

Tailings Storage Facility Disclosure Report

**Line Creek Operations, Rail Loop Ponds Tailings
Storage Facility**

July 2023



Teck

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1. Tailings Facility Description

The Rail Loop Ponds (RLP) Tailings Storage Facility (TSF) is an active conventional slurry facility at the Line Creek Operation (LCO) which is owned and operated by Teck Coal Ltd. (Teck). The Line Creek Operation is located approximately 18 km northeast of Sparwood in the Eastern Rocky Mountains of British Columbia.

The site is located in the traditional territory of the Ktunaxa Nation and is within the Elk Valley watershed. The RLP facility is located within the LCO rail loop. The facility is situated on gently sloping ground and is underlain by native soils. The weather in this area is characterized by warm summers and cold, snowy winters. Climate conditions at LCO are strongly influenced by elevation, slope aspects and proximity to either Line Creek or the Elk River.

The RLP comprises multiple ponds (Ponds A, B, C and D) for management of tailings and water. Tailings are hydraulically deposited in Pond A or Pond B. Water then flows into an adjacent Pond C before being recirculated to the plant for reuse. The facility has an additional pond (Pond D) that is primarily dry but can be used to retain excess water if needed. Retention is provided by a combination of constructed dykes and natural ground. The facility occupies a total area of approximately 4 hectares.

The RLP facility is located northwest of the Line Creek Processing Plant and is contained within the rail load-out spur. RLP first began operations in 1981. RLP can collect and store up to 100,000 cubic metres of tailings material. When Pond A or Pond B are full of tailings, deposition is ceased and the tailings materials are allowed to drain before being excavated and stored in an appropriate facility. During this time, tailings deposition is switched to the alternate pond.

A short description of the RLP TSF is summarized in the table below.

Table 1: Description of RLP TSF

TSF Design Summary	Description
Status	Active
Number of tailings embankment structures	N/A
Type of Construction	Centreline homogeneous
Most recent Annual Facility Performance Review	2022 www.teck.com/tailings
Independent Review Board	Yes

Note: Further details regarding the TSF configuration can be found in our facility inventory at www.Teck.com/tailings.



Figure 1: RLP Tailings Pond TSF Site Plan

2. Consequence of Failure

All Teck tailings facilities are assessed for credible failure modes, and the outcomes from these credible failure scenario assessments inform our risk management activities. For the purposes of assigning a facility consequence classification, the downstream consequences of potential failure modes (not considering whether they are credible or not) are used, as per the Canadian Dam Association (CDA) guidelines and the requirements of the jurisdictions in which we operate. The Global Industry Standard on Tailings Management (GISTM) bases consequence classification on credible failure modes only, which may result in a lower stated classification.

Consequence classification should not be confused with risk, as risk also requires the consideration of the likelihood of the event occurring. To better understand the risk that a tailings facility presents, it is necessary to consider both the likelihood and the consequences of a potential failure event. That analysis is performed through our risk assessment process described in the next section.

The RLP is classified as a “Low” consequence facility under both the CDA guidelines and the GISTM.

3. Summary of Risk Assessment Findings

Teck applies risk-based design approaches, whereby risk assessments are used to demonstrate the resilience of our facilities to extreme loading criteria, and to inform decisions to manage risks to as low as reasonably practicable (ALARP). This approach focuses our efforts on credible failure modes, reducing risks at our facilities by reducing the likelihood of occurrence and mitigating downstream impacts, regardless of the consequence classification from hypothetical embankment failures.

The most recent risk assessment for the RLP TSF was conducted in 2023, assessing potential failure modes for hazards up to and including extreme events (i.e., an event that occurs once in 10,000 years). As part of this assessment, failure modes are deemed as credible or non-credible, considering the greatest combination of events or operational errors, and then the risk of such events are evaluated.

All failure modes are sorted according to Teck's risk matrix, with risk mitigation controls identified and tracked. These failure modes are also described in the publicly available Annual Facility Performance Reports. These risk assessments are prepared with assistance from the Engineer of Record and are reviewed by the Independent Tailings Review Board. Teck regularly updates these detailed risk assessments.

Based on the risk assessment for the facility, there are no credible catastrophic failure modes or high risks for the RLP.

The results of the performance monitoring and surveillance program that monitors risks are described in more detail in the Annual Facility Performance Report at www.teck.com/tailings.

4. Summary of Impact Assessments and of Human Exposure and Vulnerability to Tailings Facility Credible Flow Failure Scenarios

An assessment of human exposure (potential for a person to be located in the inundation area) and vulnerability (existing physical, social, economic and environmental conditions that make people and the environment more susceptible to the impacts) was undertaken for the RLP TSF area of influence to understand the severity of the effects of a tailings facility failure.

The potential effects to people and the environment in the highly unlikely scenario of a failure of the RLP tailings storage facility may include the deposition of tailings on a wetland area adjacent to the facility and potential impacts within the rail loop; however, tailings would not be released outside of the rail loop.

5. Description of the Design for all Phases of the Tailings Facility Lifecycle

General design information regarding the RLP retaining structure design for the operational phase is summarized in the table below. An updated closure design for the RLP TSF is under development.

Table 2: RLP TSF Design Information Summary

Structure	RLP Tailings Facility
Containment or Design Type	Centreline homogeneous construction
Estimated Crest El. (m)	1655
Current Embankment Height (m)	3 to 7
Initial Operation	1981
Final Permitted Embankment Height (m)	3 to 7
Current Tailings Volume (m ³)	100,000
Final Permitted Tailings Capacity (m ³)	100,000
Crest Length (m)	1000
Overall Downstream Slope	2.5H:1V
Design Storm Event ¹	Work in Progress ¹
Design Earthquake ¹	Work in Progress ¹

Note: 1) The design basis and analysis is under development with the EOR team. This work is ongoing and is expected to be complete by the end of 2023.

6. Summary of Material Findings of Annual Facility Performance Reports (AFPRs) and Dam Safety Reviews (DSR)

Annual Facility Performance Reports (AFPRs) are compiled each year by a third-party Engineer of Record to summarize the past year's monitoring and surveillance information into a concise review. Dam Safety Reviews (DSRs) are performed every 5 years by an independent reviewer in order to provide an independent assessment of the design and performance of the tailings facility. These reports document the safe operation, maintenance, and surveillance of the facility and identify and make any recommendations for continual improvement. Recommendations from these reports are tracked in the site tailings management system through to completion.

The recommendations from the AFPRs and DSRs are considered 'material'¹ findings' when the observation relates to credible failure modes of the facility that could result in a very high or extreme consequence, regardless of the likelihood of such an occurrence. It is important to note that a 'material finding' does not mean a high probability of occurrence. The urgency with which recommendations are to be addressed are defined by the Engineer of Record or independent reviewer by assigning a priority rating, which then informs the timeline to complete the action.

The most recent AFPR for this facility was completed for the period of October 2021 to August 2022 and no DSR has been performed up to date. There were no material findings in the 2022 AFPR to indicate any tailings facility safety issues.

7. Summary of Material Findings of the Environmental and Social Monitoring Program

There were no material findings associated with the RLP from the 2022 social monitoring program. Key indicators of interest include feedback from the community and our annual sustainability report.

As part of ongoing efforts to continuously improve our social performance, LCO recently completed human rights, human exposure, and vulnerability assessments of credible failure scenarios. Further, a socio-economic profile was updated in 2023 to ensure the mine has updated knowledge for the area of influence of the RLP. An updated Global Industry Standard on Tailings Management (GISTM) Engagement Plan was created and is in the process of being implemented. This Plan outlines the activities that will be undertaken to inform and gather feedback from identified project affected people (PAP) and local emergency response organizations. All feedback gathered is tracked and continually updated within the Knowledge Base. Material findings from social monitoring across the site in general can be found in the Teck Sustainability Report.

LCO has implemented an Environmental Management System (EMS) that is certified to the ISO 14001:2015 standard and applicable Teck corporate standards for health, safety, environment and community (HSEC) management. Teck is committed to environmental management best practices and to achieve continual improvement in our environmental performance. Through this policy LCO commits to:

- Complying with applicable legal, regulatory and other requirements which relate to the operations' identified environmental aspects.
- Ensuring effective implementation, maintenance, and documentation of the EMS.
- Setting environmental objectives which measure progress towards continual improvement and utilizing accepted assessment processes.
- Prevention of pollution.
- Minimizing environmental impacts of activities and services related to mining operations.
- Making this policy available to employees, persons working on Teck's behalf and the public.
- Raising the environmental awareness of employees and those working on Teck's behalf.

¹ Material: Important enough to merit attention or having an effective influence or bearing on the determination in question. For the Standard, the criteria for what is material will be defined by Operator, subject to the provisions of local regulations, and evaluated as part of any audit or external independent assessment that may be conducted on implementation. (GISTM, 2020)

Monitoring and review requirements are related to EMS tracks the overall effectiveness of EMS in controlling environmental impacts, verifying conformance with operational controls, tracking regulatory compliance status, and progress toward achieving objectives and targets. Audits are also conducted at least annually from external or third parties.

Teck has a robust internal audit program to monitor compliance to legal and internal requirements. These audits are conducted once every three years. In 2020 the audit scope included tailings facilities at LCO.

The LCO EMS was also externally audited by a third party in 2022. This resulted in no major non-conformances, and there were no findings associated with the RLP.

8. Summary Version of the Tailings Facility Emergency Preparedness and Response Plan (EPRP)

The RLP TSF has no credible catastrophic failure modes. Regardless, information regarding the facility is included in the Line Creek Operations Mine Emergency Preparedness and Response Plan. This plan identifies emergencies that may arise from various hazards across the mine site and describes actions to prepare for and respond to emergencies arising from those hazards. The plan describes roles and responsibilities of site personnel and of provincial emergency response organizations, alert and notification procedures including off-site contacts, an inventory of response equipment, and training requirements for site personnel.

The objectives of the EPRP are:

- Establish procedures for emergency preparation, including escalating levels of response,
- Respond to developing, imminent or actual emergency scenarios in a way that reduces potential consequences; and,
- Identify training and testing requirements for effective implementation of the EPRP.

The Rail Loop Ponds do not include any credible failure mechanisms that have the potential to cause health and safety concerns to the public downstream.

In the highly unlikely event of an emergency on site, response actions would be taken to reduce potential consequences. The actions identified in the EPRP apply to a wide range of potential emergency situations, and generally include:

- Immediate physical actions that could potentially be taken in response to an unexpected triggering event to prevent further deterioration of the situation or condition.
- Emergency call out procedures to establish internal and external communication lines. These contact lists are verified annually to confirm accurate contact information. The groups that would be contacted include, but are not limited to:
 - Emergency Management BC
 - Indigenous Government Organizations
 - Potentially affected downstream communities
 - Teck Corporate Crisis Response Team
 - The Engineer of Record

- Procedures for coordination with Emergency Management BC in order to conduct an evacuation of downstream potentially affected areas.

As part of Teck's preparation for emergencies, simulations and training exercises are conducted annually, and include participation by emergency preparedness agencies and representatives of the downstream project affected people. During these exercises, Line Creek Operations will request input on the capability and capacity of emergency response services of downstream communities and project affected people to respond in an evacuation situation. As part of our commitment to continuous improvement, Line Creek Operations EPRP will continue to develop over time in collaboration with project affected people to improve the state of preparedness for emergencies.

9. Independent Reviews

The Independent Tailings Review Board meets three times annually. The most recent meeting was in July 2023, and the next one is scheduled for November 2023.

10. Financial Capacity

Teck confirms that it has adequate financial capacity to cover estimated costs of planned closure, early closure, reclamation, and post-closure of the RLP TSF and its appurtenant structures. These costs are disclosed annually in aggregate form in our annual financial statements contained within our [Annual Report](#). These cost estimates are based on the tailings facility closure designs described in Section 5.

Further, Teck maintains insurance for our tailings facilities to the extent commercially available.

11. Conformance to the Global Industry Standard on Tailings Management

Teck has performed a self-assessment of conformance to the Global Industry Standard on Tailings Management (GISTM) for the RLP TSF at LCO. This self-assessment has been performed in accordance with the ICMM Conformance Protocols issued in May 2021.

Categories of conformance for individual Requirements in the GISTM are set out below. These take into account guidance from ICMM. Where some requirements represent ongoing community engagement or other ongoing activities, and the systems and/or practices are substantively implemented such that the intended outcome is functionally achieved, and there is no physical risk to tailings facility safety, then these requirements can be considered conformance with the GISTM.

Table 3: Categories of Conformance

Conformance Level	Description
Meets	Systems and/or practices related to the Requirement have been implemented and there is sufficient evidence that the Requirement is being met.
Meets with plans in place	Where an Operator is required to undertake engineering work or other measures to conform to some Requirements (e.g., for Requirements 4.7 or 5.7, which might include remedial engineering measures for existing facilities), the expectation is that these shall be carried out as soon as reasonably practicable. It is not necessary for such measures to be complete by the implementation deadlines for an Operator to be in conformance, but both the measures and associated timelines should be clearly documented by an Accountable Executive.
Partially meets	Systems and/or practices related to meeting the Requirement have been only partially implemented. Gaps or weaknesses persist that may contribute to an inability to meet the Requirement, or insufficient verifiable evidence has been provided to demonstrate that the activity is aligned to the Requirement.
Does not meet	Systems and/or practices required to support implementation of the Requirement are not in place, are not being implemented or cannot be evidenced.
Not applicable	The specific Requirement is not applicable to the context of the asset.

For the RLP TSF at LCO, all requirements have been met, or are met with a plan in place, for Principles 1, 2, 8, 9 and 11 to 15. Ongoing work to meet all requirements in Principles 4 and 5 will continue beyond August 5, 2023, and these principles are considered partially met. Importantly, there are no immediate physical safety risks at the facility related to the work in progress. The ongoing work to address the outstanding recommendations is as follows:

- Principle 3: Work is ongoing to evaluate the opportunities to improve resilience of these facilities, including completing a hydrotechnical assessment of the facilities that takes into consideration potential effects of climate change. This work is ongoing and is expected to be complete by the end of 2023.
- Principle 4, 5 & 6: Work is ongoing to evaluate the performance of this low consequence facility relative to extreme loading conditions in order to inform decisions on managing the risks to as low as reasonably practicable (ALARP) for both the operating and closure portions of the lifecycle. Geotechnical assessments and evaluations of options to demonstrate risks are managed to ALARP, and completion of a design basis report and updated closure cost estimates are expected to be complete by the end of 2024.
- Principle 7: Upon completion of the performance evaluation and update to the design basis report in Principles 4, 5 & 6, the monitoring system for the facility will be updated to ensure that it is appropriate for verifying design assumptions and monitoring against credible failure modes, Including specific performance objectives. This work is expected to be complete by the end of 2024.
- Principle 10: The RLP TSF at LCO has been included within the scope of the Independent Tailings Review Board for Teck Coal, and a DSR is scheduled to be performed before the end of 2024. Also, closure designs and costs are being reviewed and updated to account for the additional requirements introduced by the GISTM. The design and closure cost update are in progress, and are expected to be complete by the end of Q1 2024.