

GLOBAL INDUSTRY STANDARD ON TAILINGS MANAGEMENT

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PREAMBLE

The Global Industry Standard on Tailings Management (herein 'the Standard') strives to achieve the ultimate goal of zero harm to people and the environment with zero tolerance for human fatality. It requires *Operators* to take responsibility and prioritise the safety of *tailings facilities*, through all phases of a facility's *lifecycle*, including closure and post-closure. It also requires the disclosure of relevant information to support public accountability.

Issues have arisen in the development of the Standard that are difficult to translate into an auditable industry Standard for *Operators*. These issues are more appropriately addressed through national and/or state level regulatory authorities, or through multilateral agencies working with the industry. For example, it is recognised that more work needs to be done by national and/or state level regulators to develop mechanisms that enable the identification, maintenance and/or *restoration* of abandoned or 'orphaned' *facilities*.

The Standard provides a framework for safe *tailings facility* management while affording *Operators* flexibility as to how best to achieve this goal. For auditing and certification purposes, the Standard includes the Preamble, the Requirements, the Glossary and Annexes. Unless otherwise specified, the Requirements of the Standard are directed to the *Operator*. The Requirements apply to individual facilities as defined in the Glossary, and are all intended to apply and be auditable.

Conformance with the Standard does not displace the requirements of any specific national, state or local governmental statutes, laws, regulations, ordinances, or other government directives. *Operators* are expected to conform with the Requirements of the Standard not in conflict with other provisions of law.

The Standard will be supported by implementation protocols which will provide detailed guidance for certification, or assurance as applicable, and for equivalence with other standards. Many activities referenced in this Standard may be found as part of a comprehensive mine-wide *environmental and social management system*. Where credible systems for assuring these requirements are already in place (such as third party audit or verification processes), these should be recognised as equivalent to avoid duplication, to the extent reasonably practicable.

Although the Standard follows a logical sequence arranged around broad topic areas, the Requirements are not presented chronologically. The Principles are intended to summarise the Requirements that follow and are not in themselves auditable. To reduce repetition, the disclosure requirements are grouped under Principle 15. These Requirements support public accountability and protect *Operators* from the need to disclose confidential commercial or financial information.

All terms that appear in *italics* are defined in the Glossary, Annex 1.

GLOBAL INDUSTRY STANDARD ON TAILINGS MANAGEMENT

ACRONYMS

CDIV	Construction versus Design Intent Verification
DBR	Design Basis Report
DSR	Dam Safety Review
EOR	Engineer of Record
EPRP	Emergency Preparedness and Response Plan
ESMS	Environmental and Social Management System
FPIC	Free Prior and Informed Consent
GTR	Global Tailings Review
ICMM	International Council on Mining and Metals
ICOLD	International Commission on Large Dams
IFC	International Finance Corporation
ITRB	Independent Tailings Review Board
OMS	Operations, Maintenance and Surveillance
PRI	Principles for Responsible Investment
RTFE	Responsible Tailings Facility Engineer
TARP	Triggered Action Response Plan
TMS	Tailings Management System
UNEP	United Nations Environment Programme
UNGP	United Nations Guiding Principles on Business and Human Rights

AFFECTED COMMUNITIES

TOPIC I

PRINCIPLE 1 RESPECT THE RIGHTS OF PROJECT-AFFECTED PEOPLE AND MEANINGFULLY ENGAGE THEM AT ALL PHASES OF THE TAILINGS FACILITY LIFECYCLE, INCLUDING CLOSURE.

- Requirement 1.1 Demonstrate respect for human rights in accordance with the United Nations Guiding Principles on Business and Human Rights (UNGP), conduct human rights due diligence to inform management decisions throughout the *tailings facility lifecycle* and address the human rights risks of *tailings facility credible failure scenarios*.
- For existing facilities, the *Operator* can initially opt to prioritise salient human rights issues in accordance with the UNGP.
- Requirement 1.2 Where a new *tailings facility* may impact the rights of indigenous or tribal peoples, including their land and resource rights and their right to self-determination, work to obtain and maintain *Free Prior and Informed Consent (FPIC)* by demonstrating conformance to international guidance and recognised *best practice* frameworks.
- Requirement 1.3 Demonstrate that *project-affected people* are *meaningfully engaged* throughout the *tailings facility lifecycle* in building the *knowledge base* and in decisions that may have a bearing on public safety and the integrity of the *tailings facility*. The *Operator* shall share information to support this process.
- Requirement 1.4 Establish an effective operational-level, non-judicial *grievance* mechanism that addresses complaints and *grievances* of *project-affected people* relating to the *tailings facility*, and provide remedy in accordance with the UNGP.

INTEGRATED KNOWLEDGE BASE

TOPIC II

PRINCIPLE 2 DEVELOP AND MAINTAIN AN INTERDISCIPLINARY KNOWLEDGE BASE TO SUPPORT SAFE TAILINGS MANAGEMENT THROUGHOUT THE TAILINGS FACILITY LIFECYCLE, INCLUDING CLOSURE.

- Requirement 2.1 Develop and document knowledge about the social, environmental and local economic context of the *tailings facility*, using approaches aligned with international *best practices*. Update this knowledge at least every five years, and whenever there is a *material* change either to the *tailings facility* or to the social, environmental and local economic context. This knowledge should capture uncertainties due to climate change.
- Requirement 2.2 Prepare, document and update a detailed site characterisation of the *tailings facility* site(s) that includes data on climate, geomorphology, geology, geochemistry, hydrology and hydrogeology (surface and groundwater flow and quality), geotechnical, and seismicity. The physical and chemical properties of the *tailings* shall be characterised and updated regularly to account for variability in ore properties and processing.
- Requirement 2.3 Develop and document a *breach analysis* for the *tailings facility* using a methodology that considers *credible failure modes*, site conditions, and the properties of the slurry. The results of the analysis shall estimate the physical area impacted by a potential failure. When flowable materials (water and liquefiable solids) are present at *tailings facilities* with Consequence Classification of 'High', 'Very High' or 'Extreme', the results should include estimates of the physical area impacted by a potential failure, flow arrival times, depth and velocities, and depth of material deposition. Update whenever there is a *material* change either to the *tailings facility* or the physical area impacted.
- Requirement 2.4 In order to identify the groups most at risk, refer to the updated *tailings facility breach analysis* to assess and document potential human exposure and vulnerability to *tailings facility credible failure scenarios*. Update the assessment whenever there is a *material* change either to the *tailings facility* or to the *knowledge base*.

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