

Global Tailings Standard – Comments on Draft for Public Consultation

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1 - General Comments

This memorandum was prepared by the Energy Products team to provide input to the development of the proposed Global Tailings Standard.

The proposed standard represents a well thought integration of leading tailings management standards and guidelines in the industry, in an abbreviated format. Due to the abbreviated format there will need to be significant work to develop implementation guidelines, and this process is anticipated to take significant effort and time, potentially through the end of 2021.

We highlight the importance the Global Tailings Review has placed on communicating that harm to people and human fatalities must become unacceptable.

The overarching issues identified by the team include the following:

- Implementation timeline to take several years and up to a decade or more. The Standard does propose a step change in the management and disclosure expectations for Operators and requires very significant modifications on the management structure of Operators, related to mine waste management personnel, and on publication of design and review information.
- The Standard and the certification process should provide viable enforcement mechanisms to promote its acceptance and make it valuable to Operators.
- The initial part of the implementation process should concentrate on risk management by requiring mining companies to evaluate their facilities and develop plans to decommission or improve facilities that are sub-standard or marginally stable.
- Costs of implementation are likely to be significant and are likely to result in varying levels of acceptance outside of ICMM membership, with less acceptance expected from mid-tier and smaller Operators.
- The Standard does not address the short and mid-term needs of community and financial stakeholders related to information availability. There needs to be a phased approach for implementation, starting with the disclosure aspects, in particular for the financial stakeholders

(such as Swiss Re Corporate Solutions) that are already working under confidentiality mechanisms.

- There is no definition of the Role of Industry stakeholders. The mining industry is best positioned to mandate implementation of the Standard and to develop certification programs, and to develop incentives for compliance with the Standard, so that the Financial industry stakeholders can rely on one source of information without developing separate and costly schemes.
- The Role of the States is adequately described, but most States/Countries do not have the resources to implement oversight programs that comply with this Standard. Additionally, the dam safety programs in most jurisdictions are codified in local regulations and laws. Therefore, the Co-Conveners shall not rely on the States for implementation and this program should be initially rolled out as an industry-led initiative, allowing States to follow on a longer timeline.
- The proposed accountability of the Board of Directors is likely problematic due to the non-executive nature of the function. This definition may remain as-is with the definition of Accountable Executive, likely to be the Chief Operations Office or similar.
- The proposed insurance or assurance requirement in 2.6 is likely to generate significant discussion. It is not clear if the Standard recommends third-party liability and what mechanisms can be available across the marketplace to meet the potential demand, in addition to potential industry concerns about providing financial assurance/bonding in different States/Countries.

2 - Comments on Document Sections/References

- Page 1 – Overview of the Standard, Paragraph 2 (Topic Area 1 discussion) – Include references to Earthquake studies for design, and use of Satellite technology to identify vulnerable communities, ecosystems and assets downstream of facilities.
- Page 4 – The Role of Other Stakeholders – Add "Property and Business Continuity" to Insurance company role.
- Page 4 – The Role of Other Stakeholders – Insurance companies cannot closely monitor tailings facilities. Suggest change to "incentivizes insurance companies to do business with Operators that adopt appropriate standards of care of their facilities and work proactively to minimize the potential for failures".
- Page 4 – The Role of Other Stakeholders – Insurance – Could we put an emphasis on operators to provide external reviews of TSFs as part of their property insurance renewal or whenever any material changes to the design and operation of the TSF occurs?
- Page 4 – The Role of Other Stakeholders – Include the Role of the Mining Business Community at large (i.e. ICMM) on self-regulation and penalties for Operators that do not comply with Standards.
- Page 6 – Preamble – Add reference to Annex 2 Table due to use of new Extreme class definition throughout.

- Page 6 – Requirement 1.1 – Consider definition of "international best practice", as points 4 & 5 do not really help with the clarification as to what is accepted as "best" practice.
- Page 6 – Requirement 1.2 – Add definition/detail on site investigation scope and suitability for purpose.
- Page 6 – Requirement 1.3 – Add Owner shall demonstrate if there is no potential for flow failure using a study or report produced by specialist entities.
- Page 6 – Footnote 3 – Refer to Annex 2 for clarity on classification.
- Page 7 – Requirement 1.4 – Add Owner shall identify impacts to own property and business continuity in surveys.
- Page 7 – Requirement 2.2 – Appropriately registered engineer? A PE engineer has to act in a professional manner so stating no conflicts of interest insinuates that an engineer would consider other aspects instead when if they are registered, they are mandated to act ethically.
- Page 7 – Requirement 2.4 – Add "Periodically update".
- Page 8 – Requirement 2.6 – Clarify if the requirement is related to third party liability (Owners may choose to self-insure risks related to own property).
- Page 10 – Requirement 4.1, a) – Clarify the definition of "Impactful Flow Failures" – a facility classified Low to Very High could be susceptible to flow failures meeting the consequence definition.
- Page 10 – Requirement 4.3 – If the facility cannot meet the design criteria for a facility classified as "Extreme" it may be argued that closure of the facility could be the best approach.
- Page 11 – Requirement 5.2 – Add Owner shall verify and communicate that there is no meaningful risk of failure of the facility by overtopping.
- Page 11 – Requirement 5.4 – Add that risk assessments should involve independent professionals.
- Page 11 – Requirement 6.2 – Emphasize higher Factors of Safety are required for higher variability and uncertainty in material strengths.
- Page 11 – Requirement 6.4 – And must be maintained for future reference - for me, it seems like this original design information is often too hard to find. Should be like a HAZOP - always maintained somewhere on site.
- Page 12 – Requirement 7.8 – Consider relevant Professional registrations.
- Page 13 – Requirement 8.3 – Add that performance outside of expected ranges that results in reductions of Factors of Safety below regulatory thresholds and international standards shall be disclosed to the Public and relevant stakeholders directly.
- Page 14 – Requirement 9.2 – Minimization of consequences is likely impractical without serious business and community impacts, revise to say Board or senior management to evaluate alternatives to lower the consequence classification and publish the results of the evaluation for disclosure to stakeholders.

- Page 14 – Requirement 10.2 – Definition of Accountable Executive likely needs some link to definition of Standard of Care.
- Page 14 – Requirement 10.3 – Should there be comments about whether this RTFE is a company employee or a 3rd party?
- Page 14 – Requirement 10.3 – The RTFE definition of accountability may need to refer to implementation of Standard of Care and implementation of TMS rather than "integrity of the facility".
- Page 15 – Requirement 11.1 – Provide for disclosure of any notable issues to regulatory authorities and financial stakeholders, including insurers.
- Page 15 – Requirement 11.1 – Add use of independent experts in team and submittal of assessments to Accountable Executive.
- Page 15 – Requirement 11.2 – Develop and implement an internal audit framework suitable for verification of implementation of TMS.
- Page 15 – Requirement 11.5 – Clarify if the requirement is for the Owner to appoint a team of multiple people to provide the reviews for Very High and Extreme class facilities.
- Page 16 – Requirement 12.1 – Add requirement for EOR to be experienced in use and application of international design practices.
- Page 17 – Requirement 14.1 – Add "relevant stakeholders" – insurance community needs to be informed of developing issues.
- Page 17 – Requirement 14.2 – Direct line/reporting to Accountable Executive.
- Page 18 – Requirement 15.2 – Evaluate the use of early warning devices.
- Page 18 – Footnote 33 – Indicate who it should be Disclosed to.
- Page 19 – Requirement 16.5 – Issue to the public reports related to failure investigations as soon as possible and no later than one year after an incident.
- Page 20 – Requirement 17.1 – Need better definition of "relevant data and information" for public disclosure – development of standard formats or similar – as all design and evaluation reports are likely impractical to provide in the near future.
- Page 15 – Requirement 17.2 – Add "all design, evaluation and review information related to dam safety shall be available for review by any party that is liable for damages resulting from dam failures".
- Page 29 – Annex 2 – Consider implementation of the ICOLD version to facilitate adoption by National organizations.

Revision History

Revision	Date	Responsible
Issued for RES Mining Team Review – rev 01	5 Dec 2019	D Landers
RES Mining Team draft, Issued for UW comments – rev 02	6 Dec 2019	Mondragon / Lakin-Hall
Final – with UW comments – rev 03	20 Dec 2019	D Landers
Final – with disclaimer	15 Apr 2020	D Landers