



The session will start soon

IRMA Standard Revision Process

Stakeholder Feedback Webinar

Chapter 4.1 – WASTE and MATERIALS MANAGEMENT

Agenda

1. House rules
2. Ways to contribute today
3. IRMA revision process
4. Overview of the proposed changes
5. Q&A and live chat contribution

1. House rules

- This event is hosted by **IRMA, the Initiative for Responsible Mining Assurance.**
- This event is being recorded and the recording will be made publicly available on the IRMA website.
- Participants may not post any unlawful, offensive, threatening, libelous, defamatory, obscene or otherwise objectionable content.
- Participants may not post, or send, or link to hateful, degrading, criminal or sensitive imagery or content, or to any content or material that violates laws, violates third party's privacy rights, advocates intolerance or hate against other people on the basis of actual or perceived ethnicity, national origin, caste, sexual orientation, gender, gender identity, religious affiliation, age, disability, or disease.
- Participants may not post or send or link to Spam content or mass unsolicited or aggressive activity that attempts to drive traffic or attention to unrelated accounts, products, services, or initiatives.

2. Ways to contribute today

- This event represents one of the many opportunities and channels available to contribute to the IRMA Standard Revision Process (incl. a dedicated online platform: www.responsiblemining.net/comments2)

Chat function

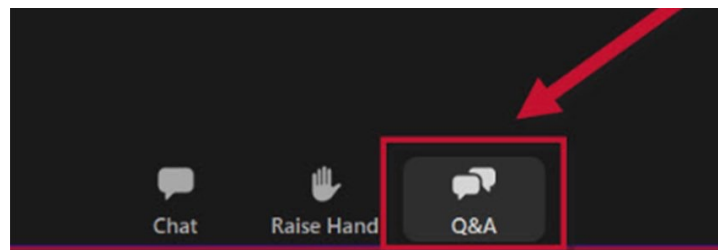
- Participants can also use the Chat function of zoom to share content with the whole audience
- Please note that the chat cannot be used in an anonymous way

2. Ways to contribute today

- This event represents one of the many opportunities and channels available to contribute to the IRMA Standard Revision Process (incl. a dedicated online platform: www.responsiblemining.net/comments2)

Q&A function

- Participants can use the Q&A function of zoom to submit any comment, suggestion, feedback, question, concern, recommendation to IRMA.
- Participants can decide to submit content via the Q&A function in an **anonymous** way

A screenshot of the Zoom Q&A submission form. It features a text input field containing the text 'Hello! I am a test question. How are you?'. Below the input field, there is a checkbox labeled 'Send anonymously' which is highlighted with an orange rectangular box. To the right of the checkbox are two buttons: 'Cancel' and 'Send'.

2. Ways to contribute today

- This event represents one of the many opportunities and channels available to contribute to the IRMA Standard Revision Process (incl. a dedicated online platform: www.responsiblemining.net/comments2)

=> All content shared with us today will be saved and considered by IRMA as part of the Standard revision process

3. IRMA revision process

A comprehensive revision of our standards allows us to:



Ensure our system remains accountable to all sectors and is aligned with our mission and vision



Remain up-to-date: Reflect the latest scientific understanding in our standard; learning from other standards, policies, laws



Add clarity: Make the standard clearer, more accessible for all stakeholders; learning from first audits



Add consistency: Better align the structure and flow of chapters that are similar; embedding good management systems practice and models

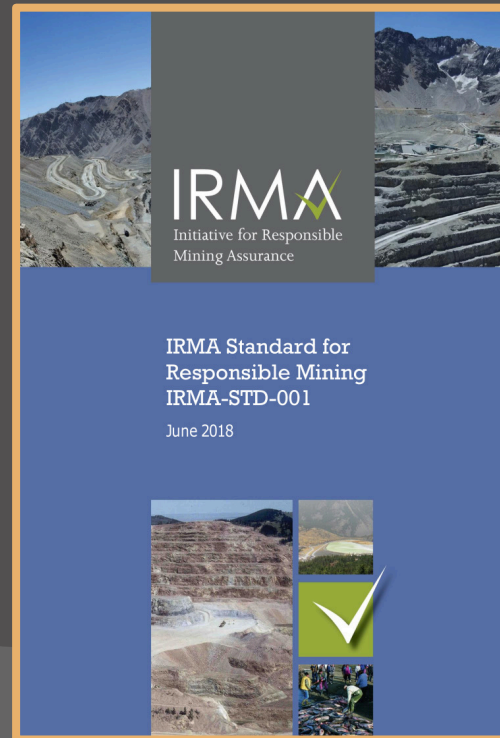


Fill gaps: Address the most significant environmental and social issues

Holistic and integrated approach

IRMA is evolving to address key phases of the mineral supply chain.

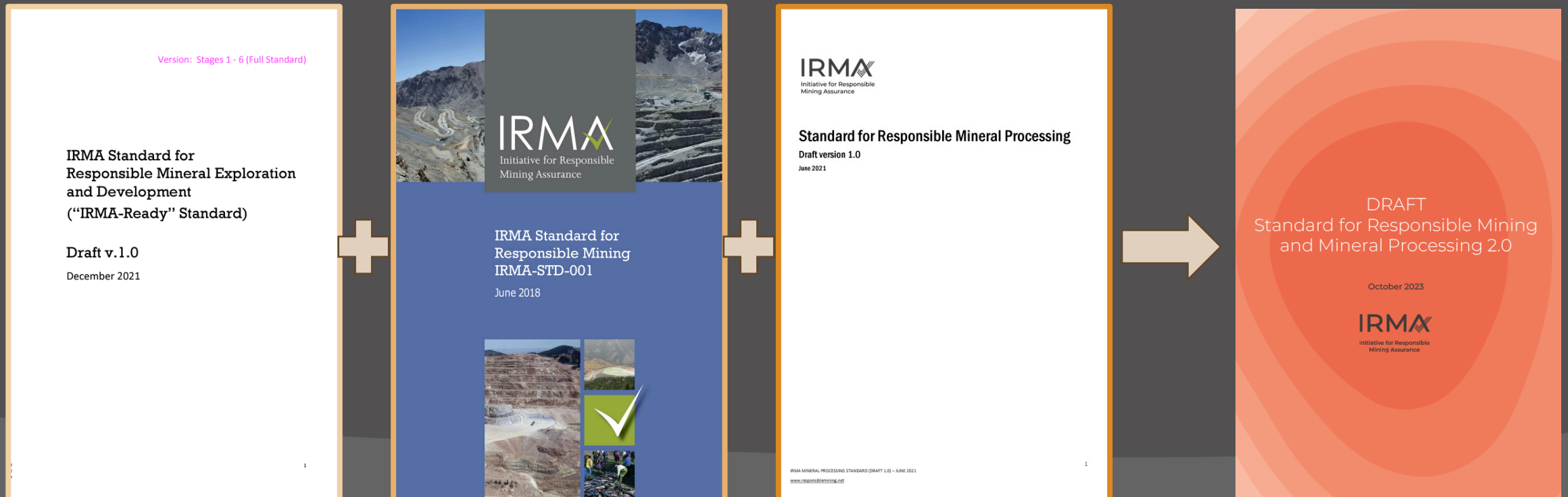
■ Mining



Holistic and integrated approach

IRMA is evolving to address key phases of the mineral supply chain.

- Exploration & Development
- Mining
- Mineral processing



What is in the new consultation draft?

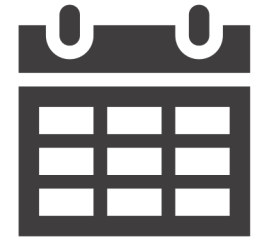
- **Transmittal Letter:** **Not Board approved**; invitation for comments on all content; reflection of IRMA principles (best practice, sound science, efficiency, equal stakeholder value, etc.), the context for proposed changes and questions
- **Drafters' Notes:** Indicate divergence with the 2018 Mining Standard, why the change is being proposed.
 - **NOTES** at the beginning of each chapter (summary of changes proposed)
 - **NOTES** under requirements that are proposed to change and why (e.g., previous requirement wording was unclear, or we had a gap with other standards, international norms, regulatory bodies. Indicates **NEW** or **REVISED** or unchanged.)
 - **CONSULTATION QUESTIONS** lay out the challenging issues that have been raised and ask for feedback to help resolve them
- An **Excel version**, as some prefer to read and comment back in Excel. It contained consultation questions and NOTES.

Consultation draft informed by:

- Experiences from initial IRMA audits
- Review of other standards
- Increased public awareness and evolving expectations of best practice
- Review of emerging issues garnering international discussions
- Comments on DRAFT IRMA-Ready and Mineral Processing
- Ongoing input from stakeholders on particular content
- Expert working group discussions

Public Consultation period is open

From Oct 26 – Jan 26: **90 days**

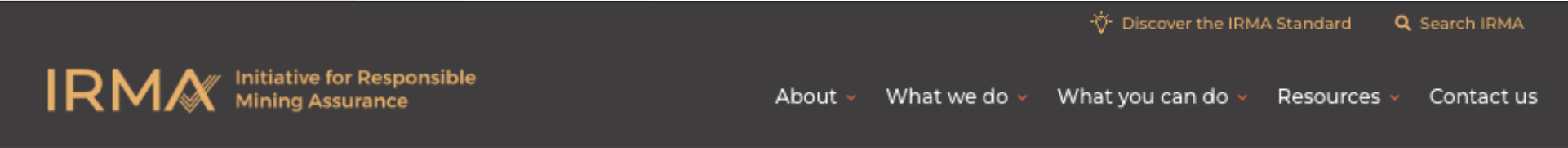


End date:
January 26, 2024

- Consultation period is 90 days
- There are many ways to participate!
- All comments will be considered equally and objectively
- They will be included in a public summary of all comments received
- **Comments may be treated confidentially if desired**

Online platform

<https://www.responsiblemining.net/comments2>



Standard 2.0 online comments

Welcome to the online commenting form for the DRAFT Standard for Responsible Mining and Mineral Processing 2.0. Commenting on the draft is open until 25 January 2024.

To start commenting enter the required fields on the *Get Started* tab and click *Proceed*. For assistance with this form visit the *Support* tab. Visit the [main Standard 2.0 page](#) to learn more about the Standard and other ways to comment.

Get Started

Support

Chapter 1.1
Legal Compliance

Get Started

Name (REQUIRED)

First

Last

Other channels

- Via email

comments@responsiblemining.net

- Via WhatsApp

To comment via text or voice, use the IRMA WhatsApp number:

+1.301.202.1445

- Via postal mail to

IRMA Std Comments

113 Cherry St, #74985

Seattle, Washington, 98104

USA

4. Proposed changes

Objectives/Intent of this chapter

To transport, handle, store, treat and dispose of materials and wastes in a manner that protects worker and community health and safety, and the environment.

Scope of application

This chapter is applicable to all exploration, mining and mineral processing projects and operations.

— not all requirements will be relevant in all cases —

NEW APPROACH to this chapter

We are proposing a NEW APPROACH to this chapter.

In the 2018 Mining Standard, the primary emphasis was on ‘mine waste,’ which included tailings, waste rock, spent ore from heap leaches, and wastes generated during mineral processing (e.g., residues and used processing fluids, wastes from thermal processing). Much less attention was paid to understanding risks and managing risks from chemicals that were used in the processing, or the chemical constituents of brines, or other substances like fuels, etc. Also, there was little attention paid to the management of non-mine wastes, which can be generated in considerable volumes at industrial-scale mines and processing facilities, and, depending on the wastes, can pose varying degrees of environmental and health hazards.

NEW APPROACH to this chapter

We are proposing to separate the aspects of waste management into two chapters:

1. this Chapter '4.1 – Waste and Materials Management' will be focused the management of the chemicals and the potential pollution-related aspects of wastes, and
2. a new Chapter '4.X – Management of Physical Stability' currently inserted after Chapter 4.2, has been designed to evaluate the physical stability risks related to mine waste (and other) facilities.

Overview of **Proposed changes**



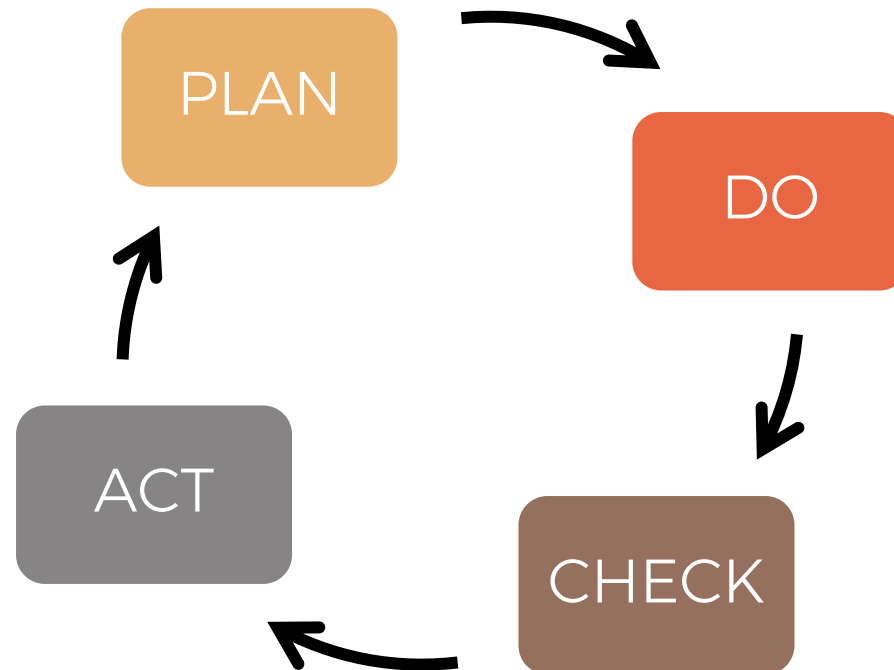
Add consistency: structure



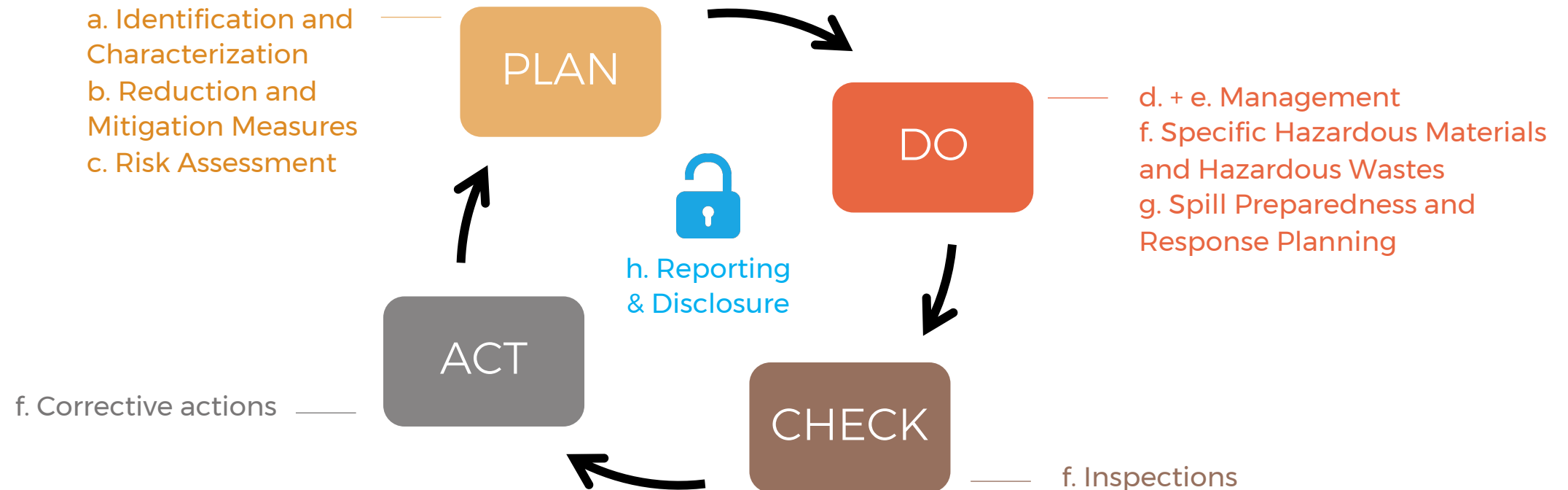
Chapter is reorganized to flow like other similar social and environmental responsibility chapters:

- a. Identification and Characterization (of Materials and Wastes)
- b. Reduction and Mitigation Measures
- c. Risk Assessment
- d. Management of Hazardous Materials
- e. Management of Hazardous Wastes
- f. Specific Hazardous Materials and Hazardous Wastes
- g. Spill Preparedness and Response Planning
- h. Inspections + Corrective actions
- i. Reporting and Disclosure

Overview of **Proposed changes**



Overview of Proposed changes



Overview of Proposed changes

2

Add clarity



Clarified scope of application:

- Materials and chemicals **brought to the site**
fuel, solvents, explosives, processing reagents, feedstock material, treatment chemicals, cement, instrumentation...
- Materials that are **produced (or extracted)** as part of the mining and mineral processing processes
ore, brines, concentrate
- **Wastes that are produced** (generated by the processes, and generated because of using the materials and chemicals that are brought to the site)
tailings, waste rock, overburden, spent ore, mine-influence water, processing wastes, lab waste, maintenance waste, used equipment/machinery, construction waste, water treatment sludges/residue, garbage and sewage...

Overview of Proposed changes

3

Fill gaps



Identification of these categories of waste and materials
(*brought to site, or produced on-site*)
(4.1.1.1)

Chemical characterization of liquid material and waste
produced as a result of mining-related activities (4.1.1.4)

Characterization of waste not derived from mining or
processing activities (4.1.1.6)

Overview of Proposed changes



Fill gaps



New criterion on Material and Waste **Reduction and Mitigation**

Other standards refer to the “waste mitigation hierarchy”, and we have incorporated that concept here. Setting out priority of actions that should be taken in managing wastes:

Prevention → **Reduction/minimization** → **Re-use** → **Recycling** →
Energy recovery → **Disposal**

(4.1.2)

Overview of **Proposed changes**

5

Add clarity



Elaborates on the documentation, identification and mitigation requirements related to waste and materials management in the original Chapter 4.1, as well as safe storage and transportation. (4.1.4.2, 4.1.5.1, 4.1.5.2)

Overview of Proposed changes

6

Add consistency



We propose to incorporate requirements from previous Chapter 4.7 **Cyanide** and 4.8 **Mercury** from the 2018 Mining Standard (now 4.1.6.1 and 4.1.6.2)

Overview of Proposed changes

7

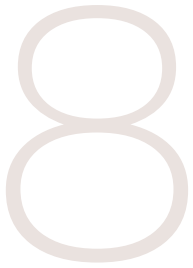
Fill gaps



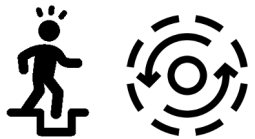
Added new specific **spill-response** requirements (plan + training + collaborative design)

Can also combine with spill prevention measures (part of 4.1.3.1 or 4.1.4.1); and/or integrate workplace-specific spill-related procedures as part of their Emergency Preparedness and Response Plans prepared in Chapter 3.2 (3.2.3.6); and/or include community-related spill hazards in the risk assessment and procedures developed as per Chapter 2.5, which addresses Community Emergency Preparedness and Response Planning.

Overview of Proposed changes



Fill gaps
+ Add consistency



Work can be stopped if unsafe conditions are observed and report (aligned with Chapter 3.2 on OHS) (4.1.8.2)

Access to information policy (aligned with other similar chapters) (4.1.9.2)

Disclosing to local authorities and emergency services relevant information on the hazardous **properties** and health and environmental **effects** of materials and wastes that may pose a risk to communities, workers or the environment if there were to be an incident or spill. (4.1.9.3)

Applicability to all phases: Full document available on IRMA website, under Resources

Criteria #	Criteria name	Req #	Critical	Exploration - Stage 1	Exploration - Stage 2	Exploration - Stage 3	Project Development	Project Permitting	Operating Mine or Mineral Process
4.1.1	Identification and Characterization of Materials and Wastes	4.1.1.1				Yes	Yes	Yes	Yes
4.1.1	Identification and Characterization of Materials and Wastes	4.1.1.2				Yes	Yes	Yes	Yes
4.1.1	Identification and Characterization of Materials and Wastes	4.1.1.3				Yes	Yes	Yes	Yes
4.1.1	Identification and Characterization of Materials and Wastes	4.1.1.4				Yes	Yes	Yes	Yes
4.1.1	Identification and Characterization of Materials and Wastes	4.1.1.5				Yes	Yes	Yes	Yes
4.1.1	Identification and Characterization of Materials and Wastes	4.1.1.6				Yes	Yes	Yes	Yes
4.1.2	Material and Waste Reduction and Mitigation	4.1.2.1				Yes	Yes	Yes	Yes
4.1.2	Material and Waste Reduction and Mitigation	4.1.2.2				Yes	Yes	Yes	Yes
4.1.2	Material and Waste Reduction and Mitigation	4.1.2.3				Yes	Yes	Yes	Yes
4.1.3	Assessment of Hazardous Materials and Hazardous Wastes	4.1.3.1				Yes	Yes	Yes	Yes
4.1.4	Management of Hazardous Materials	4.1.4.1				Yes	Yes	Yes	Yes
4.1.4	Management of Hazardous Materials	4.1.4.2				Yes	Yes	Yes	Yes
4.1.5	Management of Hazardous Wastes	4.1.5.1				Yes	Yes	Yes	Yes
4.1.5	Management of Hazardous Wastes	4.1.5.2				Yes	Yes	Yes	Yes
4.1.6	Requirements to Address Specific Hazardous Materials and Hazardous Wastes	4.1.6.1						Yes	Yes
4.1.6	Requirements to Address Specific Hazardous Materials and Hazardous Wastes	4.1.6.2				Yes	Yes	Yes	Yes
4.1.6	Requirements to Address Specific Hazardous Materials and Hazardous Wastes	4.1.6.3	Yes			Yes	Yes	Yes	Yes
4.1.7	Spill Preparedness and Response Planning	4.1.7.1				Yes	Yes	Yes	Yes
4.1.7	Spill Preparedness and Response Planning	4.1.7.2				Yes	Yes	Yes	Yes
4.1.8	Inspections	4.1.8.1				Yes	Yes	Yes	Yes
4.1.8	Inspections	4.1.8.2				Yes	Yes	Yes	Yes
4.1.9	Reporting and Disclosure	4.1.9.1				Yes	Yes	Yes	Yes
4.1.9	Reporting and Disclosure	4.1.9.2				Yes	Yes	Yes	Yes
4.1.9	Reporting and Disclosure	4.1.9.3				Yes	Yes	Yes	Yes

2018/2023 comparative analysis

TOTAL NUMBER OF REQUIREMENTS

28 requirements in 2018 standard

24 requirements in 2023 draft standard

IN PRACTICE

- => Deleted two policy/governance requirements (ex-4.1.1.1, 4.1.1.2)
- => Requirements related to Mine waste facilities now moved under new chapter 4.X (ex-4.1.3.5, 4.1.5.2, 4.1.5.4, 4.1.6.3)
- => Integrated chapters on Cyanide and Mercury (ex-4.7 and 4.8)

2018/2023 comparative analysis

IN PRACTICE

6 new elements:

1. Includes input chemicals and non-mine waste
2. Identification + Characterization
3. Reduction and Mitigation approach
4. Spill response
5. Access to information
6. Information-sharing with local authorities and emergency services

Key consultation questions

- **We are proposing a new approach:** wider scope; but clarity between waste and materials management VS physical stability of facilities

What do you think? Feedback, opinion, comments, reflections on this are warmly welcome

Key consultation questions

- **Regarding the Waste Mitigation Hierarchy:** Prevention → Reduction/minimization → Re-use → Recycling → Energy recovery → Disposal

1) Do you think energy recovery from waste is still considered an acceptable practice in terms of human health, safety or environment? Should IRMA include it in the list of waste mitigation hierarchy options?

Key consultation questions

- **Regarding the Waste Mitigation Hierarchy:** **Prevention** → **Reduction/minimization** → **Re-use** → **Recycling** → Energy recovery → Disposal

1) Do you think energy recovery from waste is still considered an acceptable practice in terms of human health, safety or environment? Should IRMA include it in the list of waste mitigation hierarchy options?

2) CIRCULARITY opportunities may not exist at every site, or there may be technical, environmental, safety or climate implications that create obstacles or barriers to implementation. Should IRMA go further to integrate concepts of circularity into this chapter? Into other chapters?

Key consultation questions

- **Regarding NON-HAZARDOUS Waste and Materials (4.1.2.3)**

1) We have not included requirements related to non-hazardous MATERIALS, such as materials used in construction of buildings. Do you agree with this approach, or do you think IRMA should include requirements for non-hazardous materials? What would you suggest would be appropriate expectations regarding non-hazardous materials? And are there particular types of non-hazardous materials that warrant a greater focus than others?

Key consultation questions

- **Regarding NON-HAZARDOUS Waste and Materials (4.1.2.3)**

2) Regarding non-hazardous WASTES, would it be reasonable to limit this requirement to the non-hazardous wastes that are most likely to have associated environmental and health risks (e.g., wastes like garbage dumps/landfills and sewage). Or should all non-hazardous wastes be evaluated?

Any additional requirements for non-hazardous wastes that should be added? (e.g. specific procedures or management plans beyond what would be required/incorporated into the plans in those chapters (as per 4.1.3.1.c).

Key consultation questions

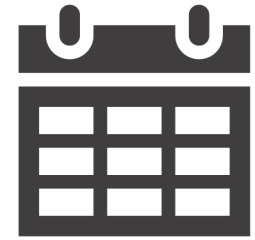
▪ **Regarding Inspections** (4.1.8)

1) We are proposing annual inspections, but do you think that these types of inspections should occur at a much higher frequency (e.g., weekly, monthly)?

2) There will be cases when entities send hazardous wastes to third-party disposal facilities. If those facilities are poorly managed, then it is possible that the entity would be contributing to impacts on human health or safety, or impacts on the environment or communities. Should there be either an up-front due diligence requirement to ensure that any third-party disposal facilities are well managed, adhere to certain standards, etc., and/or should there be any ongoing monitoring of those facilities by the entity?

Public Consultation period is open

From Oct 26 – Jan 26: **90 days**



End date:
January 26, 2024

Online platform

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Other channels

- Via email

comments@responsiblemining.net

- Via WhatsApp

To comment via text or voice, use the IRMA WhatsApp number: +1.301.202.1445

- Via postal mail to: IRMA Std Comments; 113 Cherry St, #74985; Seattle, Washington, 98104; USA