Consultation response

Part 1: Your details

Original language of response: English

Name: Johannes Drielsma

Country of residence: Germany

Are you willing to let us publish your response publicly on the Global Tailings Review website? Yes

Please select which stakeholder group you are representing: Mining Industry

If 'Other', please specify below:

Are you responding on behalf of an organization? Yes

Please give the name of the organization: European Association of Mining Industries (Euromines)

Your level within the organisation: Management

Part 2: Your views on each of the Principles and Requirements in the Standard Topic I: Knowledge Base

Principle 1

In your view, will compliance with this Principle and its Requirements contribute to the prevention of catastrophic failure of tailings facilities? Partially

Which aspects of Principle 1 do your comments relate to?

Requirement 1.3

Your comments on Principle 1

Please include "flow failure" in the Glossary. For each of the listed pieces of information in Footnote 7 to remain in the standard, we think it should be demonstrated how it pertains directly to tailings facility design, emergency preparedness and emergency response: specifically how each piece might itself drive modifications to such designs and plans.

Principle 2

In your view, will compliance with this Principle and its Requirements contribute to the prevention of catastrophic failure of tailings facilities? Not sure

Which aspects of Principle 2 do your comments relate to?

Requirement 2.4, Requirement 2.3, Requirement 2.2, Requirement 2.6, Requirement 2.5

Your comments on Principle 2

Some de minimus thresholds are required - based on consequences of failure. It should be stated that an independent technical reviewer may also be a regulator. Requirements 2.3 & 2.5 (management plans & financial assurance) are only relevant for planned activities - not for impacts of catastrophic failures. For the purposes of this Standard, a compensation requirement in case failure occurs can be acknowledged, but up-front preparation and assurance of such compensation should not be a requirement. Non-financial compensation for residual impacts of planned activities may be required by some regulators where appropriate. Requirement 2.4 should be limited to material changes to the social or environmental conditions (material changes to the tailings facility are likely to be far more frequent) In Requirement 2.5, replace the term "periodically" with "after any changes associated with the closure of a mining waste disposal facility "". Requirement 2.6 is not related to the prevention of catastrophic failure of tailings facilities, so we suggest deleting it.

Topic II: Affected Communities

Principle 3

In your view, will compliance with this Principle and its Requirements contribute to the prevention of catastrophic failure of tailings facilities? No

Which aspects of Principle 3 do your comments relate to?

Comments on the Principle itself, Requirement 3.3, Requirement 3.1

Your comments on Principle 3

Without wishing to downplay the importance of respecting Human Rights, Human Rights considerations should be an integral part of the updated knowledge base & alternatives analysis throughout the life cycle of the facility, so the whole of TOPIC II (Principle 3) should be integrated into Principles 1 & 2. Add to Footnote 13: "Human rights due diligence may occur during the State-mandated processes applicable to mining, including as part of the permitting of the operation, rather than a separate process." Requirement 3.3 should be changed from "could result in loss of life" to "could include loss of life" and shifted under Principle 2.

Topic III: Design, Construction, Operation and Monitoring of the Tailings Facility

Principle 4

In your view, will compliance with this Principle and its Requirements contribute to the prevention of catastrophic failure of tailings facilities? No

Which aspects of Principle 4 do your comments relate to? Comments on the Principle itself, Requirement 4.3, Requirement 4.1, Requirement 4.2

Your comments on Principle 4

This Principle and its Requirements should be discussed with stakeholder experts and modified. Any new wording should focus on the intent rather than a specific mechanism. Presumption of 'Extreme' classification is not realistic. Immediate rebuttals are likely to be obvious for the vast majority of tailings facilities covered by the scope of this standard. If one considers a Source-Pathway-Receptor model for Consequences, Requirement 4.1 seems unduly and exclusively focussed on the potential Source, whereas it should also be possible to take more efficient measures to eliminate Pathways &/or Receptors. E.g., set and enforce restrictions on residential development within the inundation zone. The phrase "non-credible flow failure state" is not understandable in its current form. Requirement 4.2 is not realistic if applied to all facilities regardless of risk. Requirement 4.3 does not seem proportionate or realistic. What if such an upgrade is not necessary or warranted as per an appropriate assessment of risk? Perhaps in many cases, ""upgrade"" would simply make no sense.

Principle 5

In your view, will compliance with this Principle and its Requirements contribute to the prevention of catastrophic failure of tailings facilities? Yes

Which aspects of Principle 5 do your comments relate to?

Requirement 5.3

Your comments on Principle 5

For the moment, "Consequence Classification" is not defined. Include a reference to the relevant Matrix by way of definition.

Principle 6

In your view, will compliance with this Principle and its Requirements contribute to the prevention of catastrophic failure of tailings facilities? Yes

Which aspects of Principle 6 do your comments relate to?

Requirement 6.3, Requirement 6.2

Your comments on Principle 6:

Requirement 6.2 is not understandable to non-experts. It must be ensured that it is unambiguous for those that are experts in the field. Perhaps this will eventually require a reference to supporting Technical Guidance. In Requirement 6.3, either avoid term "conservative" or give guidance as to what shall be considered "conservative design criteria", and if If "factors of safety" is kept as a term, suggest replacing "to" with "that", so that it is more clear. We would prefer to avoid the term "factors of safety" throughout the document, and suggest this Standard at least aim for consistency with latest CDA recommendations on this point.

Principle 7

In your view, will compliance with this Principle and its Requirements contribute to the prevention of catastrophic failure of tailings facilities? Not sure

Which aspects of Principle 7 do your comments relate to?

Requirement 7.2, Requirement 7.1, Requirement 7.4, Requirement 7.8, Requirement 7.5

Your comments on Principle 7

Catastrophic failure may not even be a possibility at all facilities falling within the proposed definition of "tailings facility". Some flexibility should be provided for the presence and form of any TMS and/or ESMS. To avoid being too prescriptive with respect to form, ""a TMS"" would be preferable to ""the TMS"", and ""an ESMS"" rather than ""the ESMS". Add "Construction versus Design Intent Verification (CDIV)" to Glossary and define in terms of intent rather than a specific mechanism. Add "Operations, Maintenance and Surveillance (OMS) Manual" to Glossary. Requirement 7.5 must be modified to clarify that it does not apply to tailings facilities with lower Consequence Classifications or where catastrophic failures is not a possibility. The first line of Requirement 7.8 seems too vague and introduces a risk of reliance on insufficiently qualified or expert reviewers. Lack of expertise may lead to misinterpretation of information. Tighten up requirements for expert reviewers, so that they remain relevant to tailings facilities with lower Consequence Classifications or where Consequence Classifications or where catastrophic failures is not a misinterpretation of information. Tighten up requirements for expert reviewers, so that they remain relevant to tailings facilities with lower Consequence Classifications or where catastrophic failures is not a possibility.

Principle 8

In your view, will compliance with this Principle and its Requirements contribute to the prevention of catastrophic failure of tailings facilities? Partially

Which aspects of Principle 8 do your comments relate to?

Comments on the Principle itself, Requirement 8.1, Requirement 8.3, Requirement 8.2, Requirement 8.4

Your comments on Principle 8

The Title of the Principle should also include "to minimise risk" as for other Principles. No monitoring method can give adequate warning of sudden failure once "liquefaction potential" is established, but with highly knowledgeable professionals the Observational Method can give adequate warning that conditions are deteriorating towards attainment of "liquefaction potential", before it is actually established. For successful implementation of the OM, it is necessary that all relevant failure modes are identified, and corresponding indicators and criteria incorporated so that the operator is observing the right things. So, in Requirement 8.1 change text to "that incorporates full implementation" and "credible potential failure". It should be clarified in Requirement 8.2, that public disclosure of decisions should be in accordance with the law of the country concerned. Suggest that in Requirement 8.3, the Designer should recommend frequency, and the EOR can provide comments and suggest improvements. Minimum quarterly reporting in Requirement 8.4 should be limited to tailings facilities with higher Consequence Classifications.

Topic IV: Management and Governance

Principle 9

In your view, will compliance with this Principle and its Requirements contribute to

the prevention of catastrophic failure of tailings facilities?

Not sure

Which aspects of Principle 9 do your comments relate to?

Comments on the Principle itself, Requirement 9.2, Requirement 9.1

Your comments on Principle 9

The Title is not a sufficiently clear statement of the principle: On first reading, it should be immediately obvious what ""elevate"" is intended to mean in this context. Both Requirements should me modified to speak about ""credible potential failure"" and minimisation of consequences of failure, the likelihood of failure or both.

Principle 10

In your view, will compliance with this Principle and its Requirements contribute to the prevention of catastrophic failure of tailings facilities? Not sure

Which aspects of Principle 10 do your comments relate to?

Comments on the Principle itself, Requirement 10.1, Requirement 10.2

Your comments on Principle 10:

The Title should include "for all stages of the tailings facility life cycle" as for other Principles. Catastrophic failure may not even be a possibility at all facilities falling within the proposed definition of "tailings facility". So, Requirements 10.1 and 10.2 should both be modified to clarify that it does not apply to tailings facilities with lower Consequence Classifications or where catastrophic failures is not a possibility.

Principle 11

In your view, will compliance with this Principle and its Requirements contribute to the prevention of catastrophic failure of tailings facilities? Yes

Which aspects of Principle 11 do your comments relate to?

Requirement 11.1, Requirement 11.4, Requirement 11.5

Your comments on Principle 11:

It should not be assumed that all tailings facilities will be required to have an ITRB. Yet, due to the complexity of some facilities, conducting a dam security review (DSR) can require the cooperation of an interdisciplinary expert team that is familiar with the specificities of the facility. Even with the greatest qualification, expertise and commitment, it can in these exceptional circumstances be very difficult for an expert to get sufficiently acquainted with the site. Modify Requirement 11.1 to clarify that it does not apply to tailings facilities with lower Consequence Classifications or where catastrophic failure is not a possibility. Delete the word "regularly" from the first sentence of Requirement 11.1, and add that the Risk Assessments should be updated in the case of monitored changes influencing the management of extractive waste. In Requirement 11.4 change "cannot conduct a subsequent" to "shall not [or must not] conduct more than two consecutive DSRs on the same facility unless, for a facility with a high Consequence Classification, the reviewer is part of an interdisciplinary team through which a permanent continuity of independent technical expertise is ensured overall". Incorporate the phrase from Requirement 11.5 ("For tailings facilities with 'Very High' or 'Extreme' Consequence Classification") into Requirements 2.2, 2.5, 10.2 and 17.3 as well.

Principle 12

In your view, will compliance with this Principle and its Requirements contribute to the prevention of catastrophic failure of tailings facilities? Yes

Which aspects of Principle 12 do your comments relate to?

Comments on the Principle itself, Requirement 12.4, Requirement 12.5

Your comments on Principle 12:

In Europe it is problematic that the standard gives such prominence to the "Engineer of Record", which has a legal definition in some jurisdictions, but not in all. We are not opposed to the intent but need the Standard to recognise equivalent schemes or terms. Please allow for use of "Engineer of Record or equivalent". For practical reasons, change Requirement 12.4 from "not influenced" to "not unduly influenced". Change Requirement 12.5 to read "develop and fully implement"

Principle 13

In your view, will compliance with this Principle and its Requirements contribute to the prevention of catastrophic failure of tailings facilities? Yes

Which aspects of Principle 13 do your comments relate to? Yes

Your comments on Principle 13:

In the Title of Principle 13, "Develop" should be changed to ""Establish and maintain"". In Requirement 3.2, change to ""Incorporate workers' relevant experience-based knowledge"". Under Requirement 3.3, it would be helpful to provide examples of successful mechanisms - perhaps in supporting guidance.

Principle 14

In your view, will compliance with this Principle and its Requirements contribute to the prevention of catastrophic failure of tailings facilities? Yes

Which aspects of Principle 14 do your comments relate to?

Your comments on Principle 14:

Topic V: Emergency Response and Long-Term Recovery

Principle 15

In your view, will compliance with this Principle and its Requirements contribute to the prevention of catastrophic failure of tailings facilities? No

Which aspects of Principle 15 do your comments relate to?

Comments on the Principle itself, Requirement 15.2, Requirement 15.1, Requirement 15.3

Your comments on Principle 15:

The term "best practice methodologies" is problematic because what works best in one regional context could be particularly ineffective in another regional context. The Title of Principle 5 should be rephrased to something like "to minimise consequences including violation of human rights" or "to minimise risk". Under Requirement 15.1, please delete the word "chemical" from Footnote 30. Most tailings contain extremely minimal quantities of "chemicals", in contrast to naturally occurring minerals (which may themselves by quite hazardous). In Requirement 15.2, please change "due to the", to "when there is". Requirement 15.3 is poorly written (a "plan" does not assess): change to "The capacity and capability of emergency response services shall be assessed and the Operator shall make up for any gaps in its EPRP." and delete Footnote 32, which is also poorly written (Operators should not "provide" gaps). Operators cannot be responsible for the capacity of the public sector agencies.

Principle 16

In your view, will compliance with this Principle and its Requirements contribute to the prevention of catastrophic failure of tailings facilities? No

Which aspects of Principle 16 do your comments relate to?

Requirement 16.3, Requirement 16.1

Your comments on Principle 16:

Given the aim to prevent catastrophic failure of tailings facilities, it is not clear why this Standard should require in-depth preparations for long-term recovery (as opposed to short-term emergency response). Liability law and insurance are par for the course. Detailed engagement such as described in Requirement 16.2 may be more useful if performed only when & if necessary. Actual development of an RRP as described in Requirement 16.3 may be more useful if performed only when & if necessary, but perhaps the Standard should require that Operators have materials at hand that can quickly guide the process of developing an RRP if one unfortunately becomes necessary.

Topic VI: Public Disclosure and Access to Information

Principle 17

In your view, will compliance with this Principle and its Requirements contribute to the prevention of catastrophic failure of tailings facilities? Partially

Which aspects of Principle 17 do your comments relate to? Comments on the Principle itself,Requirement 17.3

Your comments on Principle 17:

The word ""decisions"" as it appears in the Title of Principle 17 is problematic because it can be understood to refer to decisions of the regulator, not all of which can be made public depending on the jurisdiction. Principles of public access to information on decisions are often set out in national law and vary across jurisdictions. It should be clear from first reading of Principle 17 that public disclosure of decisions should be in accordance with the law of the country concerned. Requirement 17.3 to "participate in" is too open-ended, potentially embroiling the whole industry in an endless procession of new and competing initiatives. Requirement 17.3 should be changed to ""participate in at least one of the available,....""

Part 3: Your views on the Standard

Your view as to whether the content of the Standard meets your expectations

Your view as to whether the content of the Standard meets your expectations (closed question):

2: Falls somewhat below my expectations

Please summarize why you chose this option:

Inclusion of the phrase "suitable for widespread adoption" in the definition of Best Practices is not appropriate. Optimal results at any given site (or in any given social context) are likely to involve site-specific approaches consistent with more overarching objectives. It is not acceptable, that requirements on corporate management (tools), disclosure and governance are in principal the same for all kind of tailings facilities regardless of consequence classification or risk. All Requirements in the draft should be reviewed to consider whether and how they should apply to tailings facilities with lower Consequence Classifications or no possibility of catastrophic failure. A potentially very large number of facilities fitting the propose

Your view on whether the Standard will create a step change for the industry in the safety and security of tailings facilities

Your view on whether the Standard will create a step change for the industry in the safety and security of tailings facilities (closed question):

3: Will strengthen some but not all aspects of the safety and security of tailings facilities

Please summarize why you chose this option:

This draft standard refers to 12 different ""Plans"", seven different ""systems"" and six different "Reports". Suggest that the Expert Panel look with the industry representatives for opportunities to rationalise these numbers. It might be worthwhile depicting visually how each key document is related to the others and, perhaps, which key document is comprehensive and of overriding importance. The intended difference between an EPRP and an ERP must be clarified in the next draft. 'Catastrophic failure' lacks a definition - the equating of an adjective (catastrophic) with a noun (disaster) is not a satisfactory solution. We would prefer to avoid the term "factors of safety". Suggest this Standard at least aim for consistency with latest CDA reco

Does the content of the Standard address all aspects of tailings facility management adequately?

Does the content of the Standard address all aspects of tailings facility management adequately (closed question)?

No

Please explain why and/or what is missing:

It is important that the Consequence Classification is not interpreted as a 'risk level'. Risk is a factor of both the consequences and the probability of the event occurring. So, the Requirements under Principle 9 should not only target reduced Consequences, but also reduced Probabilities for minimisation of risk. All Requirements in the draft should be reviewed to consider whether and how they should apply to tailings facilities with lower Consequence Classifications or no possibility of catastrophic failure. Similarly, all Requirements in the draft should be reviewed to consider whether and how they should apply differently to tailings facilities that are already existing or already closed.

Part 4: Suggestions for topics to be included in the accompanying Recommendations Report

On which topics would you expect to have further clarification or guidance in this document?

Does this description of implementation pertain to any operation wishing to claim compliance with the Standard? E.g., will a guarantee of independence and multidisciplinary review team be required in all cases regardless of risk? Is the Expert Group recommending establishment of a permanent agency to oversee this? Or is the standard intended to serve the work of any inspector going forward? Will reference to the standard remain voluntary outside of ICMM corporate membership, or is the Expert Group seeking ways to make it mandatory for all? By what means? (Such questions are expected to be answered in the upcoming 'Recommendations Report'). Topic Area 5 should be kept brief in the Standard itself - with details of capacity-building and long-term recovery being provided in the Recommendations Report or supporting guidance for relevant professionals. Guidance to Requirements 6.2 and 6.3 will probably be required. Examples of successful mechanisms referred to in Requirement 13.3 should be provided. Materials that can quickly guide the process of developing an RRP should not be included in the Standard itself, but could be provided in the Recommendations Report.

Other information

Non-fitting response text (text submitted which did was not in response to one of the questions above)

Attachment 1 reference (if applicable) ref:0000001014:Q83 Attachment 2 reference (if applicable) ref:0000001014:Q84

Summary of Main Issues Identified by Euromines

20 December 2019

Generally

The draft standard, aimed at reducing the risk of catastrophic failures of tailings facilities and improving the overall practice, suffers from several fundamental deficiencies, most importantly an apparent desire to embrace all aspects of tailings management at once – even those that are extraneous to tailings dam failures. Whilst public consultation, disclosure and engagement can be important generally, they will be insufficient to address the root causes of tailings dam failures.

Scope of Implementation (see pages 4 & 5)

Does this description of implementation pertain to any operation wishing to claim compliance with the Standard? E.g., will a guarantee of independence and multi-disciplinary review team be required in all cases regardless of risk? Is the Expert Group recommending establishment of a permanent agency to oversee this? Or is the standard intended to serve the work of any inspector going forward? Will reference to the standard remain voluntary outside of ICMM corporate membership, or is the Expert Group seeking ways to make it mandatory for all? By what means? (Such questions are expected to be answered in the upcoming 'Report' referred to on page 5).

Definitions of concern:

Best Practices

Inclusion of the phrase "suitable for widespread adoption" in the definition is not appropriate.

Catastrophic Failure vs Disaster

The first is not defined and the second is hardly used in the text.

Conservative Design Criteria

These form part of Requirement 6.3, but are not defined.

Engineer of Record

The Engineer of Record has a legal definition in some jurisdictions, but not in all.

Emergency Response Plan vs Emergency Preparedness & Response Plan

The two "Plans" and related Requirements are confusing because they are too similarly defined.

Consequence Classification and Application of Requirements:

All Requirements in the draft should be reviewed to consider whether and how they should apply to tailings facilities with lower Consequence Classifications. A potentially very large number of facilities

fitting the proposed definition of "tailings facility" globally, but with low Consequence Classifications and/or residual risks, will not warrant application of, for example:

Requirement 2.2: Use of Independent Tailing Review Boards Requirement 2.5: Financial Assurance **The Whole of Principle 4: The Presumption of 'Extreme' Consequences of Failure** Requirement 10.2: Establishment of a Tailings Management System Requirement 17.3 Participation in Global Transparency Initiatives

Principle 9: Combining Consequences and Probabilities to Minimise Risks

It is important that the Consequence Classification is not interpreted as a 'risk level'. Risk is a factor of both the consequences and the probability of the event occurring. So, the Requirements under Principle 9 should not only target reduced Consequences, but also reduced Probabilities for minimisation of risk.

Affected Communities and Respect of Human Rights

Respect of Human Rights should be an integral part of the updated knowledge base and alternatives analysis throughout the life cycle of the facility. Therefore, Principle 3 should be rolled into Principles 1 & 2.

EMERGENCY RESPONSE versus LONG-TERM RECOVERY

In contrast to Emergency Response Plans, to be most effective a Reconstruction and Recovery Plan (RRP) may need to be developed only when a catastrophic failure has occurred. Rather than requiring up-front development of RRPs, which misses many opportunities for effective long-term recovery, perhaps the Standard should require that Operators have materials at hand that can quickly guide the process of developing a RRP together with stakeholders if a catastrophic failure does unfortunately occur.

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Draft for Public Consultation: November 2019

1	2	(3)	4	5	(6)	(7)
MB ¹	Clause No./ Subclause No./ Annex (e.g. 3.1)	Paragraph/ Figure/Table/No te (e.g. Table 1)	Type of com- ment ²	Comment (justification for change) by the MB	Proposed change by the MB	Secretariat observations on each comment submitted
Emines	Whole doc			This draft standard refers to 12 different "Plans", seven different "systems" and six different "Reports".	Suggest that the Expert Panel look with the industry representatives for opportunities to rationalise these numbers. It might be worthwhile depicting visually how each key document is related to the others and, perhaps, which key document is comprehensive and of overriding importance.	
Emines	Whole doc			It is not acceptable, that requirements on corporate management (tools), disclosure and governance are in principal the same for all kind of tailings facilities regardless of consequence classification or risk.	All Requirements in the draft should be reviewed to consider whether and how they should apply to tailings facilities with lower Consequence Classifications or no possibility of catastrophic failure. A potentially very large number of facilities fitting the proposed definition of "tailings facility" globally, but with low Consequence Classifications and/or residual risks, will not warrant application of, for example, Principle 4 or Requirements 2.2, 2.5, 10.2 and 17.3.	
Emines	Whole doc			Similar to the above, requirements should differ for new, existing and closed tailings facilities.	All Requirements in the draft should be reviewed to consider whether and how they should apply differently to tailings facilities that are already existing or already closed. A potentially very large number of facilities fitting the proposed definition of "tailings facility"	

1 **MB** = Member body (commenting body)

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					globally, but with existing controls and constraints, will not necessarily warrant application of, for example, Principle 4 or Requirements 2.2, 2.5, 10.2 and 17.3.	
Emines	Whole doc & Glossary			In Europe it is problematic that the standard gives such prominence to the "Engineer of Record", which has a legal definition in some jurisdictions, but not in all. We are not opposed to the intent but need the Standard to recognise equivalent schemes or terms.	Allow for use of Engineer of Record or equivalent	
Emines	Whole doc & Glossary			Inclusion of the phrase "suitable for widespread adoption" in the definition of Best Practices is not appropriate. Optimal results at any given site (or in any given social context) are likely to involve site- specific approaches consistent with more overarching objectives.	Modify definition of "best practices" to avoid the phrase "suitable for widespread adoption".	
Emines	Whole doc & Glossary			'catastrophic failure' lacks a definition - the equating of an adjective (catastrophic) with a noun (disaster) is not a satisfactory solution.	Suggest keeping the meaning and intent of the "disaster" definition in the Glossary, but attach it to the term "catastrophic failure" instead.	
Emines	Whole doc & Glossary			The two EPR & EPRP terms are confusing because they are too similarly defined. Is the intention to make a distinction between internal and external preparedness? If so, this needs to be more immediately obvious.	The intended difference between an EPRP and an ERP must be clarified in the next draft.	

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Emines	Whole doc			There is legitimate debate amongst competent and experienced experts in the field as regards the application of partial and/or overall factors of safety considering appropriate treatment of uncertainties in the design.	We would prefer to avoid the term " <i>factors of safety</i> ". Suggest this Standard at least aim for consistency with latest CDA recommendations on this point.	
Emines	Foreword	1 st line			Depending on definition of catastrophic failure, this should probably read: "have devastated ,, and destroyed" or "can devastate ,, and destroy"	
Emines	Foreword			The reference to consumers being able to use responsibly sourced mining products risks being disingenuous or even patronising, because consumers are still far from being able to make such choices and this standard is not going to enable them to make such choices.	Suggest to delete the reference to consumers' choices.	
Emines	Overview	Topic Area 2		Without wishing to downplay the importance of respecting Human Rights, Human Rights considerations should be an integral part of the <u>updated</u> knowledge base & alternatives analysis throughout the life cycle of the facility.	Recommend that Topic Area 2 be merged with Topic Area 1.	
Emines	Overview	Topic Area 3		Whilst supporting the spirit of this requirement, without a de minimus threshold this will create	Recommend that a <i>de minimus</i> threshold be included in the definition of "tailings facility" and that the last sentence of the paragraph be	

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² **Type of comment: ge** = general **te** = technical **ed** = editorial **NOTE** Columns 1, 2, 4, 5 are compulsory.

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				unnecessary paperwork for the vast majority of quarry sites for example. Additionally, we are concerned that the casual out- of-context reference to the Observational Method in this overview could inadvertently misrepresent the full range of monitoring that is required for design basis/intent verification in some cases.	deleted. The <i>de minimus</i> threshold should relate to consequences of failure, but also the likelihood of catastrophic failure.	
Emines	Overview	Topic Area 4		What is it that has been deemed here to be essential?: standards for critical systems? ok standards for critical processes? ok a Tailings Management System? depends on risk independent reviews? depends on risk	Clarify in the text that standards for critical systems and processes are essential, but that the need for a Tailings Management System and/or independent reviews depends on residual levels of risk.	
Emines	Overview	Topic Area 5		Whilst emergency preparedness is essential, the stated objective of this standard is to prevent harmful failures. It would be unfortunate if the Standard were perceived to be expecting and planning for failures.	Suggest that consideration be given to keeping this Topic Area brief in the Standard itself - with details of capacity-building and long-term recovery being provided in supporting guidance for relevant professionals.	
Emines	Overview	2 nd -last line		For such disclosure to be effective a <i>de minimus</i> threshold should be considered.	Consider setting a <i>de minimus</i> threshold for disclosures described in Topic 6.	
Emines	A Systems Approach	2 nd para		Some flexibility should be provided for the presence and form of any TMS and/or ESMS.	To avoid being too prescriptive with respect to form, "a" or "an" would be preferable to "the".	
Emines	Role of the State	2 nd para		Maybe not all States have the capacity to "undertake" all inspections themselves, but surely all	Clarify that all States are expected to at least set up independent programmes.	

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				States should have the capacity to "set up an independent [] programme"?		
Emines	Role of the State	Last para		Due to the fact that many States lack the capacity - and/or are unlikely ever to attain it - many regulators will choose to include contractors in their oversight & enforcement programmes.	Change this text to "implement", rather than "carry out".	
Emines	Role of Other Stakeholders	2 nd para		Let's look towards a more performant future.	Change "can sometimes be" to "have sometimes been".	
Emines	Role of Stakeholders	Last para		"meaningful" is hard to define, but probably difficult if stakeholders are not sufficiently informed.	Change "a meaningful role" to "an informed role".	
Emines	Role of Stakeholders	Last para		If we wish local communities to insist on strict compliance with the Standard, then it must allow for implementation of the best site-specific solution for each facility - otherwise, we will be encouraging communities to act against their own interests.	Ensure that the Standard allows throughout for implementation of the best site-specific solution for each facility.	
Emines	Implementation	2 nd sentence		is this intended to cover any operation wishing to claim compliance with the Standard? Is the Expert Group recommending establishment of a permanent agency to oversee this? Or is the standard intended to serve the work of any inspector going forward? Will reference to the standard remain voluntary outside of ICMM corporate membership, or is the Expert Group seeking ways to make it mandatory? By what means?	Issues to be clarified in "the Report": We do not believe this standard should create its own permanent oversight body. Euromines members have credible 3rd party assurance/audit processes in place by other means where warranted (e.g. competent authority inspections, European &/or international certifications, Independent Tailings Review Boards (ITRBs), or related stewardship processes that include	

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					independent review etc.) and some duplication already exists.	
Emines	Implementation	Last bullet		Which process should include meaningful public engagement? Those related to the life cycle of new tailings facilities? Those related to first implementation at existing facilities? The process of independent assurance?	Clarify that first implementation at each life cycle phase of the tailings facility should include meaningful public engagement (but not necessarily the process of independent assurance).	
Emines	Req 1.3	1 st sentence		"flow failure" is not defined.	Include "flow failure" in the Glossary	
Emines	Req 1.3	Footnote 7		The overall aim is prevention of catastrophic failure of tailings facilities - regardless of the variable circumstances listed in this footnote.	For each of the listed pieces of information to remain in the standard, we think it should be demonstrated how it pertains directly to tailings facility design, emergency preparedness and emergency response: specifically how each piece might itself drive modifications to such designs and plans.	
Emines	Req 2.2	All		Not all tailings facilities warrant such independent review. Independent Review should not be the primary tool, but rather secondary to strong internal governance and management.	Some <i>de minimus</i> threshold is required here - based on consequences of failure.	
Emines	Req 2.2	All		An independent technical reviewer may also be a regulator.	For clarification add: "or the regulator".	
Emines	Req 2.3	Last sentence			"management plans <i>for planned activities</i> ". E.g., construction and filling of tailings facilities. I.e., not for impacts of unplanned catastrophic failures.	

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Emines	Req 2.3	Footnote 11		This appears to be a misunderstanding of the Mitigation Hierarchy as borrowed from the field of biodiversity management. The MH is applied to planned activities - not unplanned catastrophes. It is likely that rights to compensation are already established in the laws of mining jurisdictions and (self-)insurance against such liabilities exists.	For the purposes of this Standard, which aims first & foremost to prevent catastrophic failure of tailings facilities, a compensation requirement in case failure occurs can be acknowledged, but up-front preparation and assurance of such compensation should not be a requirement. Non-financial compensation for residual impacts of planned activities may be required by some regulators where appropriate.	
Emines	Req 2.4	1 st sentence		Material changes to the tailings facility are likely to be far more frequent than material changes to the social or environmental conditions.	So, this requirement should be limited to material changes to the social or environmental conditions.	
Emines	Req 2.5	All		For tailings facilities with the highest Consequence Classifications, we support financial assurance to cover the cost of planned obligations associated with premature closure due to bankruptcy. This should not be confused with insurance to cover liabilities arising from unplanned incidents or activities.	Replace the term "periodically" with " <i>after any</i> <i>changes associated with the closure of a</i> <i>mining waste disposal facility</i> ". Given the frequent confusion that surrounds financial assurance, some definitions or explanations might be warranted.	
Emines	Req 2.6	All		This text illustrates the point made in our previous comment. We do not understand "insurance" and "financial assurance" to be interchangeable terms. It is acceptable to require financial assurance to cover planned activities in case of bankruptcy and (self-)insurance to cover liabilities arising from	Financial assurance to cover planned activities in case of bankruptcy and (self-)insurance to cover liabilities arising from unplanned activities should normally be understood as separate and complementary requirements. However, this Requirement is not related to the	

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				unplanned activities, but these should be clearly described as separate and complementary.	prevention of catastrophic failure of tailings facilities, so we suggest deleting it.	
Emines	TOPIC II	All		Without wishing to downplay the importance of respecting Human Rights, Human Rights considerations should be an integral part of the <u>updated</u> knowledge base & alternatives analysis throughout the life cycle of the facility.	To maintain focus on preventing catastrophic failure and its consequences, the whole of TOPIC II (Principle 3) should be integrated into Principles 1 & 2.	
Emines	Req 3.1	Footnote 13		In the EU, human rights due diligence occurs during the State-mandated processes applicable to mining, including as part of the permitting of the operation, rather than a separate process.	Add to Footnote 13: "Human rights due diligence may occur during the State-mandated processes applicable to mining, including as part of the permitting of the operation, rather than a separate process."	
Emines	Req 3.3				Shift under Principle 2 and change from "could result in loss of life" to "could include loss of life"	
Emines	Principle 4			Presumption of 'Extreme' classification is not realistic. Immediate rebuttals are likely to be obvious for the vast majority of tailings facilities covered by the scope of this standard.	This Principle should be discussed with stakeholder experts and modified.	
Emines	Req 4.1			If one considers a Source-Pathway-Receptor model for Consequences, this Requirement seems unduly and exclusively focussed on the potential Source, whereas it should also be possible to take more efficient measures to eliminate Pathways &/or	This Requirement should be discussed with stakeholder experts and modified.	

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				Receptors. E.g., set and enforce restrictions on residential development within the inundation zone.		
Emines	Req 4.1	c)		"non-credible flow failure state" is not understandable in its current form.	A definition or explanation is required.	
Emines	Req 4.2			It is not realistic to require this of all tailings facilities regardless of risk. Immediate rebuttals are likely to be obvious for the vast majority of tailings facilities covered by the scope of this standard.	This Requirement should be discussed with stakeholder experts and modified. Any new wording should focus on the intent rather than a specific mechanism.	
Emines	Req 4.3	2 nd sentence		This does not seem proportionate or realistic. What if such an upgrade is not necessary or warranted as per an appropriate assessment of risk? Perhaps in many cases, "upgrade" would simply make no sense.	This Requirement should be discussed with stakeholder experts and modified. Any new wording should focus on the intent rather than a specific mechanism.	
Emines	Req 5.3	1 st sentence		"Consequence Classification" is not defined.	Include a reference to the relevant Matrix by way of definition.	
Emines	Req 6.2	All		This text is not understandable to non-experts.	Ensure that it is unambiguous for those that are experts in the field. Perhaps this will eventually require a reference to supporting Technical Guidance.	
Emines	Req 6.3	1 st sentence		How are "conservative design criteria" to be defined?	Either avoid term "conservative" or give guidance as to what shall be considered "conservative".	
Emines	Req 6.3	1 st sentence		Factors of Safety must be fit for purpose.	If "factors of safety" is kept as a term, suggest replacing "to" with "that", so that it is clear.	

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Emines	Req 7.1	Last sentence		Some flexibility should be provided for the presence and form of any TMS and/or ESMS.	To avoid being too prescriptive with respect to form, "a" or "an" would be preferable to "the".	
Emines	Req 7.2	CDIV		Not yet included in Glossary.	Add "Construction versus Design Intent Verification (CDIV)" to Glossary and define in terms of intent rather than a specific mechanism.	
Emines	Req 7.4	1 st sentence		There is no need to update OMS Manual every year, it should be updated in the event of significant structural and functional changes.	Delete word "annually"	
Emines	Req 7.4	All		Some flexibility should be provided for the presence and form of any TMS and/or ESMS.	Add "Operations, Maintenance and Surveillance (OMS) Manual" to Glossary. To avoid being too prescriptive with respect to form, "a TMS" would be preferable to "the TMS".	
Emines	Req 7.5	All		Catastrophic failure may not even be a possibility at all facilities falling within the proposed definition of "tailings facility".	Modify the requirement to clarify that it does not apply to tailings facilities with lower Consequence Classifications or where catastrophic failures is not a possibility	
Emines	Req 7.8	1 st sentence		This seems too vague and introduces a risk of reliance on insufficiently qualified or expert reviewers. Lack of expertise may lead to misinterpretation of information.	Tighten up requirements for expert reviewers, so that they remain relevant to tailings management, and modify the requirement to clarify that it does not apply to tailings facilities with lower Consequence Classifications or where catastrophic failures is not a possibility.	

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Emines	Principle 8	Title			Should also be "to minimise risk" as for other Principles.	
Emines	Req 8.1	Whole sentence		No monitoring method can give adequate warning of sudden failure once "liquefaction potential" is established, but with highly knowledgeable professionals the Observational Method can give adequate warning that conditions are deteriorating towards attainment of "liquefaction potential", before it is actually established. For successful implementation of the OM, it is necessary that all relevant failure modes are identified, and corresponding indicators and criteria incorporated so that the operator is observing the right things.	Change to "that incorporates full implementation" and " credible potential failure"	
Emines	Req 8.2	Whole text		'	It should be clarified that public disclosure of decisions should be in accordance with the law of the country concerned.	
Emines	Req 8.3	Whole text		We wonder if roles are confused here?	Suggest the Designer should recommend frequency, and the EOR can provide comments and suggest improvements.	
Emines	Req 8.4	Whole text		It is not acceptable, that requirements on corporate management (tools), disclosure and governance are in principal the same for all kind of tailings facilities regardless of consequence classification or risk.	Minimum quarterly reporting should be limited to tailings facilities with higher Consequence Classifications.	

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Emines	Principle 9	Title		This is not a sufficiently clear statement of the principle.	On first reading, it should be immediately obvious what "elevate" is intended to mean in this context.	
Emines	Req 9.1	1 st sentence			Change to " <i>credible</i> potential failure"	
Emines	Req 9.1	Last phrase		Risk is a combination of consequences and likelihood.	This should be to minimise the consequences, the likelihood or both.	
Emines	Req 9.2	1 st phrase			Change to " <i>credible</i> potential failure"	
Emines	Req 9.2	2 nd -last sentence		Risk is a combination of consequences and likelihood.	This should be to minimise the consequences, the likelihood or both.	
Emines	Principle 10	Title			should add "for all stages of the tailings facility life cycle" as for other Principles.	
Emines	Req 10.1	All		Catastrophic failure may not even be a possibility at all facilities falling within the proposed definition of "tailings facility".	Modify the requirement to clarify that it does not apply to tailings facilities with lower Consequence Classifications or where catastrophic failures is not a possibility	
Emines	Req 10.2	1 st sentence		Risk is a combination of consequences and likelihood.	This should be to minimise the consequences, the likelihood or both. Modify the requirement to clarify that it does not apply to tailings facilities with lower Consequence Classifications or where catastrophic failures is not a possibility.	
Emines	Req 11.1	All		It should not be assumed that all tailings facilities will be required to have an ITRB.	Modify the requirement to clarify that it does not apply to tailings facilities with lower	

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					Consequence Classifications or where catastrophic failure is not a possibility.	
Emines	Req 11.1	1 st sentence			Delete the word "regularly" in the first sentence, and add that the Risk Assessments should be updated in the case of monitored changes influencing the management of extractive waste.	
Emines	Req 11.4	Last phrase		Due to the complexity of some facilities, conducting a dam security review (DSR) can require the cooperation of an interdisciplinary expert team that is familiar with the specificities of the facility. Even with the greatest qualification, expertise and commitment, it can in these exceptional circumstances be very difficult for an expert to get sufficiently acquainted with the site.	Change "cannot conduct a subsequent" to "shall not [or must not] conduct more than two consecutive DSRs on the same facility unless, for a facility with a high Consequence Classification, the reviewer is part of an interdisciplinary team through which a permanent continuity of independent technical expertise is ensured overall".	
Emines	Req 11.5	1 st sentence		It should not be assumed that all tailings facilities will be required to have an ITRB.	Change "the ITRB" to "an ITRB".	
Emines	Req 11.5	Last sentence		This element of proportionality needs to be visibly reflected in all other parts of the Standard.	Incorporate the same phrase "For tailings facilities with 'Very High' or 'Extreme' Consequence Classification" into Requirements 2.2, 2.5, 10.2 and 17.3.	
Emines	Req 12.4	Last phrase		Though the intention is supported, this phrasing of the Requirement is likely impractical.	For practical reasons, change "not influenced" to "not unduly influenced"	
Emines	Req 12.5	1 st sentence			Change to "develop and fully implement"	

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Emines	Principle 13	Title			Should be changed from "Develop" to "Establish and maintain"	
Emines	Req 13.2	1 st phrase			Change to "Incorporate workers' relevant experience-based knowledge"	
Emines	Req 13.3	1 st phrase			Suggest examples of successful mechanisms should be included in supporting guidance.	
Emines	Principle 15	Last phrase		The term "best practice methodologies" is problematic because what works best in one regional context could be particularly ineffective in another regional context.	This should be rephrased to something like "to minimise consequences including violation of human rights" or "to minimise risk".	
Emines	Req 15.1	Footnote 30		Most tailings contain extremely minimal quantities of "chemicals", in contrast to naturally occurring minerals (which may themselves by quite hazardous).	For transparency and more informed tailings management, delete "chemical".	
Emines	Req 15.2	Footnote 31		There will not be risk of loss of life at all tailings facilities.	change "due to the", to "when there is".	
Emines	Req 15.3	Last sentence		Plans don't assess, assessments do.	Change to "The capacity and capability of emergency response services shall be assessed and the Operator shall make up for any gaps in its EPRP."	
Emines	Req 15.3	Footnote 32		Presumably, the Operator will not "provide" gaps, but rather fill them, but operators cannot be responsible for the capacity of the public sector agencies.	See above text proposal with a view to deleting this footnote: "The capacity and capability of emergency response services shall be assessed and the	

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					Operator shall make up for any gaps in its EPRP."	
Emines	Req 16.1	All		Given the aim to prevent catastrophic failure of tailings facilities, it is not clear why this Standard should require in-depth preparations for long-term recovery (as opposed to short-term emergency response). Liability law and insurance are par for the course.	Detailed engagement such as this is may be more useful if performed only when & if necessary.	
Emines	Req 16.3	All		Given the aim to prevent catastrophic failure of tailings facilities, it is not clear why this Standard should require in-depth preparations for long-term recovery (as opposed to short-term emergency response).	Actual development of an RRP may be more useful if performed only when & if necessary, but perhaps the Standard should require that Operators have materials at hand that can quickly guide the process of developing an RRP if one unfortunately becomes necessary.	
Emines	Principle 17	Title		The word "decisions" is problematic because it can be understood to refer to decisions of the regulator, not all of which can be made public depending on the jurisdiction. Principles of public access to information on decisions are often set out in national law and vary across jurisdictions.	It should be clarified that public disclosure of decisions should be in accordance with the law of the country concerned.	
Emines	Req 17.3	1 st phrase		"and participate in" is too open-ended, potentially embroiling the whole industry in an endless procession of new and competing initiatives.	Should change to "participate in at least one of the available,"	
Emines	Glossary	Accountable Executive		Ownership is a fundamental building block of any strong governance model. It should be the owners	Replace "A member of senior management", with " An appropriately designated person	

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				that make sure they have put in place the relevant structure and proper safeguards.	who may be a Director, an Officer, Executive, or Senior Manager, according to the Owner's organizational structure"	
Emines	Glossary	Alternatives Analysis		For practicality, this definition needs to be limited to a reasonable scope - not left open-ended by use of the term "all"	Delete all instances of the word "all".	
Emines	Glossary	Best Practices		Inclusion of the phrase "suitable for widespread adoption" is not entirely appropriate. Optimal results at any given site (or in any given social context) are likely to involve site-specific approaches consistent with widespread overarching objectives.	Modify definition of "best practices"	
Emines	Glossary	EOR		Use of "The" implies that one single Engineer must be responsible for the whole list of confirmations. In reality, different individuals may occupy the EoR role over time.		
Emines	Glossary	Robust Design		The phrases "the factor of safety against each of the potential failure modes"; and "thresholds of deformation that significantly affect the facility performance" are not understandable.	Clarify these phrases.	
Emines	Glossary	Robust Design			Make the last sentence the first, so that it forms an opening statement to the definition.	
Emines	Glossary	Senior Technical Reviewer		The last phrase of this definition could be misconstrued. Presumably, there is a core set of	Tighten up requirements to be an STR, so that they remain relevant to tailings management.	

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				topics (ie tailings), in which the STR must have the required expertise.		
Emines	Glossary	Trigger Action Response Plan		The proposed definition is generally descriptive, but it does not specify what the TARP shall look like in the context of this particular Standard.	Further define the TARP.	
Emines	Annex 2	1 st sentence		We understand this to mean that when assessing all credible failure modes possible at the site, the highest severity rating should be quoted for the facility as a whole, but this needs further explanation to be clear to all readers.	Explain that "worst-case failure" refers to the credible failure mode possible at the site that is assessed to have the most severe consequences compared to other credible failure modes possible at the site.	
Emines	Annex 2	Last line of 1 st para		"The types of losses described above do not include the consideration of economic and reputational losses to the mining company itself."	Consider including the consideration of economic and reputational losses to the mining company itself in the types of losses discussed in this Annex.	
Emines	Annex 2	Last para of page 29			Not only the design, but certain management practices should also be less restrictive for the lower Consequence Classifications (e.g., ITRBs and Financial Assurance). See, for example, the proportionate approach taken by the EU Directive 2006/21/EC to regulation of extractive waste facilities.	
Emines	Annex 2	First para of page 30		See comments to Requirements under Principle 4.	Whilst the recognition that human settlements cannot always be 100% prevented in all jurisdictions is appreciated, this Standard	

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					should give more allowance to strategies that do just that in places where it is feasible (as described two paragraphs down on page 30).	
Emines	Annex 2	2 nd para of page 30		Stringent design criteria alone are not enough in all cases, but in some cases they can be - due to the intrinsically low-risk nature of some mining projects at the outset.	So, where design does achieve acceptably low levels of residual risk it should not be required, for example, to have ITRBs etc.	
Emines	Annex 2	4 th para of page 30		This text does not seem proportionate or realistic. Increased consequences of failure over time are a possibility, but not for all tailings facilities . What if an upgrade is not necessary or warranted as per an appropriate assessment of risk? Perhaps in many cases, "upgrade" would simply make no sense. Not all tailings facilities present hazards indefinitely. It could be difficult and/or costly to upgrade later if that is not considered during initial planning and design, but consideration during initial planning & design can only do so much and at some point it will even be less difficult or costly to upgrade or "renovate" the facility later if needed.	The Standard needs to ensure that the evolution of circumstances around any tailings facility does not result in introduction of uncontrolled risks, but designing absolutely all tailings facilities for any hypothetical high- consequence event in future is not an acceptable way to do it. Perhaps instead the Standard should say that long-lived facilities may need to be "renovated" to respond to changing circumstances such that lower Consequence Classifications are restored (e.g., by re-working, re-contouring, buttressing, strengthening etc.). Certainly, during the operational phase, this Standard should allow for measures that eliminate pathways &/or receptors of Consequences, rather than only influencing the potential source.	

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Emines	Annex 2	1 st two sentences of last para		Some of the Requirements - as presented in this draft - do not take sufficient account of the probability side of the risk equation as explained here - or indeed the existence of lower Consequence Classifications.	Revisit all Requirements to consider whether & how they should apply to tailings facilities with lower Consequence Classifications.	
Emines	Annex 2	CC Matrix		The weighting of consequences does not correspond with current best practice.	The matrix should be reviewed and adjusted to directly align with ICOLD.	
Emines	Annex 3	Diagram		Annex 3 does not take into account the differences between organizations. The model creates a parallel structure that will not improve necessarily efficiency and security overall.	Delete Annex 3.	

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