

Earthworks' Comments on SASB Metals & Mining and Coal Operations Standards

March 15, 2021

Thank you for the opportunity to comment on the proposed changes to the SASB Metal & Mining and Coal Operations Standards. Our submission includes introductory comments, general comments on standard setting for safer tailings management, responses to questions posed by SASB, and specific comments by section.

I) Introductory comments

We congratulate SASB on the extensive effort made to update the Operations Standards based on a heightened understanding of tailings facility risks and best practices that have emerged over the last two years. The investor community has shown that it has an important role to play in reducing risk and ensuring safer tailings management. We appreciate the opportunity to provide feedback on the proposed standards and welcome future dialogue on this issue.

In 2020, Earthworks and 150 frontline communities, technical experts, and civil society organizations published [Safety First: Guidelines for Responsible Mine Tailings Management](#), which outlines 16 guidelines that any tailings management standard should include to ensure the best and safest practices are employed, with respect for affected communities and corporate accountability. We hope that *Safety First* can be a resource to SASB in the work to support safer tailings management.

II) Setting standards for safer tailings management

Any tailings management system must establish safety as the primary consideration in design, construction, maintenance, and closure of tailings facilities. Mining companies must make an affirmative commitment to safety. Without this commitment, cost will drive the tailings management process, putting people and the environment in danger and increasing the risk of catastrophic failure. Unfortunately, economic concerns and short-term financial performance are often prioritized over operational risks. A recent review of perceptions of risk in Vale's corporate culture between 2015 and 2019 concluded, "the focus on short-term financial results can generate strong biases in the perception and assessment of environmental risks, which can not only cause massive social and environmental harms, but also, paradoxically, the destruction of shareholder value in the long run."¹

While the mining industry has access to safer and more innovative technologies, it continues to rely on technologies that have been shown to be more risky. An analysis of disclosure data on 1,743 tailings facilities indicated that while so-called "dry stack" facilities have the lowest rate of reported stability issues (six times less than upstream dams), only 10 "dry-stack" facilities have been built over the last decade, and a single international mining company operates, or is the majority shareholder in, 72% of all the dry-stack facilities in the data set.² This is reinforced by an analysis of innovative tailings technology in *Towards Zero Harm: A Compendium of Papers Prepared for the Global Tailings Review*, that states "a fundamental barrier to the implementation of innovative tailings management at those

¹ Macchione Saes, B, Muradian, R., 2021 "[What misguides environmental risk perceptions in corporations? Explaining the failure of Vale to prevent the two largest mining disasters in Brazil](#)" ScienceDirect. p 8.

² Franks, D.M., Stringer, M., Torres-Cruz, L.A. *et al*, 2021. "[Tailings facility disclosures reveal stability risks](#)" *Sci Rep* 11, 5353.

sites that would benefit from these technologies is people's resistance to change, which is often disguised as unsubstantiated claims about perceived high costs, technical obstacles and uncertainty."³

Investors, standard-setters, and regulators must insist that the mining industry think beyond their short-term bottom line and make the necessary changes for safer practices. While the proposed changes in the SASB Operations Standards are an improvement, it is important to provide investors with the tools they need to assess risk and help the industry move towards better practices.

Specifically, in order to understand the risk exposure and the risk likelihood associated with a mining company's tailings storage facilities, it is important to understand a number of factors:

- The consequences of dam failure
- The annual probability of dam failure (including how it was calculated)
- The factor of safety for the dam (including how it was calculated)
- The current conditions at the dam (including construction type)
- The probable failure analysis of a dam break

Unfortunately, the Tailings Facility Construction and Performance Review (TFCPR) may not be comprehensive enough to provide that level of detail for risk analysis, especially given the potential for variation between these types of reports on a company-by-company basis. Other documents, like a Dam Safety Review (required at least every five years in the Global Industry Standard on Tailings Management (GISTM) [Requirement 10.5]), and the Dam Breach Analysis or Inundation Study (required by the GISTM upon construction and updated with material changes to the dam [Requirements 2.3 & 2.4]), can provide more information and detail on potential risk.⁴ While we understand the need to streamline the process and reduce the reporting burden for companies, we are concerned that relying on the TFCPR will not provide enough information to investors to adequately assess facility risk.

Understanding the points bulleted above, and the underlying data that informs them, is complicated and may not be feasible for investors to implement themselves. However, access to this information provides investors with the tools necessary to assess risk if they have concerns about a particular facility, even if it is not analyzed for each tailings storage facility in their portfolio.

III) Responses to questions posed by SASB

Do you support the expanded approach on tailings storage facilities management, including the creation of its own disclosure topic?

Earthworks agrees that the expanded approach, including a separate disclosure topic, provides investors with more information to help assess risk for tailings storage facilities. Given the differences between the nature of the information collected under materials management and facilities management, the separation of the disclosure topics is logical.

Do you agree that presenting tailings storage facilities inventory in a table format would be more useful than disclosure that is aggregated at the company level? Do you agree that company disclosure preparation costs for the table would not be significantly greater than the alternative?

³ Williams, D.J., 2020. "[CHAPTER VI: The Role Of Technology and Innovation in Improving Tailings Management](#)" *Towards Zero Harm: A Compendium of Papers Prepared for the Global Tailings Review*. p.81.

⁴Global Tailings Review, 2020. [Global Industry Standard on Tailings Management](#).

Earthworks strongly supports requesting disaggregated data by tailings facility. Aggregate data do not provide the level of specificity necessary to adequately understand the complex tailings storage management systems used by mining companies and their associated risks. Disaggregated disclosures allow investors to see variance between facilities, and identify risk on a facility level.

IV) Specific comments by section

Rationale for the tailings storage facility inventory table metric

Pg. 25 paragraph 59- Recommendation: Require Dam Breach Analysis

Paragraph 59 summarizes feedback from investors about their interest in seeing potential remediation costs for each tailings facility in the disclosure. Requiring operators to disclose a *tailings facility breach analysis* would help investors identify the potential scope and scale of remediation. The *tailings facility breach analysis* is mandated in the GISTM (Requirements 2.3 & 2.4) and must estimate the physical area impacted by a potential failure. To comply with the GISTM, the analysis for 'High', 'Very High' or 'Extreme' Hazard Classifications should include estimates of the physical area impacted by a potential failure, flow arrival times, depth and velocities, and depth of material deposition. While a financial estimate is not necessarily included in the analysis, it would provide investors with necessary information to at least understand the magnitude and effects of a potential facility failure.

EM-MM-540a.1.

2- Recommendation: Include construction method to the list of disclosures for each tailings facility. Understanding the construction method used can help identify tailings facilities that have potential for greater stability risk. A recent study in *Science Direct* documented the relationship between tailings facility construction type and the incidence of stability issues.⁵ It found the likelihood of a stability issue in active upstream facilities is twice that of active downstream facilities and six times that of active dry-stack facilities. Providing this information should not be a significant additional burden beyond the other criteria requested by SASB. This information is required in the disclosures provided to the [Global Tailings Portal](#).

EM-MM-540a.2.

2.6- Strongly support: We strongly support the inclusion of financial assurance information in the description of tailings management systems and governance structures. We recommend adding detail to specify the type of assurances or bonds used.

EM-MM-540a.3.

2.1- Recommendation: Include stakeholder participation in the disclosure list. It is imperative that Emergency Preparedness and Response Plans (EPRP) are discussed and prepared jointly with downstream communities and mine workers, and in collaboration with first responders, local governments and other stakeholders. Affected stakeholders must be able to provide the critical information and insight necessary to ensure the most practical, efficient, and effective EPRP. By asking whether or not EPRPs have been

⁵ Franks, D.M., Stringer, M., Torres-Cruz, L.A. *et al*, 2021. "[Tailings facility disclosures reveal stability risks](#)" *Sci Rep* 11, 5353.

prepared with multi-stakeholder participation, investors will have insight into the quality of the EPRPs. This could be a (Y/N) question.

Finally, Earthworks recommends including disclosure requirements on board of directors oversight and community consent for tailings facilities.

-The Topic Summary for the Tailings Storage Facilities Management section (pg 35) states: "Companies that adopt robust practices to maintain the safety of TSFs may do so through assigning accountability for tailings management at the highest levels of the company..." To ensure accountability at the highest levels, the corporate board of directors, as the body that is ultimately responsible for the well-being of the operating company, must bear the prime responsibility for the safety of tailings facilities, including the consequences of dam failures. Including disclosure data on whether the Board of Directors 1) reviews and approves tailings facility safety audits, and 2) includes at least one member with specialization in tailings management, would help investors understand if the board of directors is monitoring and accountable for the safety of tailings storage facilities.

-Operating companies must ensure the meaningful engagement, participation, and consent of all affected communities for any tailings facility. Affected communities must be able to make decisions regarding their own health, safety, and livelihoods. While SASB Operating Standard EM-MM-210a.3 requires disclosure information on engagement processes and due diligence practices with respect to human rights, indigenous rights, and operation in areas of conflict, specific information on community consent for tailings facilities would provide investors with critical information on how the company has engaged with affected communities on its tailings storage facilities.

Please feel free to contact us if you have any questions or require clarification.

Sincerely,

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