



December 30, 2019

**Subject: Hecla Mining Company Comments on the Draft Global Standard for Tailings Management**

**Dear Professor Oberle and Expert Panel Members,**

On behalf of Hecla Mining Company (Hecla) thank you for the opportunity to comment on the draft Global Standard for Tailings Management (the Standard). Hecla is a 128- year-old U.S. based metals mining company. We support the objective of the Global Tailings Review to preclude catastrophic failures of tailings facilities. Hecla was an early adopter of the filtered or dry-stack method for tailings management and also utilizes a high percentage of tailings as structural fill in its underground mine operations.

Hecla is a member of the Mining Association of Canada (MAC) and supports their comments on this draft Standard. The Standard should be focused on the intended outcomes and not prescribe how owners should go about meeting those outcomes. We refer the Expert Panel to their Toward Sustainable Mining (TSM) program as a potential model for how this tailings Standard could be implemented.

*Recognition of Existing Programs and Equivalency.* The draft Standard does not appear to fully recognize that many existing programs are in place and work well to ensure the safe management of tailings and prevent catastrophic dam failures. In the U.S. tailings management is highly regulated and fully disclosed to the public by existing Federal and State regulatory and permitting programs. We believe there are many aspects of the Standard that are potentially duplicative with efforts of TSM, Association of Dam Safety Professionals and other existing state and federal permitting requirements (e.g. requiring alternatives analyses for tailings locations, mine wide environmental and social assessments, engagement with stakeholders in displaying project alternatives' and impacts, and requirements for financial assurance for reclamation and closure of mine facilities, including tailings facilities). The Standard should recognize equivalent regulatory and management systems to not duplicate or conflict with them as this could undermine the intent of the Standard.

*Implementation.* We understand the intended accompanying report (the "Report") will propose an implementation method that is intended to "harmonize with existing assurance schemes". Without proper consideration of these issues across the broad range of jurisdictions, mining companies could be required to implement one set of requirements proposed by regulatory agencies and separate requirements under this Standard. We encourage the Expert Panel to take the time necessary to fully consider existing programs in development of this Report.

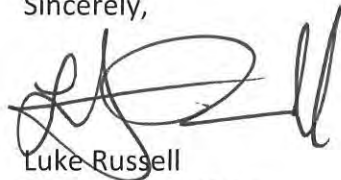
As the intent of the Standard is to minimize risk, we further support MAC's comments that the Standard should use the ALARP principle ("as low as reasonably practicable). This principle, widely used in risk management, recognizes there is a point when further risk reduction is disproportionate to the time, money and effort to be achieved.

The Independent Review Board, independent senior technical reviewer or other Tailings management professionals should not be required to also provide oversight of the environmental and social aspects of the Standard – these are very different skill sets and dilutes the Standard's focus of preventing catastrophic tailings failures.

We further support MAC's comments on the Standard's requirements on long-term recovery. As the intent of this Standard is to preclude a catastrophic failure it is not clear how a company could show conformance with the Standard in absence of a failure. We agree with MAC that this aspect could be included in the recommendations Report but does not seem consistent with the intent to be included as a requirement of the Standard itself.

We provide more specific comments on requirements below and appreciate your consideration.

Sincerely,

A handwritten signature in black ink, appearing to read "Luke Russell", written over a horizontal line.

Luke Russell  
VP External Affairs

## Hecla Mining Company Comments on Specific Requirements

<p><b>REQUIREMENT 1.1:</b> Develop and <u>regularly</u> update knowledge about the social, economic and environmental context of a tailings facility, aligned with international <i>best practice</i>.</p>	<p>Regularly update should be clarified. We also suggest the standard consider use of “maintained” and updated only when there are material changes to a tailings facility. This comment would be made wherever in the document the term regulatory is used.</p>
<p><b>REQUIREMENT 1.3:</b> Where there is a potential for flow failure, conduct and regularly update an inundation study for the tailings facility using a methodology that considers credible hypothetical failure modes, site conditions, tailings facility conditions, hydraulic routing models of the slurry, and the amount of tailings and downstream materials entrained in the outflow. The results of the study should include estimates of the inundation area, flow arrival times, depth and velocities, duration of flooding, and depth of material deposition.</p>	<p>This requirement implies a full inundation study be completed for all tailings facilities regardless of consequences. Such a full study on a dry stack tailings facility is not likely warranted. Hecla supports the intent of this proposed requirement however, it is overly prescriptive, and the level of detail required may not be achievable in all cases.</p> <p>In addition, regular updates may not be necessary and not contribute any new information from the design stage analysis. Unless there are material changes such as a mine life extension that would increase the capacity of the tailings facility, there is no value in requiring regular updates to inundations studies.</p>
<p><b>REQUIREMENT 1.4:</b> Identify stakeholders and how they are related to the tailings facility site, inundation area and impacted area; collect land, livelihood and demographic data for groups most at risk from a tailings facility failure.</p>	<p>Such as referenced in 1.3 not all facilities have significant credible runout failure mechanisms. Also, such social and demographic data is obtained during project permitting. We recommend the standard reflect this equivalency and not duplicate such analysis specifically for tailings facilities.</p>
<p><b>REQUIREMENT 2.1:</b> Undertake a formal, multi-criteria alternatives analysis of all feasible sites and technologies for tailings management with the goal of minimizing risk to people and the environment. Use the knowledge base to inform this analysis and to develop facility designs, inundation studies, a monitoring program, Emergency Preparedness and Response Plans (EPRP), and closure and post-closure plans.</p>	<p>While we support meaningful alternative analysis be conducted the Standard should clarify this is only applicable to new facilities rather than existing facilities.</p>
<p><b>REQUIREMENT 2.2:</b> Engage an Independent Tailings Review Board (ITRB) or an independent senior technical reviewer with no conflicts of interest to assess and review the alternatives analysis for site and technology selection</p>	<p>Hecla is concerned there is simply a lack of qualified reviewers to meet this requirement. The Standard should acknowledge that firms and engineers with requisite experience can serve as independent reviewers where they are not engaged by the Operator for tailings engineering services at the same site.</p>
<p><b>REQUIREMENT 2.3:</b> Use the knowledge base to assess the social, economic and environmental impacts of the tailings facility and its potential failure. Develop impact mitigation and</p>	<p>This requirement seems inconsistent with the objective of the Standard to preclude a catastrophic tailings failure especially in light that not all facilities will fail. It is suggested that conformance with this requirement to develop hypothetical mitigation plans be focused on</p>

management plans, and meaningfully engage potentially affected communities in the process	tailings facilities with very high/extreme consequences and not all facilities.
<b>REQUIREMENT 2.5:</b> The amount of financial assurance shall be reviewed periodically and updated based on estimated closure and post-closure costs	Financial assurance for reclamation and post closure conditions is generally required by State and Federal authorities. The Standard should acknowledge meeting these requirements would be conformance with this requirement.
<b>REQUIREMENT 2.6:</b> Taking into account actions to mitigate risks, the Operator will consider obtaining appropriate insurance to the extent commercially reasonable or providing other forms of financial assurance if appropriate to address risks relating to the construction, operation, maintenance, and/or closure of a tailings facility	The Standard should recognize state and federal financial assurance requirements for reclamation and closure.
<b>PRINCIPLE 3:</b> Respect the rights of project-affected people and meaningfully engage them at all stages of the tailings facility lifecycle	Hecla supports the comments of the Mining Association of Canada and recommendations the Expert Panel reference as equivalent the protocols of Toward Sustainable Mining (TSM) for project-affected people including Indigenous and Communities, among other TSM protocols
<b>PRINCIPLE 4:</b> Design, construct, operate and manage the tailings facility on the presumption that the consequence of failure classification is 'Extreme', unless this presumption can be rebutted.	This Principle seems contrary a risk based and site-specific hazard classification approach and principle of knowledge base to understand risks and consequences and appropriately manage both to preclude catastrophic tailings failures. The Principle and associated Requirements should be clarified to apply to new facilities.
<b>REQUIREMENT 4.3:</b> Existing facilities shall comply with Requirements 4.1 and 4.2. Where the required upgrade is not feasible, the Board, or senior management (as appropriate based on the Operator's organizational structure), with input from the ITRB, shall approve the implementation of measures to reduce the risks of a potential failure to the greatest extent possible	Standard should use the ALARP principle ("as low as reasonably practicable) which includes: "risks lower than the tolerable risk reference line, are tolerable only if risk reduction is impracticable or if the next increment of risk reduction is not cost effective compared to the improvement gained " (US Army Corps of Engineers, revised from ICOLD)
<b>REQUIREMENT 7.1:</b> Build, raise, operate, monitor and close the <i>tailings facility</i> according to the design intent of all stages of the <i>tailings facility lifecycle</i> , using qualified personnel and appropriate methodology, equipment, procedures, data acquisition, the <i>TMS</i> and the <i>environmental and social management system (ESMS)</i> .	The Standard should be clarified that the ESMS could be for the mine site and not require a stand along ESMS for the tailings facility.
<b>REQUIREMENT 7.3:</b> Prepare a detailed Construction Records Report at least annually or whenever there is any change to the tailings facility, its infrastructure or its monitoring system. The EOR shall sign this report.	Requirement should be clarified that construction reports required only in years of embankment construction. In addition, construction reports not required for closed facilities.
<b>REQUIREMENT 7.8:</b> Independent senior technical reviewers, with qualifications and expertise in	Requirement is outside of the focus of Principle 7 (Build and operate the tailings to minimize risk). A site-wide

social and environmental sciences and performance management, shall carry out a full review of the ESMS and monitoring results every 3 years, with annual summary reports provided to relevant stakeholders.	ESMS would include many elements unrelated to tailings management.  We refer the Expert Panel to the Toward Sustainable Mining (TSM) protocols that could be considered equivalent to these requirements on environmental and social management.
<b>REQUIREMENT 8.1:</b> Design, implement and operate a comprehensive performance monitoring program for the tailings facility that allows full implementation of the Observational Method and covers all potential failure modes.	Requirement should be clarified that this would be applied to all "credible" failure modes.
<b>REQUIREMENT 8.2:</b> Establish performance objectives, indicators, criteria, and performance parameters and include them in the design a monitoring program that measures performance at all stages of the tailings facility lifecycle. Record, evaluate and publish the results at appropriate frequencies. Based on the data obtained, update the monitoring program throughout the tailings facility lifecycle to confirm that it remains effective.	We recommend this focus on internal monitoring and reporting so as to take necessary adaptive management actions to address site specific conditions. External reporting should include interpretation and not simply raw data.
<b>REQUIREMENT 8.4:</b> Report the results of the monitoring program at the frequency required to meet company, regulatory and public disclosure requirements, and as a minimum on a quarterly basis. The RTFE and the EOR shall review and approve these reports.	The reporting frequency should be a risk-based decision and as otherwise require by regulatory authorities, which is typically on an annual basis. Quarterly reporting would be excessive for downstream or dry stack tailings facilities.
<b>REQUIREMENT 9.2:</b> For an existing facility, where a potential credible failure could have 'Very High' or 'Extreme' consequences, the Board or senior management (as appropriate based on the Operator's organizational structure) shall mandate additional steps to minimize the consequences and publish reasons for its decision. This process is to be repeated at the time of every Dam Safety Review (DSR).	It may not be possible to reduce or minimize consequences for an existing facility, but it may be possible to implement additional measures to reduce the risk of failure. Suggest this requirement be modified to focus on risk reduction to extent technically and economically feasible for existing facilities with very high or extreme consequences.
<b>REQUIREMENT 10.3:</b> Appoint a site-specific Responsible Tailings Facility Engineer (RTFE) who is accountable for the integrity of the tailings facility, liaises with the EOR, the Operations and the Planning teams and who either reports directly to the Accountable Executive, or via a reporting line that culminates with the Accountable Executive. The RTFE will have a dotted reporting line to mine management to represent the delivery of services to the site.	Hecla supports the comments of the Mining Association of Canada that through its Toward Sustainable Mining (TSM) <i>Tailings Management Protocol</i> , it requires that accountability, responsibility, authority, and role be by a Responsible Person, not necessarily an engineer.
<b>REQUIREMENT 11.4:</b> A senior independent technical reviewer shall conduct an independent	Hecla believes it to be overly restrictive to forbid in this requirement to use the same consultant on a subsequent

<p>DSR periodically (every 3 to 10 years, depending on performance and complexity, and the Consequence Classification of the tailings facility). The DSR shall include technical, operational and governance aspects of the tailings facility and shall be done according to best practices. The DSR contractor cannot conduct a subsequent DSR on the same facility.</p>	<p>DSR. In many cases having that institutional memory and understanding on why previous recommendations were made and how they have been responded to is most effective.</p>
<p><b>REQUIREMENT 12.3:</b> Establish and implement a system to manage the quality of all engineering work, the interactions between the EOR, the RTFE and the Accountable Executive, and their involvement in the tailings facility lifecycle as necessary to confirm that both the implementation of the design and the design intent are met in all cases</p>	<p>The responsible person should not have to be an engineer as referenced in Requirement 10.3 above.</p>