Tailings Storage Facility Disclosure Report

Highland Valley Copper, 7-Day Pond Tailings Storage Facility

July 2023

Teck

Contents

1. Tailings Facility Description

The 7-Day Pond Tailings Storage Facility (TSF) is an active facility that is a part of the Highland Valley Copper Operations (HVC), which is owned and operated by Teck Resources Limited (Teck). The HVC Mine is located approximately 45 km southwest of Kamloops, in the interior of British Columbia.

The site is located within the highlands of the Thompson Plateau and is characterized by elevated regions of moderate relief with moderate to gentle slopes, a rounded outline and a large area at or near the summit elevation. The vegetation comprises bunchgrass steppes, sagebrush and open forest comprised of pine, fir, aspen and larch. The climate is characterized as semi-arid and is affected by the rain shadow of the Cascade Mountain Range to the west of the Thompson River Valley.

The 7-Day Pond TSF is located approximately 1 km southeast of the Valley Pit, adjacent to the Highland Mill with a footprint of approximately 9 ha. The TSF has been used since 1979 to store tailings during upset conditions and to manage local runoff from the mill area. Tailings are contained in the TSF by haul roads and access roads of varying crest widths and heights. The pond is contained by the East Berm and by the pit waste rock dumps. There are two vegetated areas downstream of the East Berm which are contained by access road fills; these areas are the low points of the surrounding catchment (also identified as the “Treed Area”).

A short description of the 7-Day Pond TSF is summarized in the table below.

Table 1: Description of 7-Day Pond TSF

TSF Design Summary	Description
Status	Active
Number of tailings embankment structures	1
Type of Construction	East Berm: compacted granular fill (sand and gravel)
Most recent Annual Facility Performance Review	2022 www.teck.com/tailings
Independent Review Board	Yes

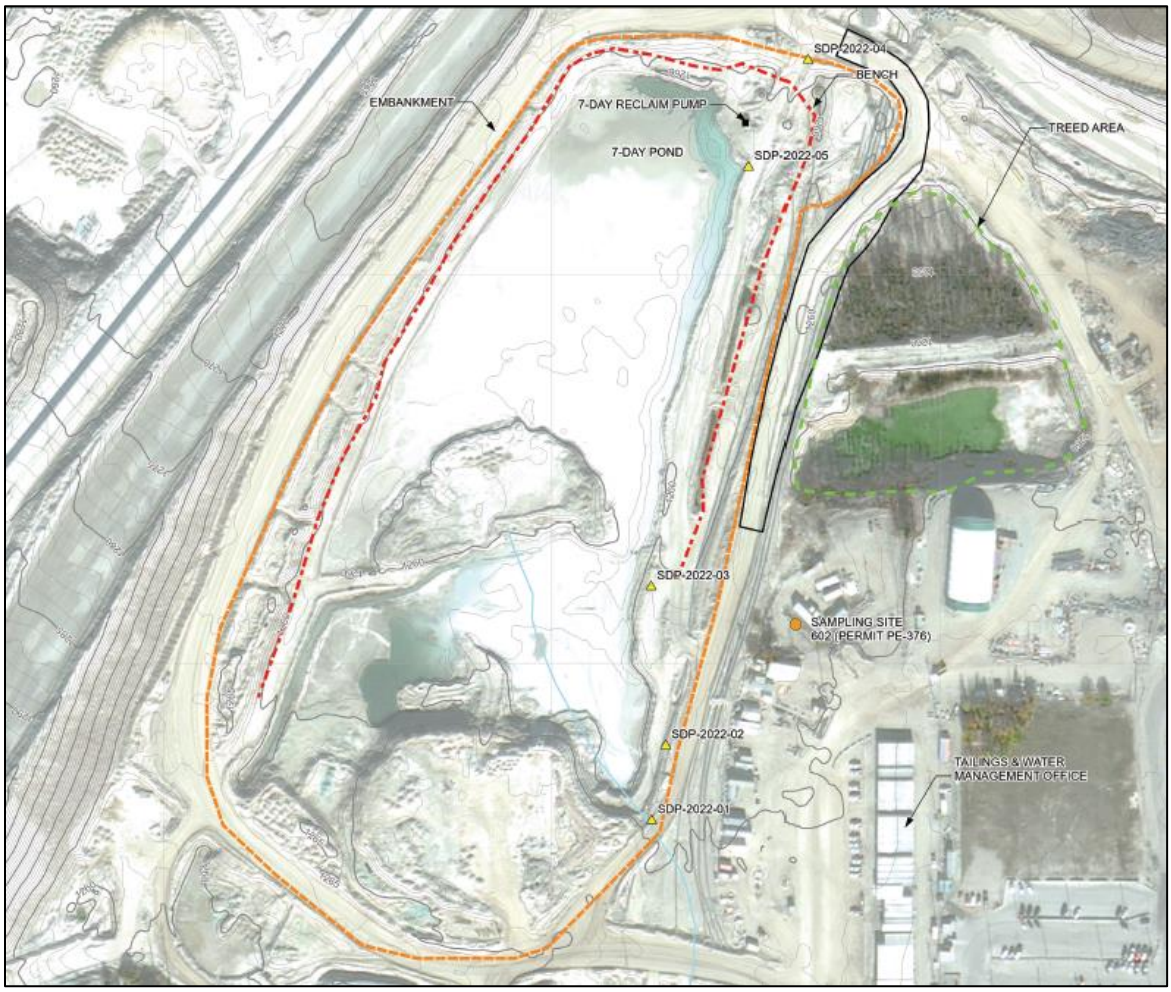

Figure 1: 7-Day Pond TSF Site Plan

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 downstream consequences of *potential* failure modes (not considering whether they are credible or not) are used, 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 7-Day Pond TSF is classified as a ‘Low’ consequence facility under both the CDA guidelines and 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 assumed dam failures.

The most recent risk assessment for the 7-Day Pond TSF was conducted in 2023 as well as a credible failure scenario assessment 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 or 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 7-Day Pond TSF has potentially credible failure modes that are of low likelihood and have low potential consequences. A summary of these low risks that are being managed, and the controls that are in place are summarized below.

<u>East Berm Overtopping During Extreme Storm Events:</u>

What could happen:

- During an extreme flooding event, the embankment could be overtopped, leading to a release of water and tailings to the adjacent treed area.

What are we doing to control the risk:

- A pumping system is installed to maintain pond levels well below threshold levels.
- A surveillance program is in place that incorporates a real-time instrumentation monitoring system.
- The Operations, Maintenance and Surveillance (OMS) Manual sets out procedures for routine tailings removal to increase storage capacity.

<u>Embankment Instability:</u>

What could happen:

- In the event of a seismic event, the potential presence of weak foundation soils beneath the embankment could become unstable and potentially lead to a release of water and tailings to the adjacent treed area.

What are we doing to control the risk:

- Adequate design controls are in place to mitigate this risk, including site investigations that meet industry best practice conducted to characterize the foundation materials.
- The facility is designed to design criteria conforming to the requirements of the GISTM.

- A pumping system is installed to maintain pond levels low to reduce the amount of water and tailings that would potentially be released.
- A surveillance program is in place that incorporates a real-time instrumentation monitoring system.

The above risks, 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. Summary of Impact Assessments and of Human Exposure and Vulnerability to Tailings Facility Credible Flow Failure Scenarios

To date, no formalized inundation studies have been completed for the East Berm of 7-Day Pond TSF. A high-level assessment concluded that water or tailings from a potential 7-Day Pond TSF breach would report to the adjacent treed area. This was used to undertake a site-wide 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) assessment was in 2023 to understand the severity of the effects of a tailings dam breach at the 7-Day Pond TSF. Physical, social, economic, and environmental factors were evaluated in order to understand conditions that might increase susceptibility of people in the area of influence to the impact of tailings hazards. Vulnerability factors identified during that exercise included loss of income or work property and location of cultural heritage located within the inundation zone. The area of influence for the East Berm is assumed to include the on-site work area downstream of the berm.

As noted in Section 3, in 2023 HVC undertook a credible failure modes assessment process for the 7-Day Pond TSF based on HVC's assumptions surrounding impact of failure of the 7-Day Pond TSF East Berm through flood induced overtopping or seismic induced instability. The assessment did not identify any credible flow failure scenarios that would affect the population downstream of the facility or would cause any offsite discharge, and there would be very limited on-site environmental and cultural heritage impact.

What are we doing to control the risk:

- The controls and mitigations that have been implemented to reduce the likelihood and consequences of a potential tailings incident at 7-Day Pond TSF are described in Section 3 above. Additionally, a potential tailings incident at 7-Day pond would not result in off-site impact.

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

General design information regarding the East Berm design for the operational phase is summarized in the table below. A mine reclamation and closure plan has been developed for HVC which references the end land use plan, reclamation prescriptions and mine closure procedures. The overall closure concept currently includes creating a surge pond or wetland (7-Day Wetland), that will provide flow attenuation for Closure and Post-Closure water management and may also support water treatment and/or habitat for wildlife as a secondary function. In the proposed configuration, the 7-Day Wetland will be approximately 2.4 hectares in size, and will be located adjacent to the Highland Mill area.

Table 2: 7-Day Pond TSF Design Information Summary

Structure	East Berm
Containment or Design Type	- Constructed with compacted granular sand and gravel fill. 1979-2013 – constructed and operated as an emergency storage facility. 2013-2016 – pond interior partially backfilled, reducing the area by 65% 2016 – classification updated from sediment pond to TSF 2018 – order issued by the BC Ministry of Energy, Mines and Low Carbon Innovation for THVCP to fulfill the Code requirements for the 7-Day Pond to be considered a TSF. (i.e., site investigations etc.) 2020 – crest raise of the east berm
Estimated Crest El. (m)	1261.8
Current Dam Height (m)	6
Initial Operation	1979
Final Permitted Dam Height (m)	6
Current Tailings Volume (m^3)	N/A[1]
Final Permitted Tailings Capacity (m^3)	34,000
Crest Length (m)	200
Overall Downstream Slope	1.5H:1V
Design Storm Event	72-hrs Probable Maximum Flood (PMF)
Design Earthquake	2,475-year return interval

Note: 1 – Tailings volume not recorded.

6. Summary of Material Findings of Annual Facility Performance Reviews (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.

The most recent AFPR for this facility was completed for the period of January 2022 through December 2022 and the most recent DSR was performed in 2018. There were no material findings in either the 2022 AFPR or 2018 DSR that would indicate any tailings facility safety issues.

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

HVC has implemented an Environmental Management System (EMS) that conforms to the requirements of ISO 14001:2015 and applicable Teck corporate standards for health, safety, environment, and community (HSEC) management. The EMS applies to all activities that could impact the environment at HVC and outlines the processes and practices to reduce potential environmental impacts and improve environmental performance. Monitoring and review requirements are defined within the EMS Tasks application in SiteLine and used to track the overall effectiveness of the EMS in controlling environmental impacts, verifying conformance with operational controls, regulatory compliance status, and progress toward achieving objectives and targets. Key process indicators of interest tracked within the EMS system include:

- Environmental performance
- Water and tailings performance
- Waste management
- On site and downstream water quality
- Compliance obligations
- Emergency preparedness and response

[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).

- Community affairs

An external audit was conducted by SGS Canada Inc. in 2022 of HVC's EMS to determine the effectiveness of the system. There were no material findings from the environment monitoring program associated with the 7-Day Pond TSF. As part of ongoing effort to continuously improve our environmental management, HVC is undertaking work to improve understanding of hydrogeology, groundwater flows, chemistry and surface water interactions. HVC also continues to work towards a collaborative resolution with Indigenous Governments and Organizations on the execution of the sulphate adaptive management plan (SAMP) program and concurrent broader water management initiatives. Community incident status is reviewed quarterly by HVC.

There were no material findings associated with the 7-Day Pond TSF from the 2023 social monitoring program. Key indicators of interest include the completion of human rights, human exposure, and vulnerability assessments of credible flow failure modes. A socio-economic profile was updated in 2023 to ensure the mine has the latest knowledge base around the location of the 7-Day Pond TSF and future development related to the HVC 2040 mine extension application. Material findings from social monitoring across the site in general can be found in the Teck Sustainability Report.

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

The 7-Day Pond TSF is included in the site-specific HVC Mine Emergency Preparedness and Response Plan. This plan identifies hazards associated with credible flow failure modes and describes actions to prepare for and respond to emergencies arising from those hazards. It also includes an organizational scheme for emergency responses, including the roles and responsibilities of site personnel, alerting and notification procedures, an inventory of release-response equipment, and a training plan 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 dam 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 dam 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 dam 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
    - Local governments of 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. For this purpose, evacuation maps have been prepared.

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, HVC requests 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, HVC's 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 2 to 3 times a year. The most recent meeting was in April 2023, and the next one is scheduled for August 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 7-Day Pond 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 7-Day Pond at Highland Valley Copper. 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 7-Day Pond at HVC, all requirements have been met, or are met with a plan in place, for Principles 1 through 15. The facility was designed and built to meet extreme loading criteria, and as such has a robust design, and appropriate tailings management and governance systems are in place, with established independent reviews and ongoing community engagement.