



STANDARDS FOR RESPONSIBLE MINE RECLAMATION

INITIATIVE FOR RESPONSIBLE MINING ASSURANCE (IRMA)

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VISION

*IRMA envisions a world where the mining industry is: **respectful** of the human rights and aspirations of affected communities; provides **safe**, healthy and respectful workplaces; avoids or **minimizes harm** to the environment; and leaves **positive legacies**.*

MISSION

*To establish a **multi-stakeholder** and **independently verified** responsible mining assurance system that improves **social and environmental performance**.*

+ HIGH VALUE PROPOSITION:

Intent is benefits to all sectors in the IRMA System

NGOs/ Communities/ Labor:

- Protect health and rights of workers & affected communities;
- Protection for land, water, air, cultural heritage.
- Improved relations with mining companies;

Mining Companies:

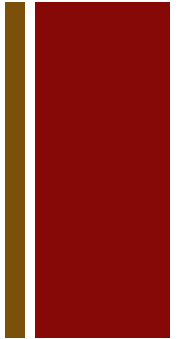
- Improved relations with labor, local communities and governments;
- Commercial advantages, for example becoming a preferred supplier;
- Improved reputation in marketplace.

Retail/ Downstream Users:

- Increased demand for products made from responsibly mined metals (product differentiation);
- Improved reputation and positive publicity for innovation.



+ Foundational Issues



- Industrial Scale Mining
- All Kinds of Mining
- At the Site Level
- All Phases of the Mine Cycle
- Single Grade – Pass/Fail
- High Threshold/Best Practice
- Compatible with Other Standards and Systems (interoperability)
- ISEAL Certification (International Social and Environmental Accreditation and Labelling Alliance)

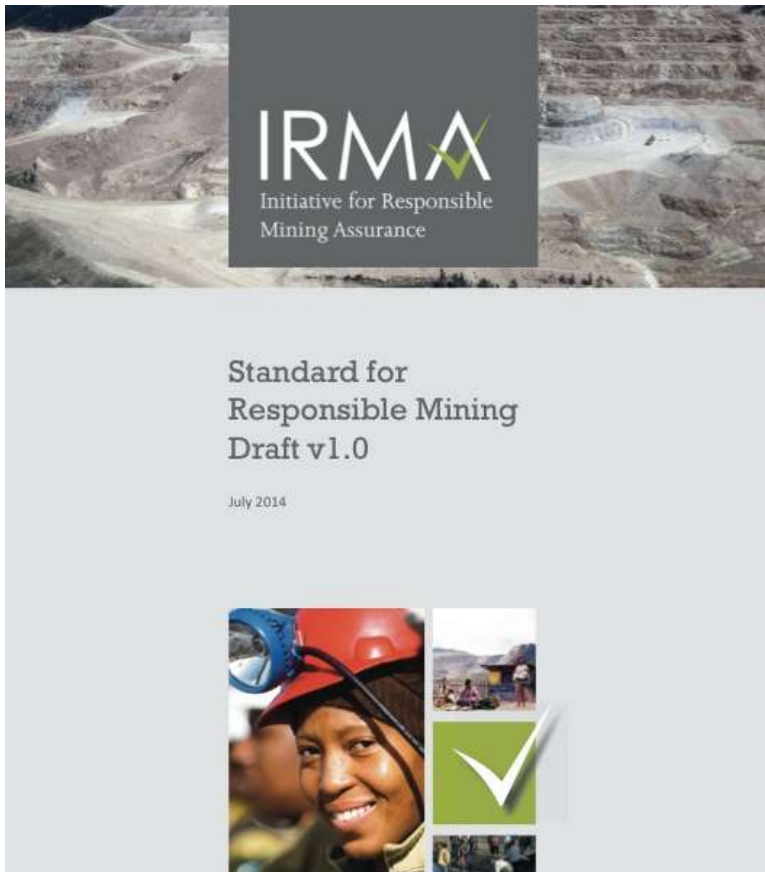
+ **The Responsible Mining**

Assurance System will include:

- **Best practice standards** that describe environmentally and socially responsible mine operations as well as legacy mine site management;
- An independent **third-party mechanism to verify implementation** of the standards;
- A **membership program** designed to generate and maintain long term support for the system from all key stakeholder groups;
- **Communication tools** (such as certificates, approved claims and labels) that generate rewards for effective implementation by participating enterprises.
- An **organizational structure** sufficient to ensure the long term stability and success of the system as a whole (through legal entities and associated personnel, governance and financial resources);
- **Mechanisms for resolving disputes.**



Standard for Responsible Mining

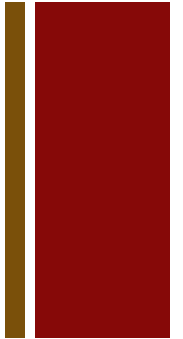


■ 28 Chapters in 5 Topic Areas

1. Business Integrity
2. Social Responsibility
3. Environmental Responsibility
4. Closure and Reclamation
5. Management Systems



Chapter 4.1—Reclamation and Closure



This chapter is intended to ensure that consideration of the long-term environmental and social potential of a mine site after mining operations have ceased is integrated into mining project management throughout the mine life cycle, and to ensure that the full costs of site reclamation and closure are borne by the mine's financial beneficiaries, and are not passed on to the public.

Key requirements include:

◆ Mineral exploration

- Prior to the commencement of any mineral exploration activity involving off-road vehicle use, road construction, drilling (including helicopter drill rigs) the operating company shall develop a mineral exploration reclamation plan.
- The mineral exploration reclamation plan shall be discussed with local communities before exploration activities begin.
- The operating company shall provide a financial surety to cover the cost of implementing the exploration reclamation plan.

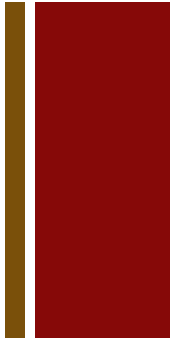


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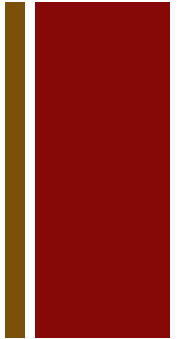
Key requirements include:

- ◆ Open pits shall be backfilled where socially, environmentally, and economically practicable.
 - When acid-generating/metals leaching materials are exposed in the pit wall of the mine;
 - If this would minimize the likelihood of environmental impact; and,
 - Exposed sulfide wall rock should have a cover or other mechanism designed to minimize contaminant discharge when it will improve surface or ground water quality.
- ◆ Underground mines shall be backfilled if subsidence is predicted and if the mining method allows.





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Key requirements include:

◆ Reclamation Financial Sureties:

- Self-bonding or corporate guarantees shall not be permitted.
- Sureties shall be evaluated by independent analysts at least every three years, or when there is a significant change to the mine plan.
- If necessary, the operating company shall provide resources for capacity building and training to enable meaningful stakeholder participation.
- Prior to the beginning of closure reclamation activities the operating company shall provide affected communities and interested stakeholders with the opportunity to propose independent experts to collaborate with the operating company in the design and implementation of its reclamation plan.



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Key requirements include:

◆ Post-Closure Financial Surety

- At the time the mine begins construction, or whenever the commitment for long-term water treatment is initiated the trust fund (or equivalent) for long-term water treatment shall be established in full; and,
- Long-term Net Present Value calculations shall utilize:
 - ✓ A real interest rate of 3% or less; and,
 - ✓ The Net Present Value (NPV) calculations will be carried out until the difference in the NPV between the last two years in the calculations is \$10 or less.



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Key requirements include:

◆ Reclamation & Closure Guidance Document:

- Contains detailed guidance (i.e. not mandatory requirements) for a long list of items including, but not limited to:
 - ✓ Facility Demolition and Disposal
 - ✓ Earthwork requirements
 - ✓ Earthwork requirements
 - ✓ Off-sets (Mitigation)
 - ✓ Closure Water Management Plans
 - ✓ Long-Term Monitoring and Maintenance



- First Draft Standards – released July 2014
- Second Draft – release ~ July 2015
- Trial Certification ~ 2016

