards in 2016: Industry Trainer; Hoist Operator; and Frontline Supervisor. Lastly, MiHR developed and piloted an alternative process to certification: the Examiner Panel Process.

MiHR's new NOS project funding (2018-2021) will be used to pilot and evaluate the Examiner Panel Process with the four existing occupations, develop and pilot national training program curriculum for Minerals Processing Operators and Industry Trainers and develop a flexible accreditation program to recognize various training programs that align to the four existing NOS.

**Mining Essentials and the National Essentials and Work Readiness Program (NEWR):** Mining Essentials is the only industry-validated national mining training program for Indigenous peoples. Developed in partnership with the Assembly of First Nations, it provides Indigenous peoples with the skills and confidence needed to enter the mining workforce and provides industry with a ready-to-work local workforce. Its success is demonstrated by its 41 deliveries, 327 graduates and a graduation rate often around 70%. The majority of participants achieve employment or further their mining education within six months of graduating.







MiHR will enhance and update Mining Essentials, including a customization for Innu people, as part of Employment and Social Development Canada's NEWR program. A new essentials skills program for women, youth and new immigrants will also be created.

### CREDENTIALS AND RECOGNITION

**The Canadian Mining Certification Program (CMCP):** The measure of mining expertise, CMCP has certified more than 1,200 workers with over 1,700 registered. Companies implementing this program include Cementation, Dominion Diamond, Diavik Diamond Mine, Teck Resources, Hy-Tech Drilling Ltd, New Gold and Thyssen Mining. Certification is available for workers in the following occupations: Underground Miner; Surface Miner; Minerals Processing Operator; Diamond Driller; Industry Trainer; Frontline Supervisor; and Hoist Operator.

New CMCP marketing and communications materials were disseminated in 2017, including website content and a new online portal. A new Examiner Panel Process has been piloted and evaluated, and is available for the latter three occupations. The Examiner Panel Process will be piloted for the four existing occupations in the fall of 2018.

### FOR MORE INFORMATION:

Visit [www.mihr.ca](http://www.mihr.ca) or contact Ryan Montpellier, Executive Director, at [rmontpellier@mihr.ca](mailto:rmontpellier@mihr.ca). ■



Rio Tinto, Iron Ore Company of Canada,  
Newfoundland and Labrador.





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Chair: Anne Marie Toutant (June 2017-), Suncor Energy Inc.

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Paul West-Sells, Western Copper and Gold Corporation

Steve Wood, Sherritt International Corporation\*\*

Penggui Yan, HD Mining International Ltd.

\*Left late 2017

\*\*Joined late 2017

\*\*\*Left early 2018

\*\*\*\*Joined early 2018

## EXECUTIVE COMMITTEE

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Kristan Straub, Glencore\*\*\*

Travis Temple, HudBay Minerals Inc.

Anne Marie Toutant, Suncor Energy Inc.

Alice Wong, Cameco Corporation \*\*

\* Left late 2017

\*\*Joined late 2017

\*\*\*Left early 2018

\*\*\*\*Joined early 2018

## OFFICERS

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Cory McPhee, Vice-Chair\*\*

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Pierre Gratton, President and CEO and Secretary

\*Left late 2017

\*\*Joined early 2017

## HONORARY LIFE MEMBERS

Jim Carter

Doug Horswill

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Norman Keevil





### TSM GOVERNANCE TEAM

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 Bryan Cox, Mining Association of British Columbia  
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 Craig Ford, Excellon Resources Inc.  
 Caitlin Glynn-Morris, First Quantum Minerals  
 Michel Julien, Agnico Eagle Mines Limited  
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 Josée Méthot, Québec Mining Association  
 Shirley Neault, HudBay Minerals Inc.  
 Tom Syer, Teck Resources Limited  
 Anne Marie Toutant, Suncor Energy Inc.  
 Dennis Wilson, New Gold Inc.  
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### COMMUNITY OF INTEREST ADVISORY (COI) PANEL

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 Theresa Baikie, Aboriginal Category  
 Tim Johnston, Economic and Community Development Category  
 Stephen Hazell, Environmental NGO Category  
 Joy Kennedy, Social NGO Category (includes faith-based groups)  
 Stephen Kibsey, Finance and Investment Category\*  
 Nathan Lemphers, Environmental NGO Category  
 Doug Olthuis, Labour and Workplace Category  
 Dr. Philip Oxhorn, International Development Category  
 Maya Stano, Expert Category  
 Stephen Walker, Finance and Investment Category\*\*  
 Chief David Walkem, Economic and Community Development Category

\*Left late 2017

\*\*Joined late 2017

### INDUSTRY REPRESENTATIVES ON THE COI PANEL

Pierre Gratton, Mining Association of Canada  
 Michel Julien, Agnico Eagle Mines Limited  
 Josée Méthot, Association minière du Québec  
 Cory McPhee, Vale\*  
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 Peter Read, Syncrude Canada Ltd.  
 Mark Wiseman, Avalon Rare Metals Inc.  
 Alice Wong, Cameco Corporation\*\*  
 Scott Yarrow, Glencore

\*Left early 2018

\*\*Joined early 2018

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 Simon Latulippe, WSP Group  
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 Claudine Lee, Dominion Diamond Mines ULC  
 Carolina Leseigneur, Golder Associates  
 Janice Linehan, Suncor Energy Inc.  
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 Walter Sencza, Newmont Canada Corporation  
 Sean Sharpe, Glencore

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 Anne Simpson, Syncrude Canada Ltd.  
 Johan Skoglund, Nyrstar  
 Helga Sonnenberg, Ecological and Regulatory Solutions Inc.  
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 Adrianna Stech, Ontario Mining Association  
 Stephanie Thibeault, Goldcorp Inc.  
 Yves Thomassin, BBA Inc.  
 Ryan Tibbles, Knight Piésold Ltd.  
 Ryan Todd, New Gold Inc.  
 Patricia Torgerson, Goldcorp Inc.  
 Kirk Tourout, Newmont Canada Corporation  
 Nathalie Tremblay, Québec Mining Association  
 Nick Tremblay, Rio Tinto Canada  
 France Trépanier, Goldcorp Inc.  
 Scott Trusler, MMG Resources Inc.  
 Ian Turpin, Quadra Chemicals Ltd.  
 Carlos Vargas, AECOM  
 Richard Viflantzoff, Charles Tennant & Company (Canada) Ltd.  
 Melanie Wallace, Prospectors and Developers Association of Canada  
 Glen Watson, Vale  
 Kelly Wells, Canada North Environmental Services  
 Kathryn Wherry, Hatch & Associates Inc.  
 Lesley Williams, Prospectors and Developers Association of Canada  
 Dennis Wilson, New Gold Inc.  
 Mellissa Winfield-Lesk, Hatch  
 Mark Wiseman, Avalon Advanced Materials Inc.  
 Steve Woolfenden, IAMGOLD Corporation  
 Linda Wrong, Lundin Mining Corporation  
 Hasan Zolata, Juarez Environmental Consultants Inc.  
 Warren Zubot, Syncrude Canada Ltd.





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 Doug Brown, Teck Resources Limited  
 Scott Brubacher, HudBay Minerals Inc.  
 Heather Bruce-Veitch, Iron Ore Company of Canada  
 Louise Burgess, Eldorado Gold Corporation  
 Carolyn Chisholm, Rio Tinto Canada  
 Dale Coffin, Agnico Eagle Mines Limited  
 Melissa Desrochers, Agnico Eagles Mines Limited  
 Blair Dickerson, Rio Tinto Canada  
 Kyle Dufresne, Rio Tinto Canada  
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 Peter Fuchs, Glencore  
 Claudine Gagnon, Rio Tinto Canada  
 Jean-Pierre Gregoire, Rio Tinto Canada  
 Dina Guralnik, ArcelorMittal Exploitation Minière Canada s.e.n.c.  
 Angela Hamlyn, Canadian Institute of Mining, Metallurgy and Petroleum  
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 Matt Johnson, Lundin Mining Corporation  
 Kristy Kenny, Prospectors and Developers Association of Canada  
 Dany Laferriere, Suncor Energy Inc.  
 Benjamin Little, IAMGOLD Corporation  
 Andy Lloyd, Barrick Gold Corporation  
 Poonam Madan, Sherritt International Corporation  
 Christine Marks, Goldcorp Inc.  
 Ryan McEachern, Canadian Association of Mining Equipment and Services for Export  
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 John Mullally, Goldcorp Inc.  
 Jennifer Prospero, Sherritt International Corporation  
 Neil Reeder, B2Gold Corp.  
 Cheryl Robb, Syncrude Canada Ltd.  
 Emily Robb, Vale  
 Christopher Ryder, BHP Billiton Canada Inc.  
 Alaina Shams, IAMGOLD Corporation  
 Jody Shimkus, HD Mining International Ltd.  
 Mark Sitter, Sherritt International Corporation  
 Michael Southern, Suncor Energy Inc.  
 Mathieu St-Amant, Québec Mining Association  
 Federico Velasquez, Anglo American  
 Tracey Wolsey, Suncor Energy Inc.

## TAILINGS WORKING GROUP

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 Tracy Anderson, First Quantum Minerals  
 Chris Anderson, Teck Resources Limited  
 Matthew Andrews, Pan American Silver Corp.  
 Debbie Berthelot, BHP Billiton Base Metals  
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\*Joined late 2017

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