



Tailings Management

Tailings are a common by-product of the mining process, and strong tailings management is a critical element in the safe design, construction, operation and closure of mines. While the design and management of tailings storage facilities has progressed significantly over time, there continue to be rare incidents of failure, and such failures can result in catastrophic consequences for surrounding local communities and the environment. As such, responsible tailings management is of utmost importance, and international standards such as the Global Industry Standard on Tailings Management (GISTM) provide a framework for safer, and more transparent, tailings facility management.¹⁹ This new standard joins other actions taken by Teck, including adoption of the Mining Association of Canada (MAC) Toward Sustainable Mining (TSM) Initiative, that improve the safety of our tailings facilities toward the goal of zero harm.

Teck currently manages 14 active and 29 inactive or closed tailings facilities. In addition, Teck has 5 active and 32 inactive or closed Coarse Coal Refuse (CCR) stacks. Tailings storage facilities at all of Teck’s operating and closed sites are designed to meet or exceed regulatory requirements, and we are continually improving the management of our facilities by developing and incorporating best practices. In 2022, Teck continued to play an active role in promoting leading practices for tailings facility management, both in our own operations and across the

mining industry as part of the ICMM and the Mining Association of Canada (MAC). Teck was part of the Advisory Group that provided input to develop the GISTM, and we worked with ICMM to develop conformance protocols for its implementation. Teck is committed to implementation of the GISTM across our operating and legacy (closed) facilities in all jurisdictions, and all of our active tailings facilities will be operated in conformance with the standard by August 2023.

GRI Indicators

GRI 2-23, 2-24, 2-27, 3-3, 306-3, 306-4, 306-5, G4-MM3
This topic is considered one of the most material by our employees, local communities, government regulators, investors and society in the context of all Teck sites.

How Does Teck Manage This Topic?

Information about how we manage tailings, including relevant policies, management practices and systems, is available for [download on our website](#).

¹⁹ About Tailings. Global Tailings Review. 2022.

Pictured: Employees at Fording River Operations, Canada.

2022 Highlights

Zero / significant tailings-related environmental incidents

8 / tailings governance reviews

100% / of our tailings facilities completed annual performance reviews performed by a third-party Engineer of Record

Case Study: Enhancing Safety in Tailings Management With Autonomous Tools

We manage tailings across their life cycle in a safe and environmentally responsible way. Bathymetry surveys, or surveys of a lakebed below water, provide information on water depth and the capacity of tailings facilities, allowing us to prepare safe and effective tailings deposition plans. However, conducting bathymetry surveys can be challenging, especially in less-than-ideal weather conditions. At our Highland Valley Copper Operations, we piloted autonomous bathymetry survey trials using Copperstone Technologies' autonomous vehicle. The vehicle uses the same tools used in the conventional survey method while following a predefined route, guided by GPS.

The autonomous bathymetry survey vehicle allows us to continue gathering accurate data to help responsibly manage our tailings facilities while improving efficiency and safety, supporting our vision of safe and responsible management of tailings across their life cycle.

Read the full case study at teck.com/news/stories.

Our Performance in Tailings Management in 2022

Our Targets and Commitments We are committed to conducting regular reviews of our tailings facilities and to being open and transparent with communities of interest (COIs) that could be affected by the tailings facility, including community members, employees and contractors, regarding the construction and management of our tailings facilities. Our regular reviews, which have six levels of protection, include a range of internal and external reviews that can create recommendations for continuous improvement. When these recommendations arise and when they align with best practices, we develop action plans based on findings, and we regularly assess the implementation of these plans. The following table summarizes our performance against our sustainability strategy and goals for tailings management.

Sustainability Strategy Goals	Status	Summary of Progress in 2022
Strategic Priority: Continue to manage our tailings across their life cycle in a safe and environmentally responsible way		
Goal: Preferentially consider milling and tailings technologies that use less water for both new mines and any mine life extensions at existing mines.	On track	Collaborated with industry peers in research and development activities. Participated in the ICMM tailings reduction technology initiative.
Goal: Expand the use of digitally connected surveillance technologies to assist in monitoring our tailings storage facilities.	On track	Implemented a digital tailings management system at our Carmen de Andacollo Operations (CdA). Expanded the use of real-time systems and remote sensing at several mining operations and closed sites.

Tailings Reviews

Internal and external reviews of our facilities and procedures are conducted to ensure we maintain the highest standard of safety and environmental protection, including following best practice guidance set by MAC and ICMM. Beyond the comprehensive internal and external reviews, an additional

level of facility oversight is in place for our tailings facilities through our Tailings Working Group, which includes subject matter experts from across our business units and sites. This working group also maintains Teck's own tailings guidance and governance framework documents.

Internal Reviews

Staff Inspections

Tailings dams are inspected by trained operators and expert technical staff as frequently as several times daily, with formal staff inspections at least once per month.

Tailings Governance Reviews

Tailings Governance Reviews are carried out every second year at our operations and every third year at our legacy properties by internal subject matter experts. These governance reviews include confirmation that we have the personnel and procedures in place to meet our commitments, and that we are addressing recommendations for continual improvement from our external reviews in a meaningful and timely manner.

The governance reviews also evaluate the performance of our Engineers of Record and other external reviewers to look for signs of complacency or lack of succession planning by those outside of Teck who we rely upon as part of our overall management processes. Regarding joint venture projects, we have an ongoing process with the other shareholders of the Antamina mine that meets the requirements of our governance review process.

From the governance review process in 2022, there were no significant findings related to dam safety; several opportunities to further develop existing systems were identified and are being actioned by the sites. As a result of our ongoing Tailings Governance Review processes and based on themes from MAC and ICMM advancements, we have strengthened our guidance related to change management, roles and responsibilities, enhancing integration of risk evaluation and identifying critical controls.

Through 2022, our governance reviews included consideration of GISTM requirements in preparation of reporting of conformance to GISTM. Teck is committed to conforming with GISTM requirements at all active tailings facilities and at inactive or closed tailings facilities with very high consequences of failure by August 2023.

External Reviews

Annual Facility Performance Reviews and Dam Safety Reviews

At each of our facilities, an Annual Facility Performance Review (AFPR) is conducted by an Engineer of Record (EoR), who is a fully licensed and qualified individual vetted by our Tailings Working Group. Independent, qualified engineers also conduct periodic Dam Safety Reviews (DSRs), with timing dependent upon the nature of the facility. AFPRs and DSRs are conducted to evaluate the physical performance of the facility, as well as Teck's conformance to international best practices, our internal policy/standards and applicable regulatory requirements. AFPRs and other information about our tailings facilities, both operating and legacy, are available on our website at www.teck.com/tailings.

Independent Review Boards

In addition to the review work involved in the AFPRs and DSRs, another key element of Teck's review process is the use of Independent Review Boards. These boards typically consist of two to four very senior individuals recognized within the industry as subject matter experts. The review board provides third-party review of design, construction, operation, surveillance and maintenance of our storage facilities, and will meet from once to several times per year, depending upon the nature of the facility and the issues being considered. The results from the Independent Review Board assessments are communicated directly to senior management.

Tailings Reviews Conducted in 2022

All of our tailings facilities are reviewed against our internal policy and guidance documentation on a regular schedule, as described in Table 12. In 2022, all tailings facilities at Teck had their AFPRs completed as planned. Independent Review Boards met at least once in 2022, with boards responsible for larger facilities meeting several times. Dam Safety Reviews and Teck's Tailings Governance Reviews were also completed as planned at all sites except the Tailings Governance Review at the Fort Hills joint venture, which was cancelled due to divestment of the asset.

External Reviews (continued)

Table 12: Teck 2022 Tailings Review Status

Business Unit	Site	Annual Facility Review	Dam Safety Review	Independent Review Board Activity	Tailings Governance Review	Comment
Base Metals	Antamina	●	■	●	2022	Joint Venture (non-operator)
Base Metals	Carmen de Andacollo	●	■	●	2022	
Base Metals	Highland Valley Copper	●	■	●	2022	
Base Metals	Quebrada Blanca 2	●	■	●	2022	Operations commence in 2023
Base Metals	Red Dog	●	■	●	2021	
Steelmaking Coal	Elkview	●	■	●	2022	
Steelmaking Coal	Fording River	●	■	●	2021	
Steelmaking Coal	Greenhills	●	■	●	2022	
Steelmaking Coal	Line Creek	●	■	●	2021	
Legacy	Beaverdell	●	■	●	2021	
Legacy	Bullmoose	●	■	●	2021	
Legacy	Douglas	●	■	●	Planned in 2023	Stable dry impoundment
Legacy	Duck Pond	●	■	●	2022	
Legacy	Fisherman Road	●	■	●	Planned in 2023	
Legacy	Lennard Shelf	●	■	Planned in 2023	Planned in 2023	Stable dry stack
Legacy	Louvicourt	●	■	●	2020	
Legacy	Magmont	●	■	●	2022	
Legacy	Pend Oreille	●	■	●	2021	
Legacy	Pinchi	●	■	●	2021	
Legacy	Pine Point	●	■	●	2022	
Legacy	Quintette	●	■	●	2021	
Legacy	Sa Dena Hes	●	■	●	Planned in 2023	
Legacy	Sullivan	●	■	●	2020	

● Completed as planned. ■ Dam Safety Reviews up to date per required frequency (between three and 10 years dependent upon potential consequence). ○ Review Board formed: first review in 2022 and next in 2023.

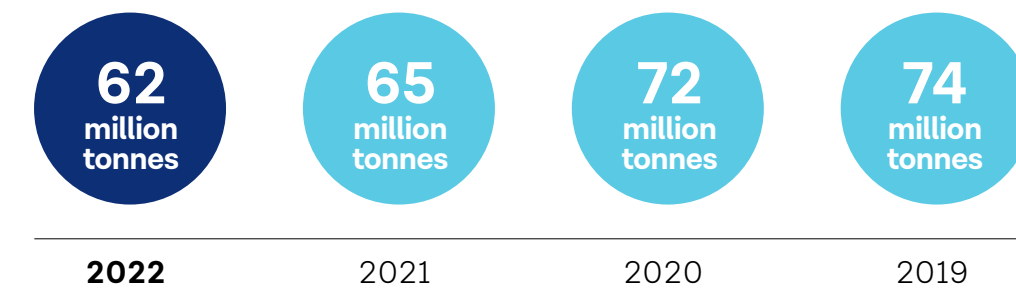
Special Reviews

In addition to internal and external reviews, Teck will occasionally complete a special review of our facilities. The Mount Polley event (2014), the Samarco event (2015) and the Brumadinho event (2019) triggered such reviews. These reviews concluded that no immediate or emerging threats of catastrophic failures were apparent within Teck's tailings facilities.

Tailings Performance in 2022

Total tailings and fine coal refuse generated from processing ore and raw coal, stored in the 13 operating tailings facilities at our mining operations, are reported in Figure 17. This total does not include our minority joint venture operation at Antamina.

Figure 17: Tailings (including Fine Coal Refuse) Generated from Processing Ore and Raw Coal (million tonnes)



Tailings Incidents

Building on our strong track record of tailings management, in 2022, we had zero significant incidents at our tailings storage facilities. All of our facilities performed as intended, with their inspections and assorted internal and external reviews conducted as scheduled, with the exception of the Tailings Governance Review at Fort Hills, which was cancelled due to divestment of the asset.

Technology and Innovation

RACE is developing and implementing a Digital Tailings Management System (DTMS) to support the use of digitally connected surveillance technologies to assist in monitoring our tailings storage facilities. The DTMS is a digital solution that will centralize and allow the use of data analytics for tailings facilities management aspects including geotechnical monitoring, construction and operations for our Carmen de Andacollo (CdA) and Quebrada Blanca (QB) sites in Chile. The system will allow Teck to facilitate compliance with legal requirements, monitor our tailings facilities in near real time, quicken our response to events with Trigger Action Response Plans (TARPs) and combine the best practices and technologies that Teck has available. Implementation of the DTMS at CdA and QB sites will be completed by the end of 2023. This project directly supports our priority to continue to manage our tailings across their life cycle in a safe and environmentally responsible way.

Industry Association Activities

Teck was an active participant in the development of ICMM's Tailings Position Statement and Governance Framework, and is a participant in ICMM's leadership work on a long-term goal of developing safe and sustainable alternatives to conventional wet tailings facilities. We were an active member of the Advisory Group helping to create the GISTM, published in August 2020 by the ICMM, United Nations Environment Programme (UNEP) and Principles for Responsible Investment (PRI). This serves as the industry-leading standard for the safer management of tailings

storage facilities. We actively supported the development of the ICMM Tailings Management Good Practice Guide and Conformance Protocols, which facilitate implementation of the GISTM.

Teck is also part of the MAC Tailings Working Group, which has been responsible for providing industry-leading best practice guidance, including key industry guidance documents. Teck continues to use the MAC Tailings Protocol's Table of Conformance as one component of our Governance Review process at our sites.

Transparency and Disclosure

We remain committed to being open and transparent with COIs that could be affected by our tailings facilities, including community members, employees and contractors, regarding our tailings facilities. As such, we make information on our approach to tailings management, a detailed list of facilities and copies of

recent AFPRs available [on our website](#). We have also provided detailed information about our tailings facilities through responses to the Investor Mining & Tailings Safety Initiative chaired by the Church of England Pensions Board and the Swedish Council on Ethics for the AP Funds.