

Our Approach to Tailings Management

Which Teck sites does this document apply to?

This document summarizes our approach to tailings management. This document applies to all Teck sites and projects, with a focus on operations and legacy sites with major tailings facilities, and on major development projects with proposed large tailings facilities. This does not include operations in which Teck has/had an ownership interest but is not the principal operator.

Tailings Management performance information: See our **Annual Sustainability Report**, available for download on our website. Also see <https://www.teck.com/Tailings/> for further disclosure.



Highland Valley Copper Operations, Canada, 2015.

Governance and Accountability

Background

Tailings and mine waste rock are common by-products of mining practice. A tailings incident has the potential to have a devastating impact on communities, local economies and the surrounding environment. The main focus of management of tailings facilities is on ensuring failures do not occur. Teck currently manages 62 tailings facilities, of which 20 are in active use and 42 are closed and no longer receiving tailings. This total includes 16 dry stack (unsaturated) facilities at our steelmaking coal mines. Of the closed facilities, 20 are located at the legacy properties that we manage, and the other 19 closed facilities are associated with our operating mines.

Tailings storage facilities at all of Teck's operating and closed sites meet or exceed regulatory requirements, and responsible management of tailings and waste rock is critical for our company. We are continually improving the management of our facilities by developing and incorporating best practices.

Teck's overall governance approach to tailings aims to maintain the capacity of our facilities, ensure the qualifications of the people responsible for ensuring safety, and safeguard our approach from complacency. We use these three framing concepts to evaluate personnel, projects, operations, and legacy initiatives and programs.

Accountability and Resourcing

The Board of Directors, through its Safety and Sustainability Committee, oversees implementation of our Health, Safety, Environment and Community (HSEC) Management Standards and tailings guidance, including policies, systems, performance and auditing functions. Our activities associated with tailings and waste management are reported to the Safety and Sustainability Committee of the Board and/or to our HSEC Risk Management Committee.

The following senior corporate leaders are involved in implementing the management of tailings and mine waste:

- The Chief Operating Officer, who is also Teck's Responsible Executive for tailings management, reports directly to the CEO and the Board on issues related to tailings
- The Senior Vice President, Sustainability and External Affairs reports directly to the President and CEO and is responsible for sustainability, health and safety, environment, community, and Indigenous affairs, including tailings management
- The Vice President, Environment oversees compliance with environmental standards for projects, operations and our legacy properties, and regularly reviews environmental performance risks and strategic issues, including tailings management, biodiversity, water, air and energy
- The Senior Advisor, Tailings & Mine Waste chairs our Tailings Working Group and reports directly to the Vice President, Environment and advises other executives on emerging issues or governance concerns, per the Global Industry Standard on Tailings Management (GISTM).



Employees at the Glandwater Barge of the Highland Valley Copper Tailings Facility, 2021.

The Tailings Working Group includes members of our senior management team and tailings management subject matter experts from our operations, corporate functional teams and legacy properties department. The group provides oversight and guidance across the organization and conducts reviews to ensure alignment with Teck's governance framework for tailings management.

Policies and Standards

Teck's Tailings and Water Retaining Structures Governance framework provides a consistent company-wide approach to how we manage the risks inherent with tailings. This framework provides clear guidance on roles and responsibilities related to tailings management across all Teck projects, operations and legacy properties. Teck's HSEC Management Standards also include general guidance on tailings and mine waste management.

Memberships, Partnerships and External Commitments

We work with various local, national and international organizations and programs to support improvements in tailings and mine waste management across the industry:

- **The Global Industry Standard on Tailings Management (GISTM):** Launched in August 2020, this standard sets a high benchmark for improving the safe management of tailings facilities and supports the ultimate goal of zero harm. Teck's existing corporate tailings program mirrors all key aspects of the GISTM related to this goal. In addition, Teck is committed to implementation of the GISTM across our sites. All of our tailings management facilities are or will be in conformance with GISTM within three years of the standard's launch. The Chair of Teck's Tailings Working Group was part of the advisory group that provided input to develop GISTM.
- **International Council on Mining and Metals (ICMM):** A global industry association that represents leading international mining and metals companies who are required to implement the ICMM 10 Principles, including Principle 6 on Environmental Performance (Performance Expectation 6.3—Tailings Management). ICMM members have committed to GISTM conformance for extreme

or very high potential consequence facilities by August 2023, a commitment Teck makes for all of its facilities. The ICMM published two key documents in 2021 related to the GISTM, the *Good Practice Guide for Tailings Management* and the *ICMM Conformance Protocol*. Teck's tailings experts supported the development of these documents.

- **Mining Association of Canada (MAC):** A national association that promotes the development of Canada's mining and mineral processing industry. Through MAC, we are committed to implementing the Towards Sustainable Mining (TSM) program, which aids in improving industry performance. Teck's Senior Advisor, Tailings & Mine Waste is the Chair of MAC's Tailings Working Group.
- **Canada's Oil Sands Innovation Alliance (COSIA):** An alliance of oil sands producers focused on accelerating improvement in environmental performance in Canada's oil sands through collaborative action and innovation
- **Engineers and Geoscientists BC:** As a member company, Teck's Senior Advisor, Tailings & Mine Waste was a reviewer for the guideline that was issued in 2016 for the requirements of foundation investigations for dams
- **Australian Research Council:** In 2017, Teck became part of an initial three-year applied research program, along with four universities in Australia and several other mining companies, that is focused on finding more effective tools for predicting and avoiding tailings facility failures
- **The Copper Mark:** An assurance framework developed by the International Copper Association in 2019 to promote industry-wide responsible copper production practices and to demonstrate the industry's commitment to green transition

Approach to Tailings Management

Tailings Management

Tailings storage facilities at all our operations meet or exceed regulatory requirements, including permit and licence conditions and other relevant or appropriate requirements, and we work to continually improve

the management of these facilities. Planning, design, construction, operation, decommissioning and closure are carried out in a manner such that:

- Structures are stable
- Solids and water are managed within designated/ approved areas
- Facilities comply with regulatory requirements
- Facilities conform to applicable standards, internal policies, industry best practices and the technical guidelines of the jurisdictions in which we operate

We have comprehensive systems and procedures in place for the safe operation and monitoring of tailings facilities that follow best practices, organized around interrelated activities that include:

- 1. Surveillance Technology:** Sites employ surveillance systems such as GPS hubs, piezometers, inclinometers, pressure gauges, remote sensing and other technologies to monitor tailings dams, abutments, natural slopes and water levels.
- 2. Staff Inspections:** Tailings dams are inspected by trained operators and expert technical staff as frequently as several times daily, with formal staff inspections at our operations at least once per month.
- 3. Annual Dam Safety Inspections:** Formal dam safety inspections are conducted annually by an external Engineer of Record. Recent annual Dam Safety Inspections for our facilities are publicly available.
- 4. Detailed Third-Party Reviews:** Comprehensive third-party dam safety reviews are conducted by a qualified independent tailings reviewer as frequently as every three years, based upon the risk profile for each facility.
- 5. Internal Governance Reviews:** Teck's Tailings Working Group conducts internal management reviews of our tailings facilities as well as our major tailings projects on a regular basis.
- 6. Independent Tailings Review Boards:** Our operations, higher consequence legacy facilities and major development projects have Tailings Review Boards made up of senior external independent experts who meet regularly, at least annually, to conduct a third-party review of design, operation, surveillance and maintenance.
- 7. Special Reviews:** After significant global events, such as the Samarco or Brumadinho catastrophic failures in Brazil, Teck takes measures to learn as much as possible from those events, and employs additional industry experts outside of independent review boards to evaluate our Governance Program and to assess whether the root causes of those other events are present in Teck's program.

Each facility also has a regularly updated detailed Operations, Maintenance and Surveillance (OMS) manual and a Mine Emergency Response Plan (MERP). We

maintain site-specific Tailings Management Systems that conform to or exceed industry standards of practice, including leading protocols established by MAC-TSM and ICMM, which we report upon publicly.

These systems, which demonstrate leadership and commitment to responsible tailings management practices, were developed through consultation with communities. We continually review our facilities and procedures and are committed to maintaining the highest standard of safety at our operations. See [Our Approach to Emergency Planning and Preparedness](#) for further information.

Antamina and Fort Hills, joint venture operations where Teck is not the operator, both have Tailings Review Boards in place as well. Teck also provides senior experts to Antamina's Tailings Technical Committee.

For information about Teck's approach to waste management, including tailings and fine coal refuse, waste rock and overburden, coarse coal refuse, and hazardous and non-hazardous waste, see [Our Approach to Responsible Production](#).

Teck is committed to integrating new and innovative technologies as part of our overall tailings management process. We make use of established and emerging dewatering approaches for applicable locations, as well as enhanced surveillance to add to our already extensive monitoring and response program across all of our facilities. Teck understands that "one size does not fit all" when it comes to tailings management and its associated technologies, but by working with targeted vendors, academia and a range of industry experts, our in-house team of experts makes sure that any facility is rigorously evaluated and that the appropriate tailings technologies are employed.

Our Targets and Commitments

We are committed to the safe and environmentally responsible development, operation and management of tailings storage facilities. We continually review our facilities and procedures, and are committed to maintaining the highest standard of safety and environmental protection at our operations, including standards set by MAC and ICMM. We aim to have zero significant environmental incidents across the organization.

Our sustainability strategy outlines our goals in relation to continuously improving tailings management at our operations.

Strategic Priority:

- Continue to manage our tailings across their life cycle in a safe and environmentally responsible way

Goals:

- Preferentially consider milling and tailings technologies that use less water, both for new mines and any mine life extensions at existing mines

- Expand the use of digitally connected surveillance technologies to assist in monitoring our tailings storage facilities

For more information on our sustainability strategy goals, see the [Sustainability Strategy](#) section of our website.

We report on our performance against indicators and goals related to Tailings Management on an annual basis in our [Sustainability Report](#).

Assurance Related to Tailings Management

At Teck we conduct four types of assurance. This includes audits of operations and business units; corporate annual HSEC assurance and mid-year effective checks conducted by Teck’s HSEC Assurance team; corporate annual internal audits conducted by Teck’s Assurance and Advisory team; and external assurance by independent auditors for relevant regulatory and voluntary membership

requirements. Following each of these types of assurance, applicable management teams use the results to inform future actions and Teck’s five-year planning process.

In addition to the formal external review processes involving independent experts and the internal assessments of performance against our own guidelines and practices noted above, we assess our tailings management practices under MAC’s TSM Tailings Management Protocol. Achieving a minimum of a Level A rating under TSM is a requirement of our HSEC Management Standards. A Level A rating indicates that tailings management practices that meet industry best practice, as defined by the MAC Tailings Guidelines, have been developed and implemented. All of our operations meet or exceed this standard. Several of our facilities reached a verified Level AAA, which indicates excellence and leadership in tailings management, through validation by an external, independent evaluation.

Assurance Related to Tailings Management

| Type | Organization | Items Reviewed |
|----------|--|--|
| External | Mining Association of Canada: Towards Sustainable Mining | <ul style="list-style-type: none"> • Tailings management policy and commitment • Tailings management system • Assigned accountability and responsibility for tailings management • Annual tailings management review • Operation, Maintenance and Surveillance manual • Mine Emergency Response Plan |
| External | ISO 14001 external audits | <ul style="list-style-type: none"> • Components of the environmental management system at each site |
| External | ICMM Conformance Protocol | <p>Conformance against the GISTM across the six topic areas of the Standard:</p> <ul style="list-style-type: none"> • Communities • Integrated Knowledge Base • Design, Construction, Operation and Monitoring • Management and Governance • Emergency Response Disclosure |
| External | The Copper Mark | <ul style="list-style-type: none"> • Issue area 1—Tailings Management |
| Internal | Risk-based Health, Safety and Environment compliance audits at each site | <ul style="list-style-type: none"> • Adherence to regulatory and permit requirements; effectiveness of controls based on risk profile |
| Internal | Tailings Governance Reviews | <ul style="list-style-type: none"> • Assessment of operational tailings management activities relative to Tailings Governance framework |