

Tailings Storage Facility Disclosure Report

Elkview Lagoon D

July 2023

The Teck logo is positioned in the bottom right corner of the page. It consists of the word "Teck" in a bold, dark blue, sans-serif font. The background of the page features a large, dark blue geometric shape on the left side, which is a trapezoid with a diagonal cutout on its right edge, creating a dynamic, modern look.

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1. Tailings Facility Description

The Lagoon D is an active tailings facility at the Elkview Operations (EVO) site, which is owned and operated by Teck Coal Ltd. The EVO coal mine site is approximately 3 km east of the town of Sparwood, in southeastern British Columbia.

Elkview is situated between the Elk River and Michel Creek valleys in the front ranges of the Rocky Mountains in southeastern British Columbia (BC) and is situated within the asserted traditional territory of the Ktunaxa Nation. Elkview spans three Biogeoclimatic Ecosystem Classification (BEC) subzones, with the largest proportion occurring in the Engelmann Spruce – Subalpine Fir Elk Dry Cool Subzone. Pre-existing baseline information is presented in more detail in EVO's Five Year Mine Plan and Reclamation Plan. The climate is characterized by warm dry summers and cool winters.

Lagoon D is located on the western perimeter of the site, immediately west of the Wash Plant. Lagoon D was constructed as a ring dyke embankment. The ring-dyke starter embankment was constructed in 1972 using locally borrowed sand and gravel. The eastern perimeter is confined by the natural hillside. Since the commissioning of the West Fork Tailings Facility in 2006, Lagoon D has become the secondary tailings storage location. Today, Lagoon D receives a small portion of fine tailings and contains an estimated 22.78 Mm³ of tailings.

A short description of Lagoon D is summarized in the table below:

Table 1: Description of Lagoon D

TSF Design Summary	Description
Status	Active
Number of tailings embankment structures	1
Type of Construction	Upstream sand and gravel ring-dyke
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.

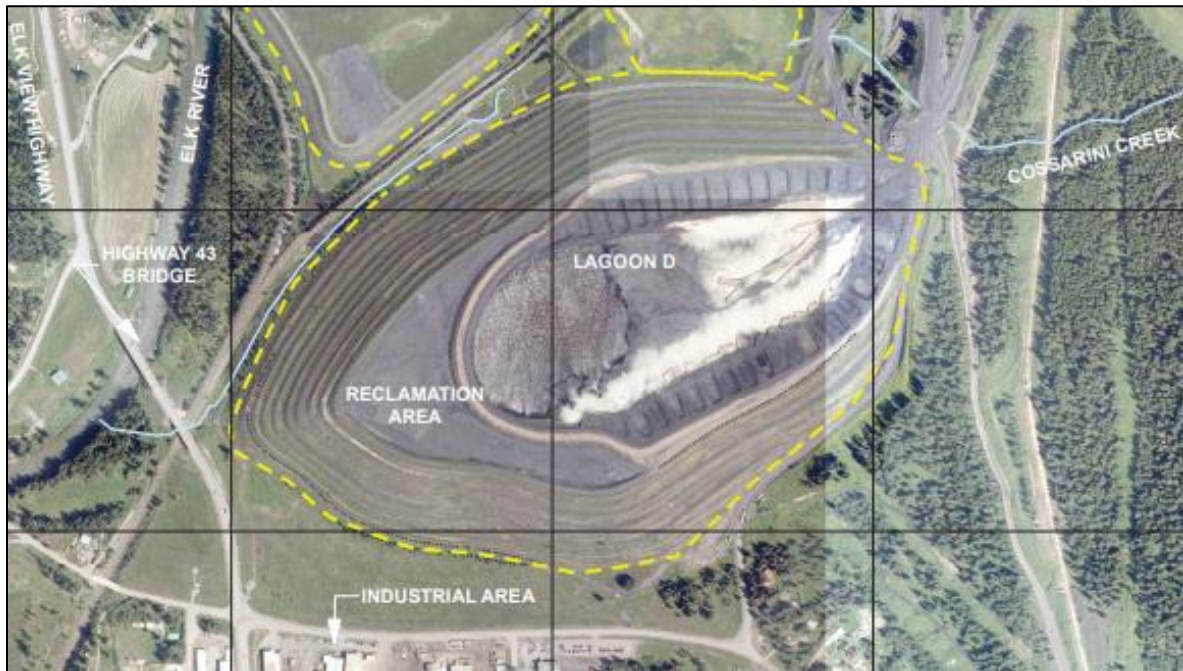


Figure 1: Lagoon D Site Plan

2. Consequences 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 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 of a failure event, and the consequence of the event, which is performed through our risk assessment process described in the next section.

The Lagoon D TSF is classified as a “Very High” 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 Lagoon D was reviewed and updated 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, and the key findings from the most recent assessment are described below.

The Lagoon D TSF has a potentially credible failure mode that is of very low likelihood and may ultimately be deemed non-credible upon completion of additional detailed assessments. A summary of the material risk (high or extreme consequences, regardless of likelihood) being managed, the existing controls that are in place, and additional risk mitigation measures that are planned, are summarized below.

Potential for Presence of Weak Foundation Soils in the Northern Slope of the Structure:

What could happen:

- In the event of a 5,000-year or greater seismic event, and if the water levels within the structure are also elevated far beyond current levels, the foundation material could deform, causing instability leading to loss of containment.

What are we doing to control the risk:

- The design and operation of the facility includes internal drainage, maintains the pond away from crest, and reduces the volume of fluid stored.
- Additional Investigation of the foundation will be conducted to improve understanding of the geotechnical conditions, and if necessary, options to reduce the risk to as low as reasonably practicable (ALARP) will be developed.

The above risk, and the results of the performance monitoring and surveillance program that monitors these risks are described in more detail in the Annual Facility Performance Report at

www.teck.com/tailings.

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

Formal inundation studies have been conducted at Lagoon D to identify potentially impacted communities, infrastructure and waterbodies in the extremely unlikely event of a tailings facility breach. 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 Lagoon D area of influence to understand the severity of the effects of a tailings facility breach. Results of the assessment are summarized below.

The potential effects to people and the environment in the highly unlikely scenario of a breach of Lagoon D include impacts to infrastructure, the aquatic and riparian environment and fugitive dust accumulation. Some of the vulnerability factors identified during that exercise included the sensitive aquatic ecosystem and the strong economic reliance on mining and tourism in the region. The area of influence for Lagoon D includes infrastructure immediately north and downstream of Lagoon D and the Elk River. Because this northern aspect is not an active work area, people are only occasionally and irregularly in the area of potential impact. It is not expected that Lagoon D inundation would leave the banks of the river.

What are we doing to control the risk:

- The controls and mitigations that have been implemented to reduce the likelihood and consequences of a credible tailings facility failure scenario at Lagoon D are described in Section 3 above. Further, measures to protect potentially affected people are being planned for implementation, including sharing of information, assessing capacity of the communities to respond to emergencies, and co-developing emergency response measures with provincial agencies and project-affected people to improve preparedness.

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

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

Table 2: Lagoon D Design Information Summary

Structure	Lagoon D
Containment or Design Type	-Upstream sand and gravel ring-dyke. The north, south, and west perimeter of the facility was raised using Coarse Coal Rejects. -Construction started in 1972
Estimated Crest El. (m)	1168
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Initial Operation	1972
Final Permitted Embankment Height (m)	1168
Current Tailings Volume (m ³)	22.78 M
Final Permitted Tailings Capacity (m ³)	~22.8 M
Crest Length (m)	2226
Overall Downstream Slope	2.7V:1H (max)
Design Storm Event	Probable Maximum Flood (PMF)
Design Earthquake	1:5000 AEP

6. Summary of Material Findings of Annual Facility Performance Reports (AFPR) 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 potential 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.

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)

The most recent AFPR for this facility was completed for the period of November 2021 through September 2022 and the most recent DSR was performed in 2018. There were no unaddressed material findings in either the 2022 AFPR or 2018 DSR 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 Lagoon D 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, EVO 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 Lagoon D. 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 PAP and local emergency response organizations. In addition, all feedback gathered is tracked and continually updated within the EVO Knowledge Base. Material findings from social monitoring across the site in general can be found in the Teck Sustainability Report.

EVO 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 EVO 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.

Monitoring and review requirements are defined in the EMS in order to track the overall effectiveness 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 2022 the audit scope included tailings facilities at EVO.

The EVO 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 Lagoon D.

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

Lagoon D is covered under the facility specific Emergency Preparedness and Response Plan (EPRP) and referenced in the site-specific EVO Mine Emergency Preparedness and Response Plan (MERP). This plan identifies hazards associated with credible flow failure scenarios 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 EPRP program is linked to the tailings specific trigger action response plans (TARP), which are associated with the tailings surveillance and monitoring program described in Section 3. The objectives of the EPRP are:

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

In the highly unlikely event of an imminent tailings facility failure, response actions would be taken to save human lives and reduce the potential downstream consequences. The actions identified in the EPRP 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 toward embankment failure.
- 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.

In preparation for emergencies, emergency 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, EVO 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, EVO's EPRP will continue to develop over time in collaboration with project affected people to improve the state of preparedness for emergencies.

The EPRP is tested and reviewed every three years. The last test was in 2022.

9. Independent Reviews

The Independent Tailings Review Board meets three times annually. The most recent meeting was in July 2023. The next Independent Tailings Review Board meeting 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 Lagoon D 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 Lagoon D at EVO. 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 Lagoon D at EVO, all requirements have been met, or are met with a plan in place, for Principles 1 to 4 and 6 to 15. Ongoing work to meet all requirements in Principle 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 5: Work is ongoing to demonstrate that risks are as low as reasonably practicable (ALARP), including evaluation of performance against extreme loading criteria, and verification of foundation conditions beneath the north slope, as discussed in section 6. Evaluations of long term stability and development of options, if necessary, to reduce risks to ALARP is expected to be complete by the end of 2024.
- Principle 5: Closure designs are being updated to account for the additional requirements introduced by the GISTM. Design work is ongoing, with closure Design Basis Reports and updated cost estimates expected by the end of 2023.