FORWOOD

How to track and report your tailings compliance

Contents

Background

Effective governance requires a focused and consistent effort dedicated to continuous improvement. Especially when it comes to highly regulated operations like tailings; tracking and managing gaps in your processes is vital.

However, not all companies have the appropriate processes in place to ensure their conformance and compliance efforts are both effective and efficient.

The good news is that companies don't need to start from scratch. By embracing existing continuous improvement methodologies, completing a self-assessment against applicable standards and guidelines, and addressing any possible identified gaps through a live action plan management system, companies can ensure they're following the industry best-practice methods towards tailings management compliance.

Whether you're at the beginning of a tailings compliance journey or dedicating time to implement retroactive solutions to meet changing compliance requirements, in this guide we will take you through some key steps to achieve the most effective tracking and reporting methodology.

Setting the Baseline

Establish a starting point at the beginning of the compliance journey

At the beginning of any compliance journey, the first step should always be a baseline assessment.

This enables companies to understand the existing gaps in their system and evaluate their process maturity around tailings management.

So how do you establish a baseline? Follow these steps as outlined by the Mining Association of Canada, in the MAC Tailings Guide Version 3.2:

- Audit and collate existing plans, processes and systems.
- Conduct a gap analysis to identify any missing plans, processes or systems.
- Assess the current degree of alignment and integration of plans, processes, systems and identify any deficiencies.
- You should also consider the adequacy and potential need for updates to the risk assessment and risk management plan.

A practical example would look like:

- Selecting key performance indicators that encompass the whole tailings management life cycle.
- Assessing the level of compliance against a multi-element approach to align the selected key performance indicators and the minimum requirements that need to be met. It can then be identified if an indicator is in full, partial, or not in compliance with the standard.
  - For example, perform a self-assessment of your risk assessment evaluating: whether the participating team were multidisciplinary; if all the unwanted material events were assessed against triggers and evolving events; if the process followed world-wide guidelines related to the matter; if the process followed the enterprise risk methodology for the company; and, if the controls, including critical controls, were appropriately identified to mitigate or eliminate the asset or process failure.

Once you have a clear view of the present situation and established your baseline, then you can measure all compliance actions against it, and understand your improvements and changes.

Identifying Gaps

The goal as you identify gaps is to understand where you have compliance deficiencies or areas in need of improvement.

By performing a thorough gap analysis, you should consider all necessary actions needed to maintain compliance. Then, you will be able to develop action plans, which can also serve as key risk management activities to perform throughout the year.

For example, in the risk assessment introduced above, if it was identified that not all controls were implemented, then the risk profile of the enterprise in relation to the event is at an unacceptable stage. Action plans need to be put in place to not only implement the control, but to test its effectiveness. One of the best tools to enable you to perform a robust gap analysis is the **Mining Association of Canada's Table of Conformance** (see below).
https://mining.ca/resources/guides-manuals/table-of-conformance-2019/

It asks all of the questions required to audit your processes and clearly see any gaps.

Tailings Management Protocol - Table of Conformance, June 2022 Indicator 2: Assigned Accountability and Responsibility							
Criteria	Document	Section	Yes	No	N/A (Active Facilities)	N/A (Inactive Facilities)	Description and Evidence to Support Response
Has personnel with accountability, responsibility or authority for tailings management been assigned by the owner, accountable executive officer, responsible person, or engineer? Has the owner assigned accountability and responsibility for ensuring that the tailings facility is designed, constructed, and operated, including all aspects of the facility, its associated infrastructure, critical systems management, and performance standards?	Tailings Guide	4.3					
Has the Owner established clear lines of communication between the Board of Directors/Governance Level, Accountable Executive Officer, Responsible Person, and Engineer with respect to tailings management?							
Has the Owner defined the role and accountability of the Board of Directors or Governance Level with respect to tailings management?							
Accountable Executive Officer							
Is the Accountable Executive Officer aware of key outcomes of tailings facility risk assessments and how these risks are being managed?	Tailings Guide	4.3.2					
Does the Accountable Executive Officer been assigned accountability for:							
• development and implementation of training needed for responsible tailings management;							
• establishing an appropriate management structure;							
• ensuring development and implementation of site-specific tailings management systems;							
• ensuring development of any required plans for emergency preparedness;							
• delegating responsibility and authority for tailings management and defining the personnel responsibilities, authority, and reporting relationship to implement the systems needed for responsible tailings management;							
• demonstrating to the Board of Directors/Governance Level whether tailings are managed responsibly;							
• establishing processes to ensure the approval of:							
• the design and design intent of the tailings facility, including design associated with any material changes?							

You can also use the Tailings Management Protocol developed by the ICMM as another powerful guide to map where your company stands in its tailings management system journey.

By using either of these documents, you are giving yourself the best possible chance to challenge any assumptions and ensure you're establishing a foundation of information that considers every possible form of risk mitigation.

Creating Action Plans

Develop specific plans to address those deficiencies

As the saying goes, knowledge is power, and once you have a clear understanding of the deficiencies in your plans and processes, then you're able to make appropriate action plans.

When you're developing an action plan, it's important to focus on:
* The gaps or deficiencies that pose the highest risks.
* Missing or inadequate information that you need to obtain.
* Making sure you have the right resources and people in place to effectively see out the action plans to completeness, and by the defined due date.
* Involve the relevant stakeholders.
* Make sure the action owner is accountable and committed to the matter.

All action plans should be documented, approved and implemented, and the implementation of action plans should also be documented and tracked to completion.

Managing action plan performance

To ensure action owners are fulfilling their actions plans, it's important for companies to build in regular performance evaluations to identify any gaps or nonconformance with the tailings management system. For the best outcomes, empower action owners with action-oriented performance objectives, and plans to address those objectives.

When undertaking performance reviews, the Mining Association of Canada suggests that the management review process should evaluate the:
* Status of actions from the previous management review
* Suitability, adequacy, effectiveness, and the need for changes to:
    * the tailings management system;
    * the ERP and the EPP; and
    * the OMS manual;
* Performance of the tailings facility
* Effectiveness of risk management
* Adequacy of resources committed to tailings management; and
* Integration of tailings management activities with site-wide systems, such as, where applicable, a site-wide environmental and social management system.

Outcomes of reviews should then be regularly reported to stakeholders to:
* Ensure commitment alignment
* Bring awareness to the maturity journey, and
* Identify opportunities for improvement, describing associated action plans.

The frequency of management reviews varies but should at least be completed annually.

Real-Time Reporting

At Forwood, our Tailings+ solution provides mining companies with the software they need to stay on top of ongoing compliance actions that enable continuous improvement.

As companies complete year-on-year continuous improvement efforts, the goal is to drive down the risk profile of the structure, while also demonstrating a best-practice compliance journey to stakeholders and regulators.

To achieve this, companies need a tech and data-driven platform that gives clear oversight of the present status and actions that need to be implemented to maintain and uphold best-practice.

Forwood's customisable reporting capabilities enable real-time reporting that can meet the needs of companies, enabling them to:
- Identify opportunities for improvement
- Demonstrate compliance efforts to shareholders and stakeholders
- Maintain transparency throughout the process.

So, why choose Forwood's Tailings+?

- Our real-time reporting tool enables visualisation of your tailings compliance journey with no data manipulation, strengthening openness and transparency.
- Our intuitive platform has a comprehensive management solution that 'sits' behind the audit and comes with decades of industry-specific knowledge.
- We'll help you implement the most effective management system for GISTM, MAC TSM, and other tailings-related audits, including your own enterprise management system.
- Our platform will ensure you stop wasting time on administration and put this time to good use, adding value where it matters most.
- No other platform on the market makes complex tailings storage facilities requirements this simple.

By implementing a system that can provide ongoing updates on the journey to full compliance, companies can have a clear view to the horizon where they can achieve zero harm to people and planet.
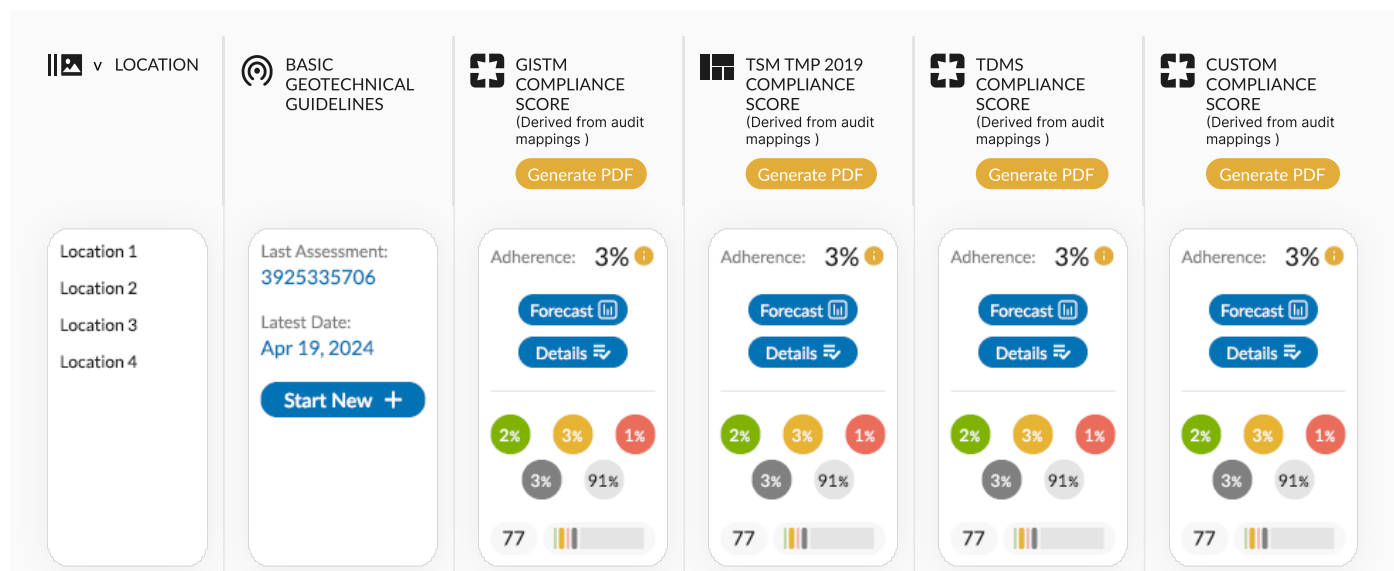
Final Message

As the world's mining companies work towards raising their tailings management system through the adoption of world-leading practices in the field, ensuring your compliance processes are robust and committed to continuous improvement is essential for success.

By following a transparent and established best-practice process, your company can raise its standards and become a leader in excellent compliance and continuous improvement to guarantee the zero harm commitment.

If you would like to partner with Forwood to achieve exceptional tailings compliance. Please, get in touch.

Get in touch

For over 10 years, Forwood has been on a mission to achieve zero harm to people and the planet. Working collaboratively with great companies, this mission is being achieved across 800+ sites globally. Our dedication to this mission through our rigorous platform design has seen us achieve exceptional results with our mining partners in reducing and eliminating serious injuries and deaths.

> *Life is fragile and precious. Mission Zero is our way of protecting the lives of people, and, along the way, looking after this big, beautiful, breathing planet that sustains us.*
> - Steve Wood, CEO of Forwood

FORWOOD

- Compliance Dashboard
- GISTM Dashboard
- TDMS Dashboard
- TSM Dashboard
- Action Plan Board
- Evidence Management
- Historical Assesment Records
- Public Disclosure
- Help

Evidence Management

Apply Correlation to the Location >

GISTM Default Correlations Template

Filters

Evidence Type-Name	Standards	Evidence Category	Classification	Requirements	Actions
EMS Environmental Management System Manual	TSM, BGG	Corporate	Normative	1.1, 2.1, 3.5, 4.3	
Mining and metallurgical waste Management Policy	BGG	Corporate, Normative	Normative	2.1, 5.8	
Mining and metallurgical waste Management Policy	TSM	Corporate, Normative	Normative	2.1, 5.8	
Mining and metallurgical waste Management Policy	GISTM	Corporate, Normative	Normative	2.1, 5.8	
Mining and metallurgical waste Management Policy	GISTM	Corporate, Normative	Normative	2.1, 5.8	

To achieve similar results with your tailings facilities, please reach out to:

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Mission Zero.
Protecting people and our planet.