



Your trusted partner in the journey to a sustainable tomorrow.

ISO METRIX

Tailings Management System

Tailings facilities store a mine's primary waste stream. Without proper management, these facilities pose a significant risk to the natural and social environment should a catastrophic event such as a collapse, contaminated water seepage or significant dust generation occur.

Tailings management protocol is more than just a strict adherence to technical standards. Many industry standards require confirmation that a Tailings Storage Facility (TSF) has implemented a system for responsible tailings management.

Mines need to ensure that:

- Facilities have a formal policy in place
- They have developed and implemented a tailings management system
- They have assigned accountability
- They have developed an operation, maintenance and surveillance manuals
- They have developed procedures for all tailings impoundments

The IsoMetrix Tailings Management System is designed according to international standards and best practice. It is specifically developed to offer mines a more effective and responsive way to manage their TSF.

The IsoMetrix TMS allows all of these requirements to be tracked, managed and reported on.

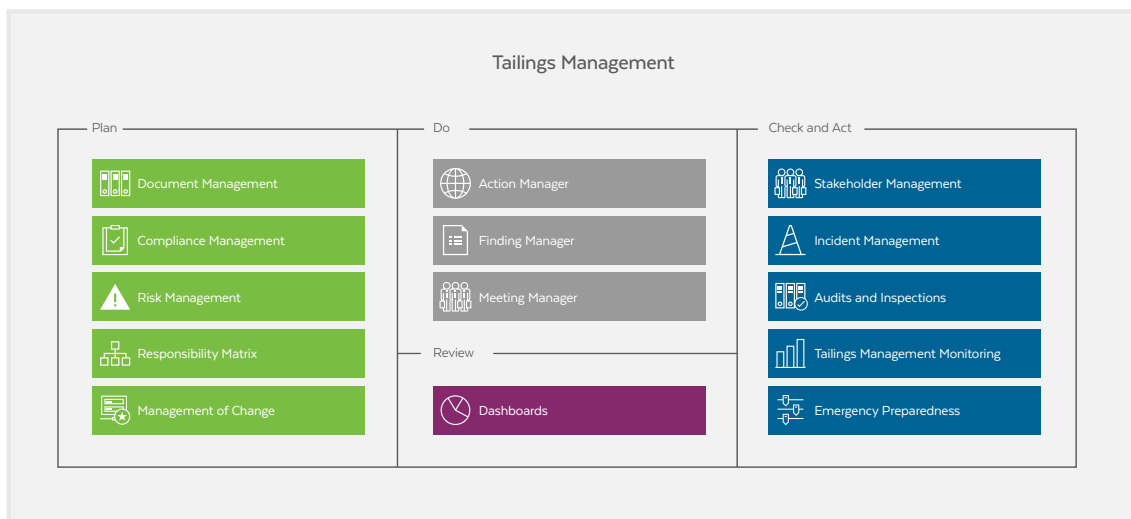
Plan, Do, Act, Check

The IsoMetrix TMS follows the Deming Cycle of Plan, Do, Check, Act using applicable modules already tried and proven in its world-class EHS Management System. Permit, license and approval conditions, obligations and commitments can all be tracked and actioned within the system. High-rated risks can be identified, and critical controls managed, in the Risk Management module.

The software allows you to appoint responsibility and then capture and track tasks. At any point, the status of actions and the individuals responsible for them is visible. Stakeholder and contractor information is also recorded in the system. The Incident Manager module allows the user to capture non-conformances or incidents with follow up corrective actions, which can be tracked until closure.

Our solution is aligned with ICMM good practices. The 6 key elements of tailings management and governance include:

- Accountability, Responsibility and Competency
- Planning and Resourcing
- Risk Management
- Change Management
- Emergency Preparedness and Response
- Review and Assurance



Tailings Management Interface

Integration

The IsoMetrix TMS can be integrated with existing systems, or used on its own to replace manual and spreadsheet-based systems.

If the system is used in conjunction with existing systems, data can be pulled from these existing systems to avoid duplication of work.

The IsoMetrix TMS gives you a complete picture of the health of your tailings facility, where other systems may only give you part of the picture. With the growing risk associated with tailings facilities, mines need a system that understands the specific protocols required to manage the tailings facilities effectively.

The IsoMetrix TMS reduces reaction times, bringing the right data to the necessary decision makers faster and more accurately than would be possible with manual or spreadsheet based systems. This is especially useful when operations are in remote areas.

Mobile

IsoMetrix is a web-based tool that you can access on any smart device.

Any module in IsoMetrix can be converted, automatically, into an off-line app for Android or IOS, allowing you to easily capture and edit records.

The apps allow you to upload photos or videos, as well as recording your GPS coordinates. It is ideally suited to managing Stakeholder Engagements (surveys, meetings, complaints and grievances); Event Reporting (hazard observations, near miss reports and incidents); and Audits and Inspections.

Apps can be easily tailored to ensure they are kept as simple as possible, special features include voice to text translation and in-app search for existing records.

Configurability

Every mine is different. The IsoMetrix TMS lets you create audits that exactly match the requirements of your mine. Reviews, audits, surveillances and inspections with checklist can all be configured into the system.

Powerful Dashboards

The real power of this TMS lies in the built-in IsoMetrix dashboard capabilities. They are configurable and provide data visualization that can be customized to the user profile, making reporting easy through automation.

Managers can quickly detect if certain functions are not undertaken and follow up on them, as well as being notified immediately of a non-conformance, or when any trigger is activated. Very often, responsible persons are remote, so this reduces the need for direct interaction through site visits, as the information captured in IsoMetrix is more detailed and live.

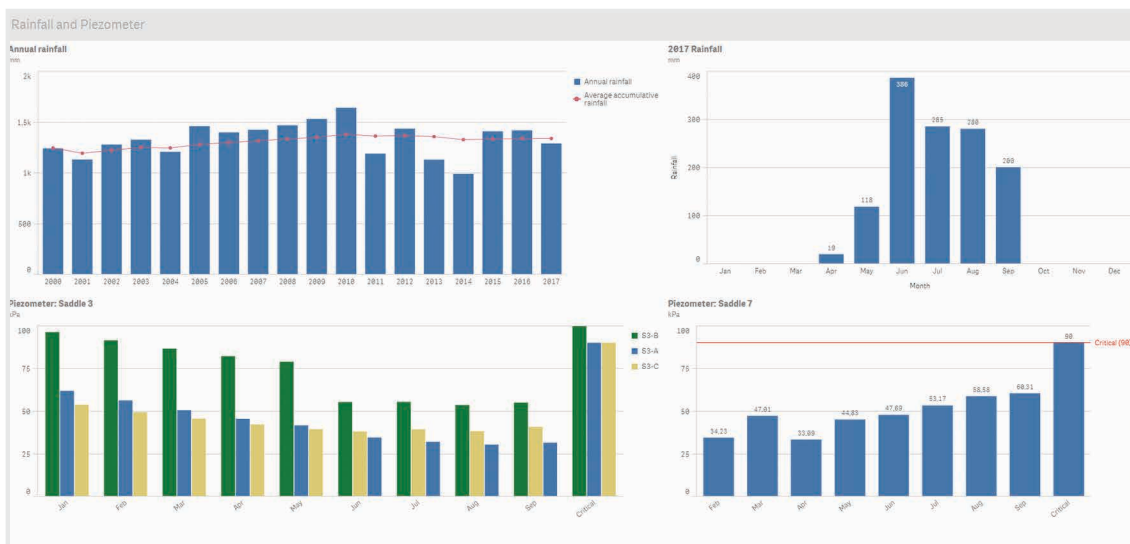
The IsoMetrix TMS easily integrates with meters and other monitoring devices to take advantage of the Internet of Things (IoT) and reduce the need for manual inspections.

Advantages of the IsoMetrix Tailing Management System:

- Remote managers can get live information on the status of the TSF
- Log incidents with corrective actions which can be tracked
- Real-time data for quicker reaction time for identified problems
- Alerts or notifications triggered when data does not conform
- A repository for all tailings related documentation
- A customizable dashboard
- Mobile/offline capability for the capturing of information such as audits and incidents
- Use IoT to automate and increase the frequency of monitoring activities

This system can also be used to manage the risks related to Heap Leach Pads and mine waste rock dumps.

The IsoMetrix TMS can be used as a standalone solution, or as part of a fully integrated EHS Management System.



Dashboard image of Rainfall and Piezometer data

✉ If you have any questions about IsoMetrix or our solutions, please contact the sales team at sales@isometrix.com

isometrix.com