Understanding TSM

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ABOUT MAC

The national voice of the mining industry in Canada:

- Advocacy - to advance the business of mining

- TSM Initiative – stewardship and social license

- 38 members in iron ore, gold, diamonds, oil sands, met-coal, base metals, uranium

- 50+ members in engineering, environment, finance

- Members engaged in exploration, mining, smelting, semi-fabrication, supply
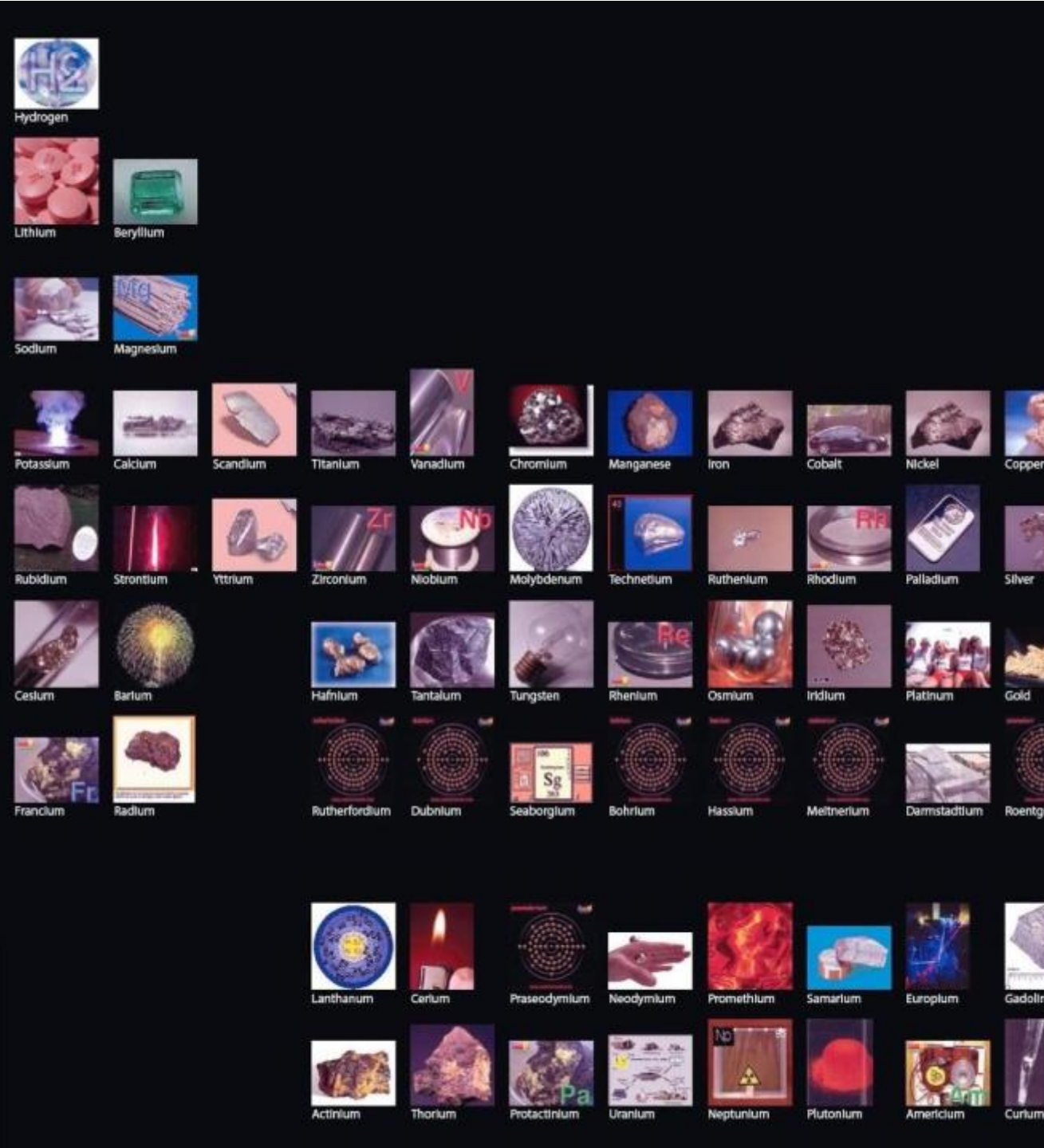
Towards Sustainable Mining Our Commitment

TSM is MAC's commitment to responsible mining that every member commits to implement. It includes a set of tools and indicators to drive performance and ensure that key mining risks are managed responsibly at our facilities. By adhering to the principles of TSM, our members demonstrate leadership through:

- **Engaging with and supporting local communities**

- **Driving world-leading environmental practices**

- **Committing the resources and leadership to promote the safety and health of employees**

Towards Sustainable Mining: Our Commitment

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

- **Accountability** – Mandatory for all members to report at the facility level

- **Transparency** – Annual reporting against 23 indicators with independent verification

- **Credibility** – Includes ongoing consultation with a national Community of Interest Advisory panel to improve industry performance and shape TSM for continual advancement

28	58.7
Ni	
Nickel	

6	12.0
C	
Carbon	

42	95.9
Mo	
Molybdenum	

Before it's yours, it's mined.
Canadian mining provides the minerals that make green energy possible for our future.
mining.ca

CANADIAN MINING
What will we find next?

COI Advisory Panel

- Aboriginal peoples
- Environmental NGO
- Economic/community development
- Social NGO including faith based groups
- Finance/investment
- International development
- Labour/workplace
- Media/communications
- MAC Board of Directors
- Junior Mining Company Representative

- Meets twice per year
- Work of Panel publicly available on the MAC website
- Annual COI Panel Statement published in TSM Progress Report

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Components of TSM: Focus Areas and Protocols

Environmental Stewardship	Communities & People	Energy Efficiency

Tailings Management	Aboriginal & Community Outreach	Energy Use & Greenhouse Gas Emissions Management
Biodiversity Conservation Management	Safety & Heath Management	
	Crisis Management	

Community of Interest Advisory Panel

TSM Protocols and Indicators

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

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TSM Rating System

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

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Aboriginal and Community Outreach Protocol

Four indicators:

1. **COI identification:** To confirm that efforts have been made to identify COI, including Aboriginal communities and organizations, affected or perceived to be affected by their operations or who have a genuine interest in the performance and activities of a company and/or operation.

2. **Effective COI engagement and dialogue:** To confirm that processes have been established to communicate with COI, including Aboriginal communities and organizations, to understand their viewpoint, to transparently inform them of company activities and performance, to actively engage them in dialogue and participation on issues of concern to them, and to identify how issues might be addressed through measures such as mitigation, compensation, or other actions.

3. **COI response mechanism:** To confirm that there are processes to receive complaints and concerns from COI, including Aboriginal communities and organizations, to ensure that they are understood and effectively responded to.

4. **Reporting:** To confirm that reporting on COI engagement and dialogue activities (including activities with Aboriginal communities and organizations) is open and transparent.

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TSM Verification System
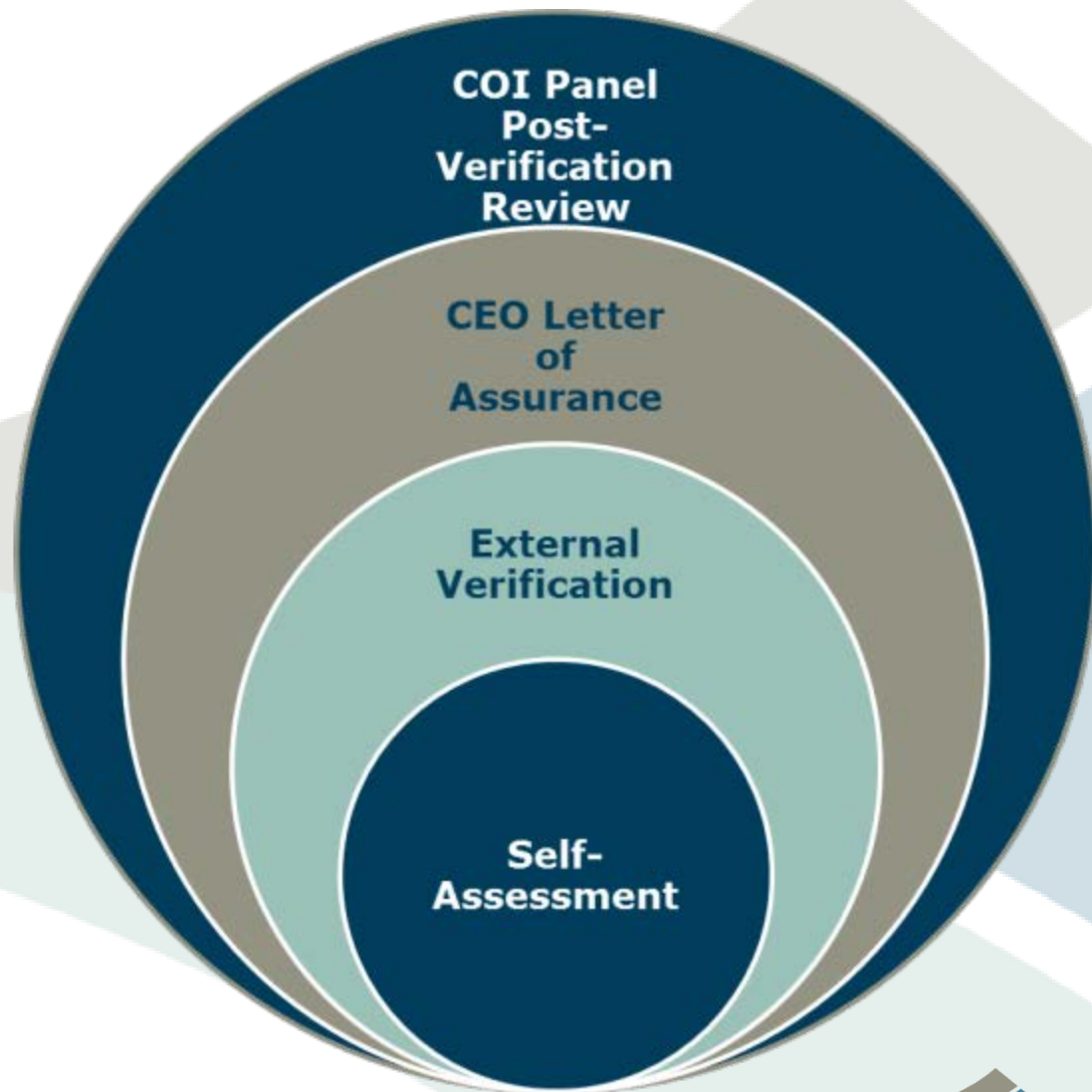
Self-assessment
- annual

External verification
- every three years

CEO letter of assurance
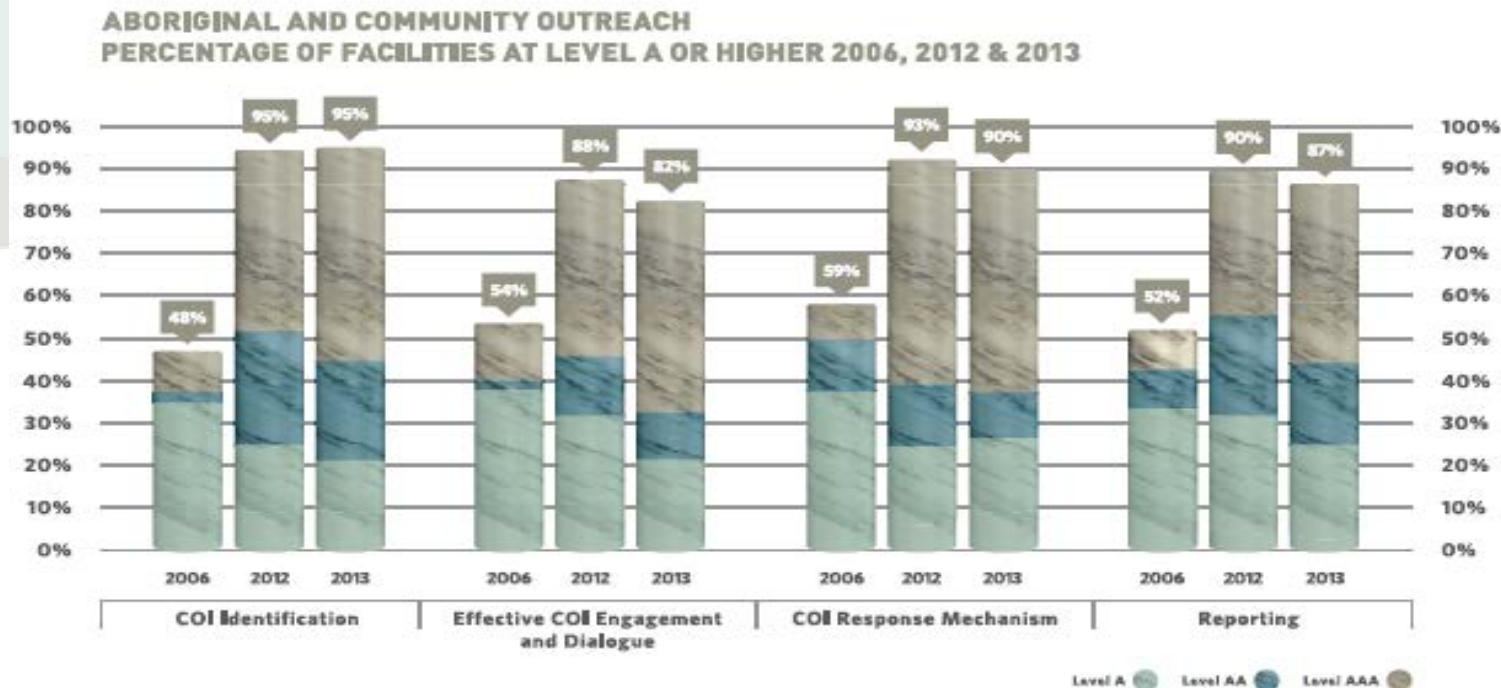- posted on MAC website in year of external verification

COI Panel Review
- 2-3 companies each year

COI Panel Post-Verification Review

CEO Letter of Assurance

External Verification

Self-Assessment

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Public Reporting

- Publication of results
  - company specific
  - aggregated for the membership as a whole
- On website (www.mining.ca)
- Useful for comparison between companies (and peer pressure)

TOWARDS SUSTAINABLE MINING
PROGRESS REPORT 2014

ABORIGINAL AND COMMUNITY OUTREACH
PERCENTAGE OF FACILITIES AT LEVEL A OR HIGHER 2006, 2012 & 2013

Level A   Level AA   Level AAA

Aggregate Performance: Communities and People

CRISIS MANAGEMENT PLANNING
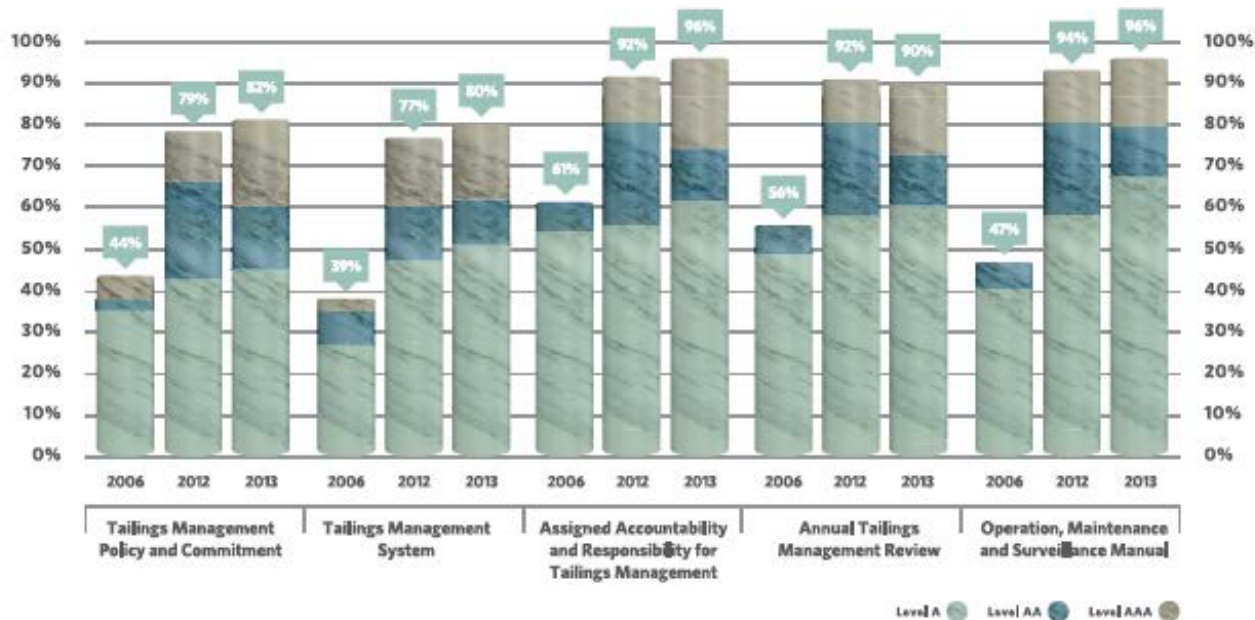**PERCENTAGE OF COMPANIES AND FACILITIES RESPONDING "YES" 2006, 2012 & 2013**
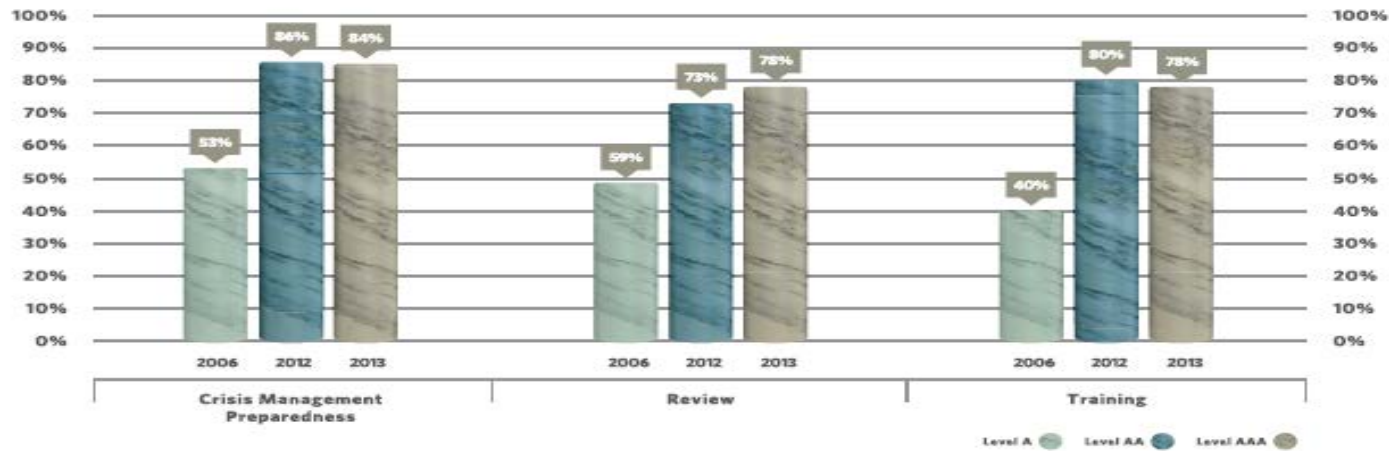
SAFETY AND HEALTH
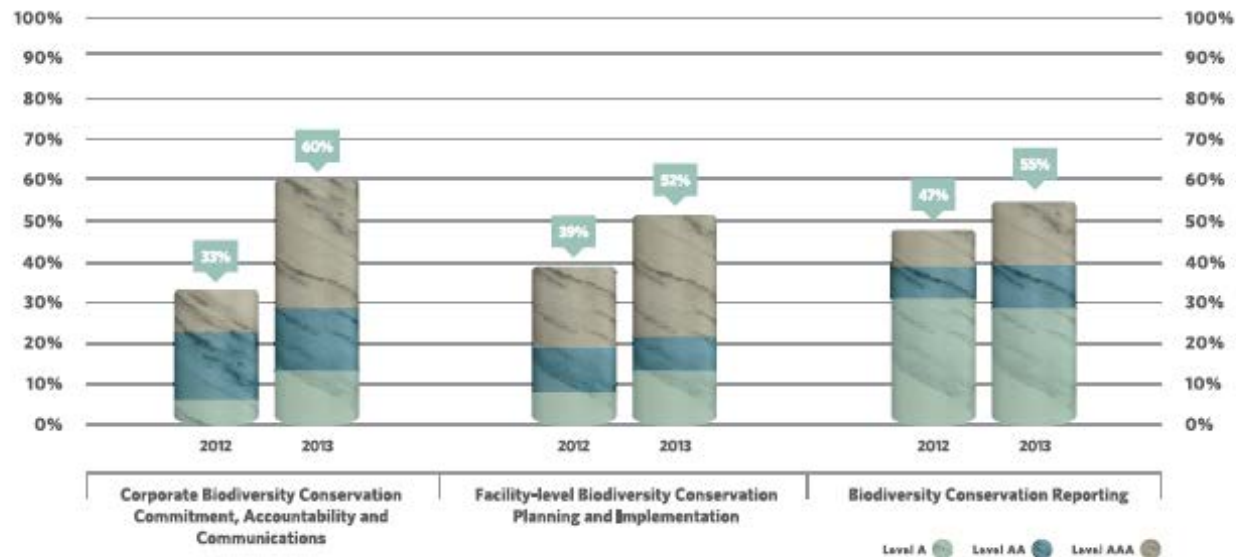**PERCENTAGE OF FACILITIES AT LEVEL A OR HIGHER 2012 AND 2013**

Level A   Level AA   Level AAA
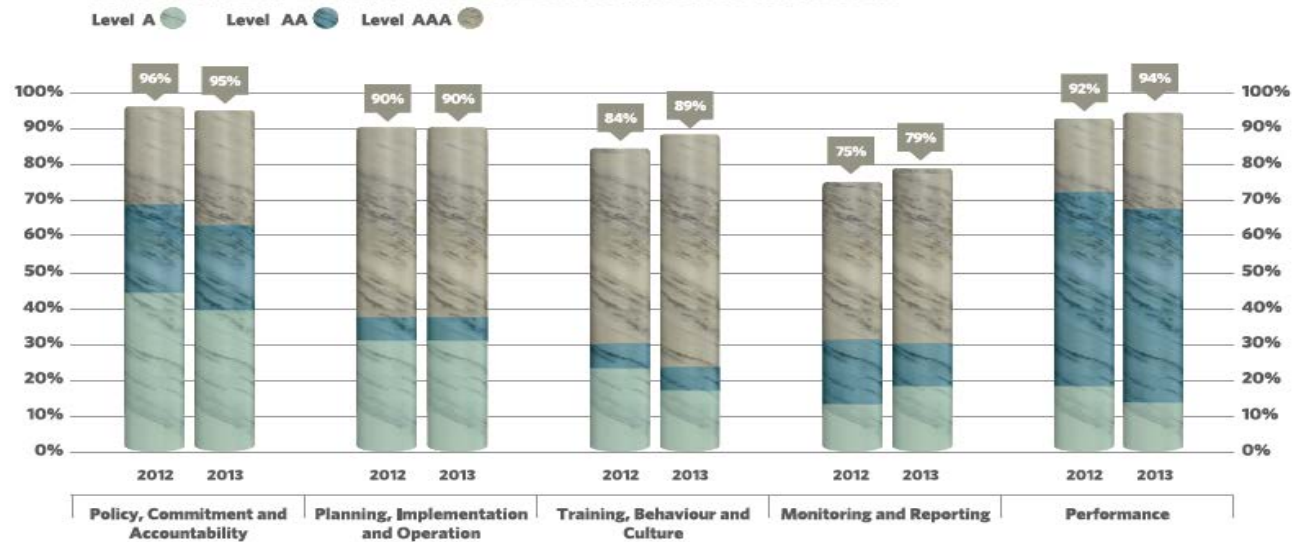
TAILINGS MANAGEMENT
PERCENTAGE OF FACILITIES AT LEVEL A OR HIGHER 2006, 2012 & 2013

BIODIVERSITY CONSERVATION
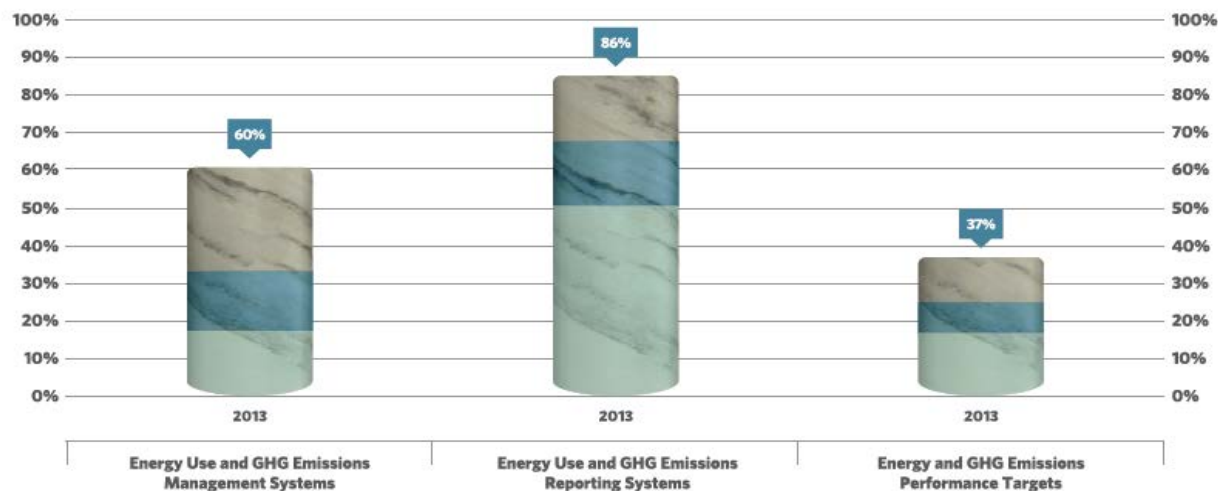PERCENTAGE OF FACILITIES AT LEVEL A OR HIGHER 2012 & 2013
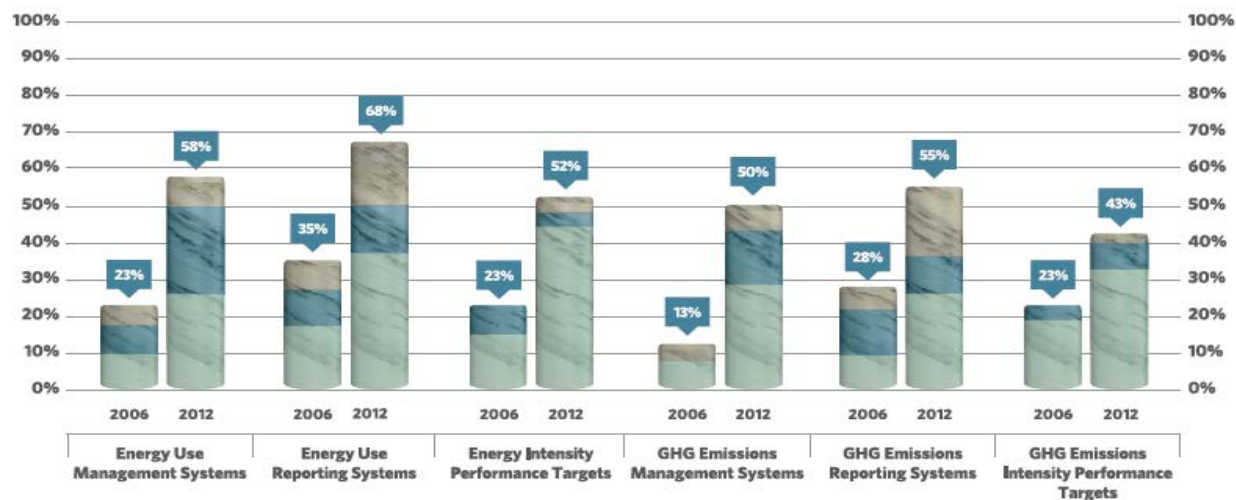
Aggregate Performance: Environmental Stewardship

ENERGY USE AND GHG EMISSIONS MANAGEMENT
PERCENTAGE OF FACILITIES AT A LEVEL A OR HIGHER 2013

Level A   Level AA   Level AAA

Energy Use and GHG Emissions Management Systems — 60% (2013)
Energy Use and GHG Emissions Reporting Systems — 86% (2013)
Energy and GHG Emissions Performance Targets — 37% (2013)

ENERGY USE AND GHG EMISSIONS MANAGEMENT
PERCENTAGE OF FACILITIES AT A LEVEL A OR HIGHER 2006 AND 2012

Level A   Level AA   Level AAA

	2006	2012
Energy Use Management Systems	23%	58%
Energy Use Reporting Systems	35%	68%
Energy Intensity Performance Targets	23%	52%
GHG Emissions Management Systems	13%	50%
GHG Emissions Reporting Systems	28%	55%
GHG Emissions Intensity Performance Targets	23%	43%

Aggregate Performance: Energy Efficiency

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FOR MORE INFORMATION PLEASE CONTACT:

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