Mining Association of Canada
Towards Sustainable Mining

22nd Meeting of the
Community of Interest Advisory Panel
POST-VERIFICATION REVIEW REPORT

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Towards Sustainable Mining
Vers le développement minier durable

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1 Introduction

The purpose of this report is to present the summary of discussions of the MAC Community of Interest Advisory Panel (COI Panel) post-verification review (PVR) of Barrick's Hemlo operations and ArcelorMittal's Mont-Wright and Port-Cartier operations. Meeting presentations and briefing materials were provided to the COI Panel; content contained in meeting presentations is not duplicated in the body of this report.

For more information on the October 2014 Panel Meeting, please see the *October 2014 COI Panel Meeting Report* under separate cover.

This report is organized by the following sections:

- **Section 2:** Overview of Towards Sustainable Mining (TSM)
- **Section 3:** Overview of the TSM verification system and COI Panel post-verification review
- **Section 4:** Results and discussion of the 2014 post-verification review: Barrick
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A list of all referenced web links is provided in **Annex 1**.

2 About the Towards Sustainable Mining (TSM) Initiative

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

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

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

***Accountability**: Participation in TSM is mandatory for all MAC members, and is currently being phased in for members of the Mining Association of British Columbia and the Québec Mining Association. Assessments are conducted at the facility level where the mining activity takes place—the only program in the world to do this in our sector. This provides local communities with a meaningful view of how a nearby mine is faring.*

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

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

Participation in TSM is a condition of membership in MAC, and requires that members subscribe to a set of guiding principles that are supported by specific performance indicators against which member companies must report their results.

Performance measurement protocols have been developed for key areas of operational performance as illustrated in Figure 1. MAC released its tenth TSM Progress Report, which provides overall industry TSM results and company-specific results for the issues listed in Figure 1. For more information on TSM and industry and company results, please see Annex 1 for a list of web pages.

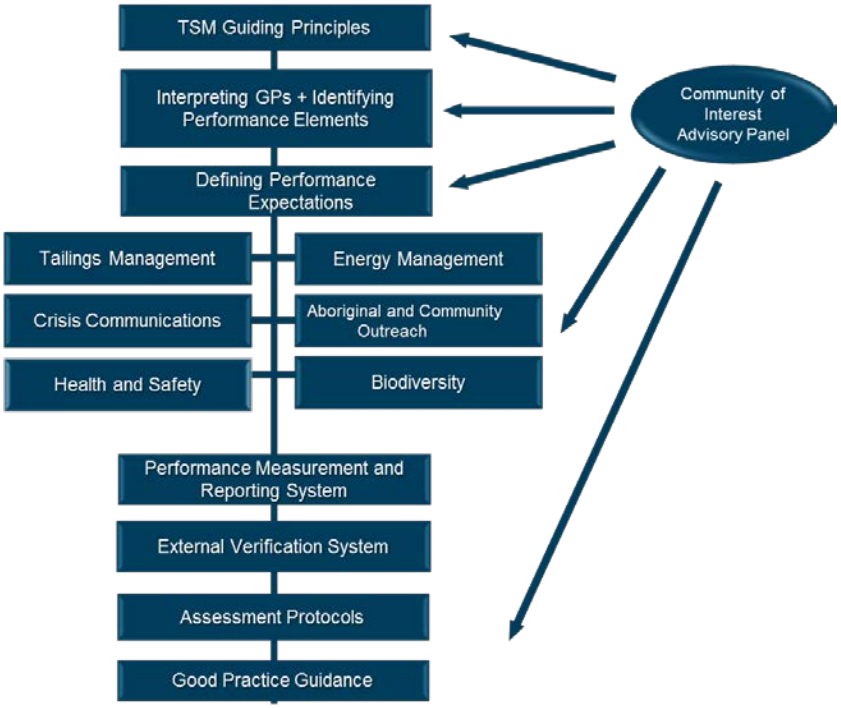


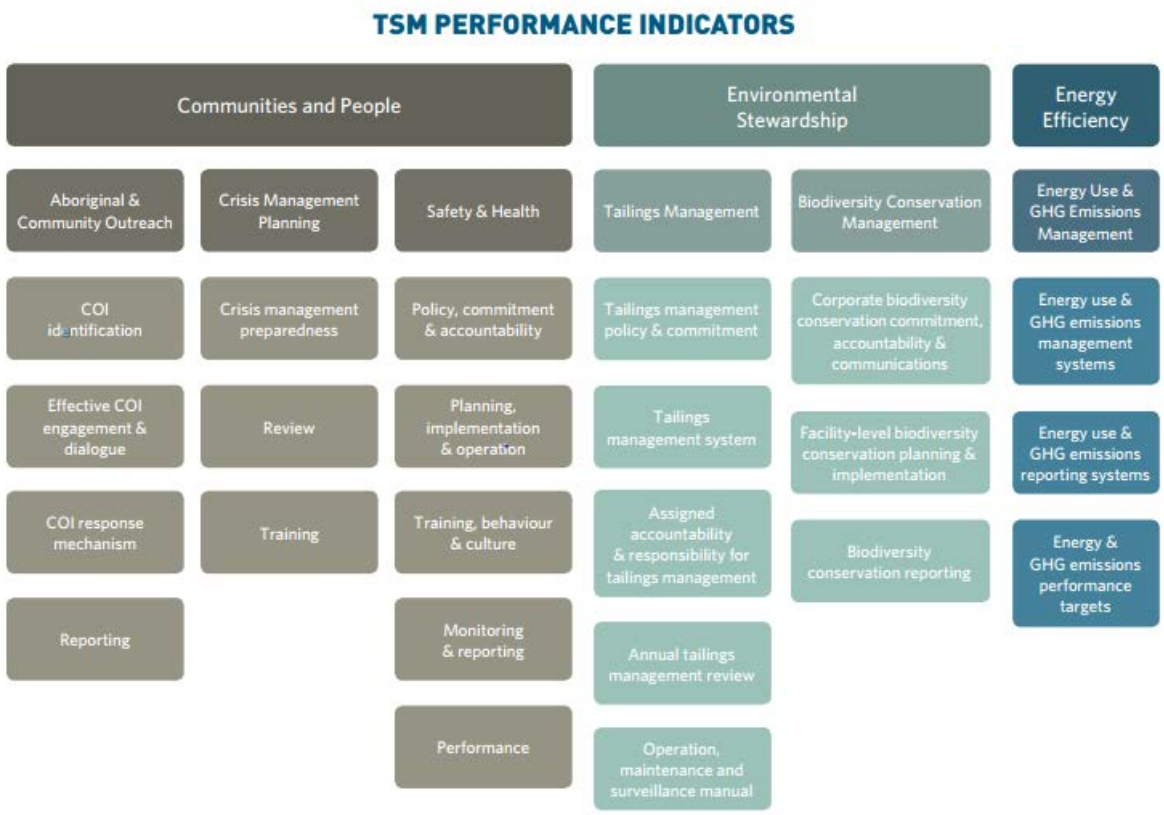
Figure 1: TSM Architecture

TSM is overseen by the TSM Governance Team, a sub-committee of MAC's Board of Directors. Within each member company, TSM is supported by internal representatives called Initiative Leaders. Expert committees of MAC members lead the development and refinement of performance indicators and technical guidelines for implementing TSM. Also as part of the TSM initiative, MAC's Board of Directors initiated the Community of Interest Advisory Panel (COI Panel), a multi-stakeholder group whose mandate is to help MAC members and communities of interest improve the industry's performance, to foster dialogue between the industry and its communities of interest, and to help shape TSM goals. The COI Panel meets twice a year, and held its founding meeting in March 2004. The COI Panel terms of reference, a current list of COI Panel members, and meeting agendas and minutes can be found on MAC's website (see **Annex 1**).

2.1 Measurement and Reporting

Every year, MAC members self-assess their performance against a series of specific performance indicators as shown in Table 1.

Table 1: TSM Performance Indicators



Detailed assessment protocols in each of these areas provide guidance to assist companies in their self-assessments and to facilitate the consistency of self-assessments within and across companies. These protocols are available on MAC's website (see **Annex 1**).

For each indicator, MAC members receive one of five scores based on the criteria they met from level C, B, A, AA, AAA for each Canadian operating facility. For crisis management planning, the assessor is required to determine whether the criteria of each indicator are met and to provide a yes/no answer, and to assess each indicator for the company's corporate office, as well as for each of the Canadian operating facilities[1]. The goal of MAC members is to achieve a minimum of Level A, which represents good performance, for all indicators, or 'Yes' in the case of crisis management.

2.2 TSM External Verification System

TSM includes a number of checks and balances to ensure that reported results present an accurate picture of each facility's management systems and performance. Figure 2 identifies the different layers of assurance embedded in TSM.

This report is focused on the final layer: the COI Panel Review. Each year, the COI Panel chooses two or three companies who have undergone external self-assessment for the post-verification review (PVR) at the October COI Panel meeting.

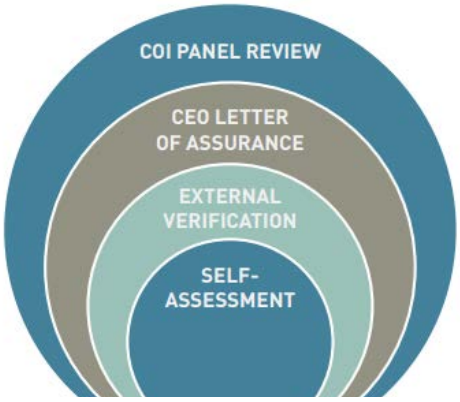


Figure 2: TSM assurance levels

[1] The application of TSM to Canadian operating facilities is mandatory for MA chosen to apply TSM to operating facilities outside of Canada.

More information on the TSM external verification system, including terms of reference for verification service providers, can be found on MAC's website (see **Annex 1**).

3 COI Panel Post-Verification Review Process

Based on guidelines developed by the Panel in 2007 and revised in 2014 with support from the COI Panel PVR Working Group, the purpose of the post-verification review is to have the COI Panel lend public credibility to the TSM results by:

- ✓ Engaging in dialogue with the companies undertaking the PVR to identify best practices and challenges on environmental and social issues faced by mining companies and communities;
- ✓ Driving continued performance improvements by identifying both opportunities and impediments to reaching the highest level of TSM performance;
- ✓ Determining whether the member companies are finding the verification process useful;
- ✓ Bringing cohesiveness in the application of the self-assessment and verification processes; and
- ✓ Improving TSM (including the verification process);

The Panel agreed that the PVR process is not intended to be a "verification of the verification" undertaken by the verification service providers for each company. Rather it should focus on building a strong dialogue with the companies selected to undergo the PVR process to gain a better understanding of the successes and challenges regarding the key environmental and social issues in mining, to challenge the companies on their performance, and whether verification is working as the Panel expected. The PVR process should also allow the Panel to gain understanding in how the TSM indicators translate into real action and build confidence in the verification process.

The scope of the PVR process includes the verification process (design, etc.), the verified results, and lessons learned and changes needed to improve performance identified by the company. The specific protocols of focus for each year's post-verification review are decided by the Panel. A subset of the protocols may be chosen by the Panel for deeper examination in the hope of exploring how companies are taking action to meet the protocol criteria.

At the March 2014 COI Panel meeting, the Panel selected Barrick's Hemlo operation and ArcelorMittal's Mont-Wright and Port-Cartier from the list of companies verifying their 2013 TSM results to undergo the PVR in 2014.

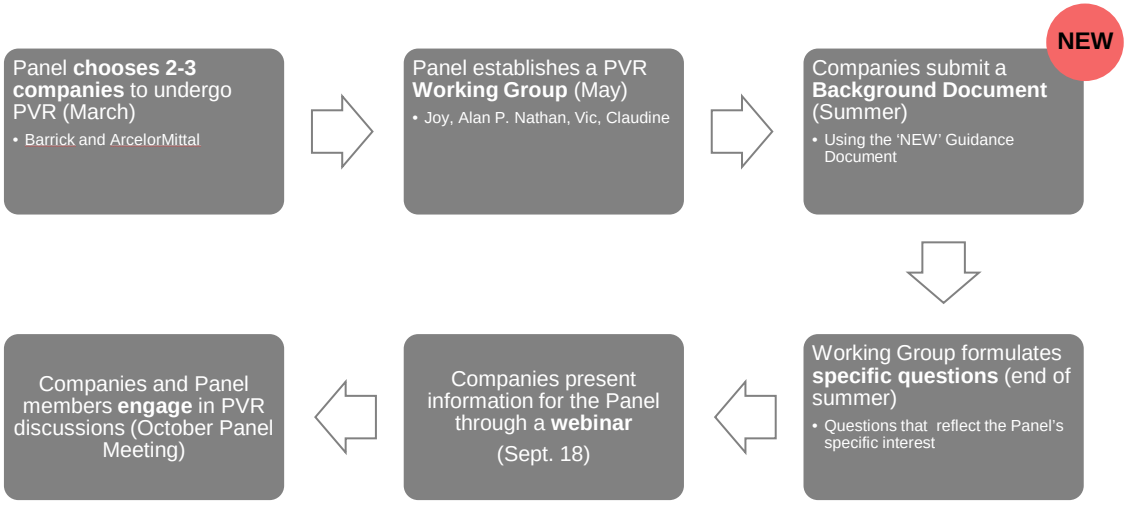


Figure 3: PVR Process 2014

Figure 3 outlines the PVR process. All companies selected for the PVR are asked to prepare a Company Background Document to help the Panel understand the company, the verified results, and any relevant background information prior to the Fall COI Panel Meeting.

Similar to the PVR process in 2013, companies were again asked to present their materials via a webinar two weeks prior to the meeting for the Panel to free up time for dialogue during the face-to-face meeting as well as give the Panel some time to reflect on the material. The content in the webinar largely answered the specific questions the PVR Working Group had regarding both companies' Background Documents.

The PVR Working Group decided on the following outline and themes for the discussions with both Barrick and ArcelorMittal.

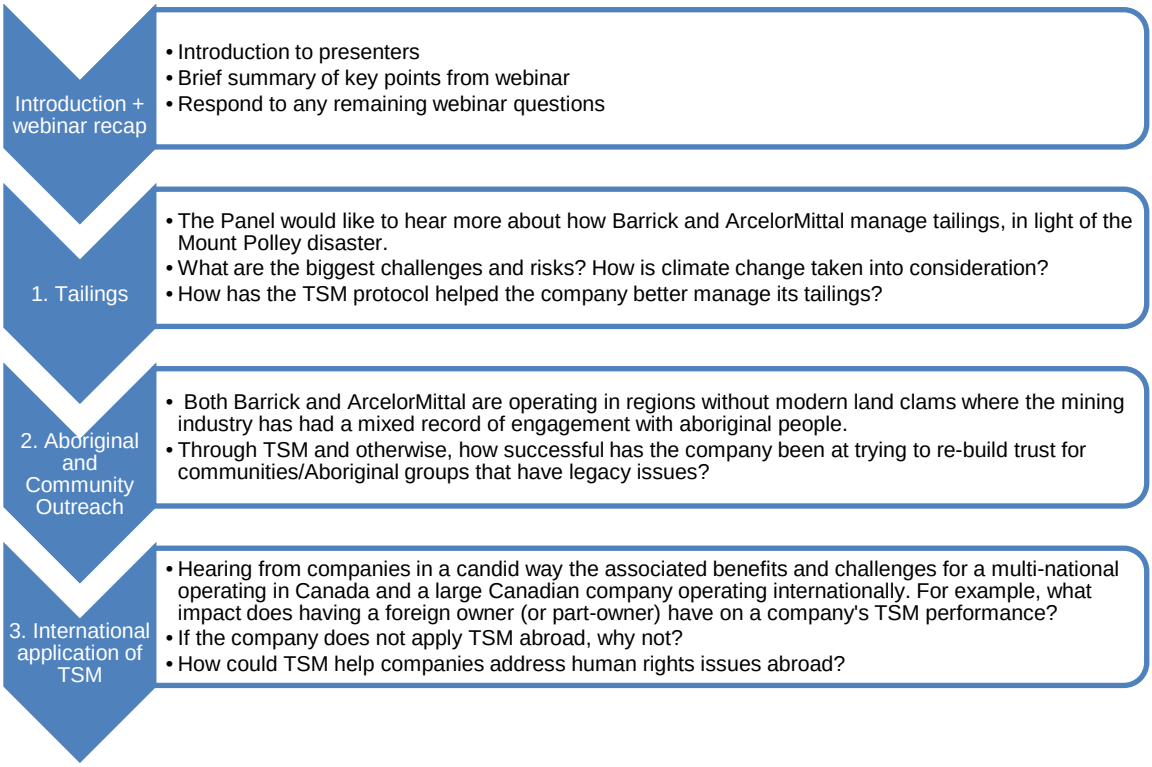


Figure 3: Key themes for the 2014 PVR (face-to-face meetings)

This report summarizes the information provided by the companies in their post-verification reviews and summarizes the Panel discussion on the presented information.

4 Results of the Post-Verification Review: Barrick

About Barrick:

- Barrick is engaged in the safe production of gold, as well as related activities such as exploration and mine development on 5 continents
- Barrick is the world's leading gold producer with a portfolio of 21 owned and operated mines and numerous advanced exploration and development projects.
- In 2013, Barrick produced 7.2 million ounces of gold and 539 million pounds of copper.
- The corporate headquarters is in Toronto, Canada.
- At Barrick, responsible mining refers to the values, management systems, and practices we have in place to manage our impacts on, and interactions with, our employees, the environment, and society.
- Barrick has made responsible mining a core pillar of its strategy, integrating it into its day-to-day work, planning, and decision-making.

About Hemlo:

- Barrick's Hemlo Operation is located approximately 46 kilometres east of Marathon, Ontario, and has produced gold continuously since 1985.
- The operation includes two underground mines, one open pit mine and a shared processing facility. Prior to 2010, the Hemlo operations were a 50/50 joint venture.
- Barrick acquired full ownership of the Hemlo Operation in 2010.
- In recent years, the Hemlo Operation entered a new phase of its productive life with the purchase of adjacent lands, increasing the site's mineable reserves.
- The site's mine life is now extended until 2019 at Williams, with the possibility of additional expansions. The David Bell underground mine ceased production in 2014.
- Before this mine life extension, Hemlo was prepared to begin its closure process in 2010.

See Barrick's Background Document and PVR webinar slides for more information.

Three Barrick representatives were present for the PVR session and answered applicable questions as they arose. The Barrick team included: Bill Ferdinand (Director of Environment, Barrick North America, Salt Lake City); Jeremy Dart (Environmental Superintendent, Barrick Hemlo, Marathon Ontario), and Deb Bouchie (Employee Relations Superintendent, Barrick Hemlo, Marathon Ontario).

4.1 Tailings management

Jeremy Dart presented information on the Hemlo tailings facility. The presentation is included under separate cover, however, key points regarding Hemlo's tailings include:

- Hemlo has 8 perimeter dams that make up the tailings facility
- Pond is 330 hectares in area and can contain 80,000,000 tonnes of tailings
- Site has an extensive water balance that monitors tailings deposition and water deposition to ensure the company is operating within the design limits of the facility
- A Tailings Operations, Maintenance and Surveillance manual outlines the overall management of the Tailings Management Facility

Figure 4: Hemlo tailings facility

Figure 5: Hemlo mine site

4.1.1 Questions and commentary from the Panel

Panel members had the following comments and questions regarding Barrick's tailings management:

- *Post-Mount Polley*
  - The Panel was curious to know if the events at Mount Polley had any implications on Hemlo's relationship with the regulators and if it was causing any delays with its expansion project. Jeremy noted that they had a call from their local regulators two to three days after the event to get additional information pertaining to the Hemlo management of the tailings facility.
- *Managing water balance*
  - Managing the water balance is a challenge at Hemlo as the mine has experienced excess precipitation over the last three year period which has led to a buildup of water in the tailings impoundment and they are limited by the effluent discharge season. Jeremy noted that the

Ministry of Environment regulators' primary charge is more with water quality and water balance than with tailings dam stability, which is governed by the Ministry of Natural Resources, which can be a challenge as one impacts the other. This concerned one MAC representative, who wondered if the water quality versus tailings dam stability issue might be a national trend that warranted further discussion.

- *Relationship with the regulators*
    - Jeremy explained that the regulators are generally stretched with limited capacity. He stressed the importance of having open dialogue and good professional relationships with the regulators – especially when things need to move fast for the safety of the environment. For instance, Hemlo is currently working with the Ministry of Environment to fast track a temporary water treatment plant to help manage the facility's water balance.
    - One Panel member agreed that the capacity of the regulators is an ongoing challenge and suggested that more resources are needed to reduce the dependence on regulators and noted that consultants who work with mining companies may have an important role to play.
- *Climate change*
    - The Panel was concerned about the implications of extreme and unpredictable weather events on tailings, especially considering that Hemlo has experienced excess precipitation over the last three years. A few Panel members were interested in understanding how Barrick incorporated climate risk into the design and management of tailings.
    - Barrick, as well as another MAC member noted that impacts from climate change are hard to predict, however, unpredictable events such as earthquakes and increased PMP must be considered in tailings facility design and operation.
    - Asked whether the company felt that they had adequate access to weather data, Barrick responded that they constantly measure and recalibrate their system on the most up to date precipitation information.
- *Assigned responsibility and management for tailings:*
    - One Panel member wanted to know more about how tailings were managed, including who had responsibility for tailings at Hemlo and if they were supported by senior management. Jeremy responded that Barrick has a corporate tailings management standard that provides minimum standards for all sites, as well as a Tailings Operations, Maintenance and Surveillance manual which outlines the overall management of the Tailings Management Facility. Roles and responsibilities are assigned at the site level. However, ultimate responsibility to ensure performance and compliance rests with the CEO/COO. Hemlo's inspection program consists of daily, monthly and annual inspection conducted by site personnel and reviews by the facility's Engineer of Record. In addition to these reviews, Barrick has an independent third-party review of the tailing impoundment every 5 years to independently assure it is indeed operating safely and performing as designed.
- *Liability of tailings management*
    - Should an accident occur, one Panel member wanted to know who was liable for damages as well as what type of assurance was available for mine closure. Barrick responded that companies have environmental security in place for closure, but are not bonded to 'what if' scenarios.
- *Transparency around crisis management*
    - One Panel member explained the challenges he faced when he once tried to access information on companies' crisis management plans, noting that communities close to mines have an interest in knowing how well companies are prepared for events such as a tailings dam failure. Barrick explained that they have site level spill contingency plans that are shared with the regulators and local fire departments, but local COI are generally not consulted. Information shared with the provincial government should be accessible to the public.

4.2 Aboriginal and community outreach

Deb Bouchie presented information on Hemlo's aboriginal and community outreach approach. The presentation is included under separate cover, however, key points include:

- Pic River and Pic Mobert First Nations are the two closest Aboriginal communities to the mine. Both First Nations have land claims before the courts.
- Prior to the 2004 Supreme Court of Canada decisions regarding *Haida Nation* v. *British Columbia (Minister of Forests)*, 2004 SCC 73 and *Taku River Tlingit First Nation* v. *British Columbia (Project Assessment Director)*, there was minimal dialogue/interaction with First Nations and industry regarding mining activity. In the mid to late 2000s, both First Nations developed Lands & Resource sections/departments within their First Nation administration with the mandate to engage all industry, including mining with the First Nations.
- In 2008 and 2009, Barrick signed agreements with both First Nations that outlined proactive relationships concerning mining activities, as well as extending the relationship beyond the labour agreements.

4.2.1 Questions and commentary from the Panel

- *Aboriginal training and employment*
  - One Panel member wondered what would be an appropriate target for Aboriginal employment and if there was a specific number of Aboriginal hires the company was seeking. Barrick responded that having a specific target for Aboriginal employees would not be appropriate as they would be in competition with their suppliers for talent and Barrick promotes Aboriginal employment for their contractors as well.
- *Métis involvement*
  - One Panel member noted that the term Aboriginal encompasses Inuit, First Nations and Métis, adding that Métis are often left out of conversations and agreements. Deb responded that Barrick is currently working on a memoranda of understanding with the Métis Nation of Ontario but in general, they work with those communities affected by the mine, which generally means those in close proximity to the mine.
- *Building relationships with Aboriginal groups at existing sites*
  - One MAC member reflected on how the relationship with First Nations at Hemlo has changed over the last ten years. He explained how interactions with First Nations was basic back then, and with the growing recognition that things had to change, it seems that things have progressed. He noted that it is often a struggle for companies to start a relationship, particularly when a site has been in existence for decades without relationships with Aboriginal groups. Barrick agreed and noted how important it is for the company to be present and visible in the community.
- *Negotiations with First Nations*
  - One Panel member was curious to know what the bargaining power of First Nations was for negotiating agreements. Barrick responded that the biggest issue is social license – if they do not have the support of First Nations, operations could face delays and other risks.
- *Gender and Aboriginal relations*
  - How are Aboriginal women engaged? What are the gender considerations for engaging with Aboriginal communities? Barrick responded that there is a very strong female presence in decision making, noting that several women are Chiefs. In terms of how many Aboriginal women work at the mine, Deb noted that she did not know the exact number on the spot, but definitely more males have been hired.
  - In discussing women in the workplace, the issue of harassment came up. Barrick quickly noted that if an issue ever arose, they would address it immediately. All employees need to follow Barrick's Code of Conduct. There is also a toll free number available to all Barrick employees should they want to report an issue or discuss a situation while remaining anonymous.
- *Aboriginal relations with First Nations who have land claims versus those without land claims*

  - As noted in the PVR themes above, Barrick's Hemlo operations are located in an area with-modern land clams where the mining industry has had a mixed record of engagement with aboriginal people. There are land claims before the courts with both First Nations. Relationships are about building trust and creating win-win situations. Currently, the agreements signed by the First Nations near Hemlo benefit the community and people are able to stay in their communities longer.
- *Preparing for mine closure*
  - One Panel member brought up the concept of 'Creating Shared Value' (CSV) and asked how Barrick was focusing on helping affected communities build capacity to ensure diverse economic development beyond the lifetime of the mine. From a corporate responsibility perspective, he noted that companies should reflect on the long term value of the company and think about how they want to be branded for doing the right thing.
  - Barrick completed a socio-economic study in 2012 to identify benefits and impacts of mining activities in its local area. To prepare for the closure of David Bell Mine, Hemlo worked on a social closure plan, with the help of a socio-economic committee which included a First Nations representative, ongoing dialogue with COI and the local union. Hemlo is now developing a second socio-economic study for Williams Mine.
  - Barrick also noted that they are working closely with the local government to ensure that they are prepared for closure from a financial and tax perspective. They noted that they are phasing the taxation decline over time.

4.3 International Application of TSM

Bill Ferdinand presented information on the international application of TSM. The presentation is included under separate cover, however, key points include:

- Barrick reports to a number of international organizations that require disclosure of material issues
- Barrick also has a number of internal management systems and programs as well as corporate policies

4.3.1 Questions and commentary from the Panel

- *TSM and the reporting burden:*
  - Between ICMM, the United Nations Global Compact, International Cyanide Management Code (ICMI), and the Carbon Disclosure Project to name a few, Barrick noted that they are facing increased disclosure requests that lead to duplicative requirements, weeks of audits, and a loss of value. This year, Barrick's Responsibility Report was over a 140 pages.
  - Shirley, the Chair of the Initiative Leaders added that MAC is aware of the reporting burden and discusses the overlap of initiatives constantly.
  - One of the benefits of TSM is facility-level disclosure. Barrick noted that several other initiatives also report at the facility level, such as the International Cyanide Management Code (ICMI).
- *Value of the Crisis Management TSM protocol:*
  - Barrick sees value in the Crisis Management TSM protocol, adding that it has made Hemlo a better operation. He noted that the crisis management plan utilized by Barrick for its operations in North America is the only TSM protocol issue that is not specifically covered by Barrick's internal management standards and added that this issue is also not covered by most of the other international initiatives. One Panel member wondered if Barrick would find value in applying the TSM Crisis Management Protocol across all of its operations.
- *Applying TSM internationally:*
  - One of the MAC representatives noted that some of TSM is lost when applied abroad as part of the value is the national context and having nationally engaged COI involved such as the COI Panel.
- *International reputation - operating in good faith*
  - A few Panel members expressed the importance of ensuring Canadian mining companies operate responsibly abroad. They wondered if TSM had a role to play for Barrick in helping

build trust with local communities of interest. TSM, could offer a level of assurance to local communities at a facilities level that these issues are being managed. Barrick responded that the company has standards for all of the TSM protocols aside from crisis management.

- *Other sites in Canada*
  - One Panel member was curious as to what was happening at Barrick's other sites in Canada that are closed, especially noting the earlier discussion on the need for crisis management. This was a reflection on an earlier point from Barrick's webinar presentation that it did have the resources to apply TSM to sites in the closure phase. Barrick responded that most of these sites are unmanned, fully reclaimed and closed, waiting for the government to approve the closure. Barrick noted that all sites including the closure sites are included in its crisis management plan. In terms of the other five protocols, Bill noted that no people work at these sites as many have been closed for over 25 years.
  - The Panel member commented that closed sites still pose a risk for downstream communities. Extending TSM to closed sites might be another area where MAC could raise the bar.

4.4 Barrick (Hemlo) TSM assessment results

Barrick Hemlo's TSM results are summarized below:

Crisis Management Planning Assessment

	Crisis Management Preparedness	Review	Training
Corporate	Y	Y	Y
Hemlo	Y	Y	Y

Energy Use and GHG Emissions Management Assessment

	Energy use and GHG emissions management systems	Energy use and GHG emission reporting systems	Energy and GHG emissions performance targets
Hemlo	A	A	A

Safety and Health Reporting Assessment

	Policy Commitment and Accountability	Planning, Implementation and Operation	Training, Behavior and Culture	Monitoring and Reporting	Performance
Hemlo	B	A	AAA	AA	AA

Tailings Management Reporting Assessment

	Tailings management policy and commitment	Tailings management system	Assigned accountability and responsibility for tailings management	Annual tailings management review	Operation, maintenance and surveillance (OMS) manual
Hemlo	A	A	C	A	A

Biodiversity Conservation Management Assessment

	Corporate biodiversity conservation policy, accountability and communications	Facility-level biodiversity conservation planning and implementation	Biodiversity conservation reporting
Hemlo	C	C	C

Aboriginal and Community Outreach Assessment

	Community of interest (COI) identification	Effective COI engagement and dialogue	COI response mechanism	Reporting
Hemlo	AA	A	AA	A

5 **Results of the Post-Verification Review: ArcelorMittal** (Mont-Wright and Port-Cartier)

About ArcelorMittal:

- ArcelorMittal is the world's leading steel and mining company.
- Guided by a philosophy to produce safe, sustainable steel, it is the leading supplier of quality steel products in all major markets including automotive, construction, household appliances and packaging.
- ArcelorMittal is present in more than 60 countries and has an industrial footprint in over 20 countries

About Mont-Wright and Port-Cartier

- In 1975, the Mont-Wright mine was opened and the Town of Fermont was established.
- The Mont-Wright mining site is located 420 km north of Port-Cartier, in the Labrador Trough, 20 km from Fermont and about 60 km from Labrador City, NFL.
- The Mont-Wright open-pit mine covers an area of 26 square kilometres
- Mine life: estimated up to 2045
- Number of employees: 1500 permanent employees, including 400 permanent non-residents (PNR); and 100 seasonal employees.
- In 2007, ArcelorMittal became the owner of QCMC, which then took the name ArcelorMittal Mines Canada (AMMC). The decision-making centres are based in London (UK) and Luxembourg.
- In May 2011, ArcelorMittal's Mont-Wright iron ore mine announced the implementation of an expansion plan of over $2.1 billion to double capacity. It is the largest project under Plan Nord.
- In February 2012, an agreement on the impacts and benefits for the territory was signed with the Uashaunnuats and the Innu Band of Uashat Mak Mani-Utenam.
- In 2013, a consortium including Posco acquired a 15% stake in ArcelorMittal Mines Canada.
- Later that year, the division and name changed to: ArcelorMittal Mining Canada G.P. and ArcelorMittal Infrastructure Canada G.P.

See ArcelorMittal's Background Document and PVR webinar slides for more information.

Three ArcelorMittal representatives were present for the PVR session and answered applicable questions as they arose. The ArcelorMittal team included: Pierre Lavoie (Chief Sustainability and Integration System Port-Cartier, Quebec); Pierre-André Gignac (Director of Environment and Sustainable Development Montréal, Quebec), and Paul Bird (General Manager, Health, Safety and Environment, Montréal, Quebec).

5.1 Tailings management

Pierre-André Gignac showed the Panel a video of Mont-Wright's tailings facilities. With the expansion project, the tailings will cover approximately 20 square kilometres. The presentation is included under separate cover, however, key points regarding Mont-Wright's tailings include:

- Tailings are mainly quartz as "coarse" and "fine" particles
- About 2 tonnes of tailings are developed per tonne of iron concentrate
- Annually, 44 megatonnes of tailings are pumped as a pulp, 55 % solid and 45% water. (The solids decant from the water and remains in the tailing impoundment; water drains from the solids and is collected in basins – 90% of the water is used in closed circuit)

- The overall infrastructure for water management includes: dams, dykes, decantation areas, canals, ditches, sedimentation basins, water treatment plant, and a water sampling station.
- Several challenges exist for the overall water management. This includes: the fact that the Mont-Wright tailings facility is large (mine = 26 km^2; tailing pond = 16 km^2 extending to 20 km^2 at max footprint; it is surrounded by lakes and rivers; there are 40 kilometres of roads; water from tailings freezes in winter (5-6 months) and melts in spring (1 month); and the water balance has to be maintained as more than 90% is reused in the process.

5.1.1 Questions and commentary from the Panel

- *Tailings reclamation*
  - One MAC member wanted to know if ArcelorMittal was able to reclaim tailings throughout operations, noting that IOC was able to use the tailings in the surrounding landscape (i.e. to make hills, wetlands, etc.). Mont-Wright has only used the tailings to make the dykes.
- *Improving TSM tailings management scores*
  - For Mont-Wright to improve its scores from an A to an AA or AAA, it would need to complete both internal and external audits. The facility has lagged on this piece due the expansion project, however, the intent is for the external audit to be complete by next year. Mont-Wright recently completed an external geotechnical audit. The difference, however, between the geotechnical audit and the TSM audit is that the geotechnical audit is mandated by the regulator and focused on assessing the construction of the dam and how it operates, whereas the TSM audits are focused on ensuring that the responsibility, budget authority and accountability for the tailings management system are in conformance with the tailings management framework in MAC's Guide to the Management of Tailings Facilities.
- *Safeguards in place to de-risk tailings*
  - Mont-Wright has split management responsibility between the tailings operations and production to ensure that production targets do not drive tailings management decisions.
  - Other safeguards include ongoing monitoring on a weekly and monthly basis, weekly surveyors and helicopter tours.
  - Mont-Wright also conducted a peer review for the design of the dam.
- *Factoring in climate risk*
  - Mont-Wright did not factor in climate change, such as extreme events, into the design of the tailings facility. It was designed with more frequent water precipitation, however, the main issue is that it needs to manage the water balance through the management of the basin and water treatment efficiency.
- *Effluent discharge and impact on Moisie River*
  - The watercourses collecting the effluents of the Mont-Wright site are part of the tributaries of the Moisie River, known worldwide for the quality of its salmon fishing, while the watercourses of the Fire Lake site flow toward the Manicouagan watershed.
  - One Panel member wondered how Mont-Wright identified that salmon was a significant issue and whether the issue was brought to the company by its COI. Paul noted that it became a major issue in the 1970s when Jimmy Carter, former President of the United States, could no longer fish in his favourite spot due to a spill at the mine (at a time when there was no water treatment).
  - Now, there is a pH level 7 at the final effluent point. Suspended solids is the parameter of concern. There is no sulfur in the ore so there is no acid drainage.

5.2 Aboriginal and Community Outreach

The Panel conversation shifted to the subject of Aboriginal and community outreach. Pierre-André Gignac shared some information throughout the ongoing dialogue with the Panel. Key points include:

- The Town of Fermont was built in 1974 to accommodate mine workers for Mont-Wright. Its original design is characterized by its famous "Wall", which accommodates various community services (school, gym, arena, CLSC, municipal services, stores, dwellings, etc.) and protects the housing from the prevailing winds. The total population is around 3000 inhabitants. The growth of the mine's activities also led to the arrival of 400 "permanent non-resident" workers, who are housed in a residential complex developed in town for this purpose. The startup of the Cliffs mining activities at Bloom Lake contributed to the town's growth. The vast majority of the available labour works for the company or for community services.
- With the expansion of Mont-Wright, 1800 temporary new rooms were constructed to host the workers as the occupancy rate in the town was over 100 per cent.
- The setting-up of “Fly-in, Fly-out” for Bloom Lake workers and for 400 of the 1500 of Mont-Wright workers has created a new dynamic in “Fermont’s way of life” and a real pressure on public services.
- There are no Aboriginal people close to Fermont.
- In February 2012, an Impact Benefit Agreement (IBA) was signed with the Uashaunnuats and the Innu Band of Uashat Mak Mani-Utenam. The IBA has led to more a tangible relationship with more dialogue for the Aboriginal communities near Port-Cartier.

Figure 6: Town of Fermont and the Mont-Wright mine pit

5.2.1 Questions and commentary from the Panel

- *Impact and discussions post-Mount Polley*
  - Shortly after the tailings breach, the communities near Mont-Wright wanted to know more about ArcelorMittal’s tailings. Mont-Wright has a very open and transparent relationship with their communities and shared all relevant information on their tailings.
- *Business development opportunities with the Innu First Nations*
  - Panel members were curious about Port-Cartier’s relationship with the nearby Innu First Nations, asking questions related to business development and employment opportunities.
  - ArcelorMittal representatives explained how the Innu are not as active with mining as they generally focus on the construction industry. There is a section in the IBA for employing Innu but it has been a challenge. Language is a major issue as many Innu have limited French skills – and Mont-Wright and Port-Cartier are both primarily francophone organizations where French is a pre-requisite for employment.
  - ArcelorMittal representatives explained how they generally have a good relationship with the Innu, especially in comparison to the other nearby mining companies. ArcelorMittal is often told that they are the company of choice because of their commitment to openness and transparency.

- *Challenges with Fermont as a fly-in and fly-out community*
    - The Panel engaged in a long conversation on the benefits and challenges of having fly-in/fly-out commuters integrated into a company town like Fermont. The discussion was ignited when one Panel member wondered if the workers at Fermont were unionized. An ArcelorMittal representative noted that they were unionized. The current collective agreement runs until 2017. He noted that the issue in Fermont is generally not about unionization, but trying to balance the needs and interests between those who stay and live in the community and those who fly-in and fly-out every few weeks. He added that the company will focus on bringing in more residential employees versus fly-in/fly-out employees because having both puts a major strain on the community. Nevertheless, Mont-Wright receives over 2000 applicants every six months, and the majority of applicants want to live in larger cities such as Montreal or Quebec City and would like to have the fly-in/fly-out option.
    - There are social pressures with having children in the company town. Oftentimes, the town is so tightknit that what might happen between workers at the mine can be discussed between children in the schoolyard. In addition, once a child reaches sixteen, he or she needs to leave the town to attend CEGEP.
- *Employment diversity at Mont-Wright*
    - One Panel member wondered if the workforce at Mont-Wright was heavily dominated by men, and if so, what kind of policies or incentives were in place for more inclusion of women in the workforce. ArcelorMittal representatives noted that that there are women who work at Mont-Wright, as the mine generally hires local people from Fermont and there are several couples and families within the town.
    - Another Panel member wondered if there would be less need for fly-in/fly-out employees if Mont-Wright tapped into the Aboriginal and women populations. The site is constantly trying to hire both women and Aboriginal peoples, however, there is an ongoing language barrier with Aboriginal employees and lack of formal training. As well, there is no aboriginal people in the area so they would be on a fly-in/fly-out mode.
- *Crisis management*
    - While ArcelorMittal noted in their Background Document that they were aware that there was room for improvement on crisis management, the Panel was concerned with their low scores. Even though the representatives from Mont-Wright noted that a breach like Mount Polley would not be possible based on the design of the tailings facility, one Panel member cautioned that it was not just the actual risk of a tailings breach that matters, it is also the perceived and social risks to the community and broader society that matters.
- *Closure*
    - Mont-Wright has a mine life expectancy until 2045, and the company has not heavily focused on the subject of closure at this point. However, everyone is aware that mine closure will have a major impact on the town of Fermont. The company owns the majority of the houses, as well as the wall which houses many of the commercial services.
    - Generally, people move out of the town once they stop working at Mont-Wright. There are few seniors living in Fermont. The town does not even have a cemetery.

5.3 International Application of TSM

The ArcelorMittal team noted that TSM is not a key decision-making element at the corporate level of ArcelorMittal. More recently, the company is gaining interest in TSM and is considering applying TSM in its worldwide mining facilities.

5.3.1 Questions and commentary from the Panel

- *The value of applying TSM to ArcelorMittal's global operations*
    - The ArcelorMittal representatives explained how Mont-Wright and Port-Cartier are seen as among the best performers within ArcelorMittal and agreed with the Panel that TSM would add value if applied across ArcelorMittal's global operations. They added that the Canadian

operations need to share their knowledge across the company which will ultimately lead to financial benefits. Paul noted that ArcelorMittal corporate will make a decision soon whether or not they will move forward with applying TSM across the company.
    - One Panel member remarked how TSM plays a role in helping ensure COI that Canadian mining companies are making decisions that do not lead to negative impacts abroad. For instance, TSM could provide some level of assurance against the human rights issues with mining companies that are frequently in the news (including the recent case of human rights and forced evictions with the POSCO-India Project)
    - One MAC member added that TSM helps the industry manage material issues, noting that many mining companies would generally not have thought about managing biodiversity before TSM.
- *Understanding cultural differences*
    - One MAC representative explained the challenges of operating mines abroad, noting that mining companies often want or need to hire locally, however, cultures and values are not always aligned. There has been hostility towards TSM with people assuming that it is a Canadian program and that "we know best". Another MAC member added that it's helpful to frame TSM as a program "designed not by Canadians, but by miners".
- *Measuring the impact and value of TSM:*
    - One Panel member wondered how MAC could measure the positive impact of TSM to help increase the uptake by international operations. Several people agreed that this would be helpful, however, some also cautioned that this type of indicator work is challenging. The Panel facilitator reminded everyone of IAMGOLD's Beyond Zero Harm framework that was presented to the Panel in March 2013. One MAC representative also noted the increased interest in understanding the cost of conflict, referring to a study by Queensland University and the Harvard Kennedy School that demonstrated how conflict translates environmental and social risk into business costs.
    - Case studies on companies with AAA scores were suggested as a practical method to share the good news stories.
- *Managing Ebola at ArcelorMittal's Liberian operations*
    - The PVR session ended on a discussion about how ArcelorMittal's operations in Liberia were managing the Ebola virus outbreak. Paul explained how ArcelorMittal is taking every precaution to protect its employees and operations, including: leading the efforts to fight the epidemic, removing expatriates from their operations, cooperating with government and other aid providers in the region including the US military, and providing thermoflash scanners to test for fever in all employees and visitors to all ArcelorMittal Liberia locations.

5.4 ArcelorMittal (Mont-Wright and Port-Cartier) TSM assessment results

ArcelorMittal's TSM assessment results are summarized below:

PERFORMANCE INDICATORS	2011			2012			2013			Stantec		
	M.W.	P.C.	Corpo	M.W.	P.C.	Corpo	M.W.	P.C.	Corpo	M.W.	P.C.	Corpo
	SAFETY AND HEALTH											
Policy, Commitment and Accountability	A	A		A	A		A	A		A	A	
Planning, Implementation and Operation	A	A		A	A		A	A		A	A	
Training, Behaviour and Culture	B	B		A	A		AAA	AAA		AAA	AAA	
Monitoring and Reporting	A	A		A	A		A	A		A	A	
Performance	A	A		A	A		AAA	AAA		AAA	AAA	
	ABORIGINAL AND COMMUNITY OUTREACH											
Community of Interest (COI) Identification	A	A		A	A		B	B		B	B	
Effective COI Engagement and Dialogue	A	A		A	A		A	A		B	B	
COI Response Mecanism	A	A		A	A		B	B		A	A	
Reporting	A	A		A	A		B	B		B	B	
	ENERGY USE AND GREENHOUSE GAS EMISSIONS											
Management System	B	B		A	A		A	A		A	A	
Reporting System	A	A		A	A		A	A		A	A	
Energy and Greenhouse Gas Emissions Performance Targets	B	B		A	A		A	B		A	B	
	TAILINGS MANAGEMENT											
Policy and Commitment	A	A		A	A		A	A		A	A	
Tailings Management System	A	A		A	A		A	A		A	A	
Assigned Accountability and Responsibility	A	A		A	A		A	A		A	A	
Annual Tailings Management Review	A	A		A	A		A	A		A	A	
Operation, Maintenance and Surveillance Manual	B	B		A	A		A	A		A	A	
	BIODIVERSITY CONSERVATION											
Corporate Biodiversity Conservation Commitment, Accountability and Communications	B	B		B	B		B	B		B	B	
Planning and Implementation	B	B		B	B		B	B		B	B	
Reporting	C	C		C	C		C	C		C	C	
	CRISIS MANAGEMENT											
Preparedness	N	N	N	N	N	N	N	N	N	N	N	N
Review	N	N	N	N	N	N	N	N	N	N	N	N
Training	N	N	N	N	N	N	N	N	N	N	N	N

6 Summary of 2014 Post-Verification Review

A number of themes emerged during the post-verification reviews across the three discussion areas of tailings, aboriginal and community outreach and the international application of TSM. A summary from both PVR sessions is included below.

6.1.1 Tailings

The Panel was keen to know how the Mount Polley incident had affected both Barrick and ArcelorMittal. As one presenter noted, "what happens to one, affects us all."

Key themes from the dialogue on tailings include:

- *Relationships with the regulators:* After Mount Polley, regulators checked in on both companies to review their tailings. Good relations and open dialogue between the regulator and the company is important.
- *Managing the water balance in tailings:* Companies are most concerned with managing the water balance of tailings. One PVR presenter noted that, generally speaking, regulators are more concerned with water quality than with tailings dam stability. Is the water quality versus tailings stability issue a national trend that warrants further discussion?
- *Implication of climate change on tailings:* The Panel was concerned about the implications of extreme and unpredictable weather events on tailings and was interested in understanding how both Barrick and ArcelorMittal incorporated climate risk into the design and management of tailings.
- *Transparency of corporate crisis management plans:* The Panel was interested in the public disclosure of crisis management plans. Communities nearby mines want to know how well companies are prepared for events such as a tailings dam failures.
- *Improving performance in the Tailings Management TSM protocol:* To get a level AA for the Tailings Management TSM protocol, companies must have their performance against the protocol externally verified. While one company noted that they have completed geotechnical audits which are mandated by the regulator and externally reviewed, TSM differs as it focuses on the management of tailings.

"What happens to one, affects us all."

PVR presenter, referring to the Mount Polley incident

6.1.2 Aboriginal and Community Outreach

- *Relationships with Aboriginal Peoples:* The Panel was interested in both companies' experience with Aboriginal groups. Building relationships on trust and good dialogue is key. According to one company, whether or not an Aboriginal community holds treaty rights changes little on how they interact – a relationship still needs to be built on trust.
- *Negotiating agreements with communities:* What is the bargaining power of an Aboriginal group? How do negotiations work? One presenter responded that gaining or losing social license is critical.
- *Fly-in/fly-out communities:* How do companies located in remote areas manage fly-in/fly-out communities? The Panel was interested in the practical realities and challenges of Fermont – a mining dependent town that now houses a large population of employees who are fly-in/fly-out.
- *Gender balance:* Considering that mining is a male-dominated field, the Panel was interested in the gender balance within Aboriginal communities and with remote fly-in / fly-out communities, noting that labour shortages may be able to be filled if companies hired more Aboriginal people and women.
- *Preparing for mine closure:* Both Marathon and Fermont are towns that are heavily dependent on the mining industry. The Panel was interested in how the companies and municipalities were preparing for closure, from the social, economic, and environmental perspectives.

6.1.3 International application of TSM

- *Expanding TSM:* Panel members were interested in the application of TSM abroad, noting that it is important for Canada that mining companies operate responsibly abroad.
- *Knowledge sharing with global operations:* One PVR Company representative suggested that implementing TSM would improve overall corporate performance. In this case, the Canadian operation outperforms its international peers and having TSM in place would help raise the bar across the global corporation. Responding to comments suggesting that TSM is too Canadian-focused to be applied internationally, one person noted, "TSM was not just developed by Canadians, it was developed by miners."
- *TSM and the reporting burden:* Between ICMM, the United Nations Global Compact, and the Carbon

"TSM was not just developed by Canadians, it was developed by miners."

Disclosure Project to name a few, companies are facing increased disclosure requests that lead to duplicative requirements, several weeks of audits, and a loss of value.

- *Measuring the impact and value of TSM:* One Panel member wondered how MAC could measure the positive impact of TSM to help increase the uptake by international operations. The Panel facilitator reminded everyone of IAMGOLD's Beyond Zero Harm framework that was presented to the Panel in March 2013. One person also noted the increased interest in understanding the cost of conflict, referring to a study by Queensland University and the Harvard Kennedy School that demonstrated how conflict translates environmental and social risk into business costs.

7 Panel Feedback on the Post-Verification Review Process

Overall, the Panel members enjoyed the PVR process, rating the webinar and two PVR sessions with Barrick and ArcelorMittal between 'Good' and 'Excellent' on the meeting evaluation form. According to a few Panel members, the most valuable part of the October meeting is the dialogue and exchange during the PVR sessions. Many Panel members agree that the webinar held in advance of the meeting is useful for having time to reflect on the material and allowing more time for dialogue during the face-to-face meeting. One Panel member suggested that the Panel further decrease its use of PowerPoint during the meeting to focus on the dialogue. Another Panel member noted that they would have liked to spend more time probing ArcelorMittal on their relationship with the Innu and noted the value of the discussion about mining towns and fly-in/fly-out arrangements – particularly since the issues are relevant in a much broader geographical context.

Annex 1: Web Links

COI Panel Information:
http://mining.ca/towards-sustainable-mining/community-interest-advisory-panel

Detailed Assessment Protocols:
http://mining.ca/towards-sustainable-mining/protocols-frameworks

2014 TSM Progress Report:
http://mining.ca/towards-sustainable-mining/tsm-progress-report-2014

TSM External Verification System Information:
http://mining.ca/towards-sustainable-mining/how-tsm-works/tsm-verification
http://mining.ca/towards-sustainable-mining/verification-service-providers

Annex 2: List of Companies That Verified Their TSM Results

2007 Review (2006 Results)
Albian Sands Energy Inc.
BHP Billiton Diamonds Inc.
Breakwater Resources Ltd.
CVRD Inco Ltd. (excluding Voisey's Bay Nickel)
Diavik Diamond Mines Inc.
HudBay Minerals Inc.
Inmet Mining Corporation
Iron Ore Company of Canada
Suncor Energy Inc.
Syncrude Canada Ltd.
Teck Cominco Limited

2008 Review (2007 Results)
ArcelorMittal Mines Canada
Barrick Gold Corporation (a sample of facilities)
Syncrude Canada Ltd.
Teck Cominco Limited (a sample of facilities)
Xstrata Copper Canada
Xstrata Nickel
Xstrata Zinc Canada

2009 Review (2008 Results)
BHP Billiton Diamonds Inc. – EKATI Diamond Mine
IAMGOLD
Inmet Mining Corporation

2010 Review (2009 Results)
Shell Canada Energy – Shell Albian Sands
Vale
Breakwater Resources Ltd.
HudBay Minerals Inc.
Iron Ore Company of Canada
Suncor Energy Inc.
Teck Resources Limited – Highland Valley Copper

2011 Review (2010 Results)
ArcelorMittal Mines Canada
Barrick Gold Corporation
De Beers Canada Inc.
Diavik Diamond Mines Inc.
Iron Ore Company of Canada
Syncrude Canada Ltd.
Xstrata Copper Canada
Xstrata Nickel
Xstrata Zinc Canada

2012 Review (2011 Results)
BHP - Ekati
Cameco
IAMGOLD
Inmet
Suncor

2013 Review (2012 Results)
Vale
HudBay
Shell
Teck (select facilities)
Nyrstar

2014 Review (2013 Results)
Arcelormittal
Barrick Gold
De Beers
Rio Tinto
Syncrude
Teck Resources (Trail, Greenhills, Cardinal River)
Glencore

Note: *Suncor Energy Inc. and Inmet Mining Corporation participated in a pilot post-verification review process (i.e., a "pre-verification review") in 2006.*

Underlining denotes which companies completed post-verification reviews in each year.