



TOWARDS SUSTAINABLE MINING

The Towards Sustainable Mining (TSM) initiative is the Mining Association of Canada's (MAC) commitment to responsible mining and participation in the program is mandatory for our members. It is a set of tools and indicators to drive performance and ensure that our members are doing the right things for the right reasons at each of their facilities. Adhering to the guiding principles of TSM, mining companies demonstrate leadership by:

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

Today, communities expect more of mining companies and the industry expects much more of itself. TSM helps mining companies meet society's needs for minerals, metals and energy products in the most socially, economically and environmentally responsible way. At its core, TSM is:

ACCOUNTABLE

Assessments are conducted at the facility level where mining activity takes place – the only program in the world to do this in our sector.

TRANSPARENT

Members publicly report their performance against 23 indicators annually in MAC's *TSM Progress Reports* and results are externally verified every 3 years.

CREDIBLE

TSM is overseen by an independent Community of Interest (COI) Advisory Panel, which shapes the program for continual advancement.



MINE-SITE REPORTING – MEASURING WHERE IT COUNTS.



COMMUNITIES AND PEOPLE

TSM measures mining operations' performance in Aboriginal and community outreach, safety and health, and crisis management planning. Through TSM, mining operations can more effectively engage with people in surrounding communities, as well as ensure they have a voice in company decision-making and are well-informed of relevant issues. TSM also helps to ensure the safest possible working environment for employees and contractors at the mine site.



ENVIRONMENTAL STEWARDSHIP

Through TSM, mining operations have access to best practices in tailings management and biodiversity conservation management and are evaluated on their performance in these areas. TSM helps to ensure that mining operations manage their tailings facilities responsibly to protect human safety and the environment. Mining facilities must also adopt management systems and set targets to limit impacts to local biodiversity and are encouraged to collaborate with local conservation groups to improve outcomes.



ENERGY EFFICIENCY

Improving energy efficiency and reducing greenhouse gas (GHG) emissions are priorities for the mining industry, and TSM measures a facility's ability to track and report energy data, as well as establish and meet targets. Through comprehensive management systems, TSM helps mining operations reduce emissions that contribute to climate change, while helping to reduce operational costs.

REPORTING

Mining operations annually self-assess their performance against each of the TSM program's 23 indicators under the 6 protocols. For each indicator, they assign a letter grade that reflects their performance ranging from Level C to Level AAA. These grades are made public in MAC's annual *TSM Progress Reports* for each facility. Level A equates to good practice while AA and AAA are excellence and leadership.

One of the key strengths of TSM is that mining companies are measured where the mining activity actually takes place – at the facility level. The results provide local communities with a meaningful view of how a nearby mine is faring.

“IT IS CLEAR THAT MAC'S EFFORTS TO WORK WITH THE INDUSTRY IN ADVANCING ITS SUSTAINABILITY PERFORMANCE AND ACCOUNTABILITY ARE PAYING OFF IN SIGNIFICANT BEST PRACTICE.”

– Five Winds International (2008)

AAA Excellence and leadership.

AA Integration into management decisions and business functions.

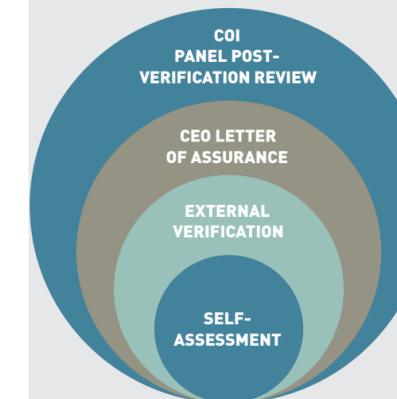
A Systems/processes are developed and implemented.

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

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

LAYERS OF VERIFICATION

TSM requires a number of checks and balances to ensure that reported results are accurate. Every 3 years, an external verifier reviews a company's self-assessments to determine if there is adequate evidence to support the reported ratings. The company's CEO (or equivalent) submits a Letter of Assurance confirming that the verification followed TSM's requirements. Each year, a sample of companies is selected by the COI Advisory Panel to present their verified results, providing another opportunity to validate their performance. Letters of Assurance and the COI Advisory Panel's post-verification review reports are publicly available on www.mining.ca.



COI ADVISORY PANEL CORE CATEGORIES

- Aboriginal
- Environmental Non-Governmental Organization (NGO)
- Economic and community development
- Social NGO, including faith-based groups
- Finance and investment
- International development
- Labour and workplace
- Media and communications

“FROM AN INVESTOR'S PERSPECTIVE, TSM HAS GREAT VALUE AS A VERY TRANSPARENT RISK MANAGEMENT INDICATOR ENCAPSULATING BEST MINING PRACTICES.”

– Stephen Kibsey, COI Advisory Panel Member, and Vice President, Risk Management, La Caisse de dépôt et placement du Québec (2013)

TEN YEARS OF TSM

Established in 2004, MAC's award-winning TSM initiative is now celebrating 10 years of driving performance at mining operations across Canada and beyond.

Over the years, TSM has reached many important milestones and has been recognized by reputable organizations with awards and accolades for driving better social and environmental performance in the Canadian mining sector. TSM has been recognized with awards by the Globe Foundation (2005), the Prospectors & Developers Association of Canada (2012) and the Excellence in Corporate Responsibility Awards (2013).

TSM has been successful in pushing for continuous progress in the mining sector. The proof is in the results, which have seen steady improvement over the duration of TSM. For a detailed look at our members' results, visit www.mining.ca.

MEASURING, VERIFYING AND REPORTING PERFORMANCE WHERE IT COUNTS – AT THE MINE-SITE.



**FOR MORE INFORMATION
WWW.MINING.CA**

TSM MEASURES 23 INDICATORS UNDER 6 PROTOCOLS

Aboriginal & Community Outreach	Crisis Management Planning	Safety & Health	Tailings Management	Biodiversity Conservation Management	Energy Use & GHG Emissions Management
COI identification	Crisis management preparedness	Policy, commitment & accountability	Tailings management policy & commitment	Corporate biodiversity conservation commitment, accountability & communications	Energy use & GHG emissions management systems
Effective COI engagement & dialogue	Review	Planning, implementation & operation	Tailings management system	Facility-level biodiversity conservation planning & implementation	Energy use & GHG emissions reporting systems
COI response mechanism	Training	Training, behaviour & culture	Assigned accountability & responsibility for tailings management	Biodiversity conservation reporting	Energy & GHG emissions performance targets
Reporting		Monitoring & reporting	Annual tailings management review		
		Performance	Operation, maintenance and surveillance manual		