

Final

2025 Annual Facility Performance Report – HB Mine Tailings Facility

Salmo, BC

Regional District of Central Kootenay



SRK Consulting (Canada) Inc. ■ CAPR003603 ■ February 2026



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Useful Definitions

This list contains definitions of symbols, units, abbreviations, and terminology that may be unfamiliar to the reader.

AFPR	Annual Facility Performance Report
CDA	Canadian Dam Association
DSI	Dam Safety Inspection
DSR	Dam Safety Review
EMLI	BC Ministry of Energy, Mines and Low Carbon Innovation
EOR	Engineer of Record
EPRP	Emergency Preparedness and Response Plan
FLNRO	BC Ministry of Forests, Lands, and Natural Resource Operations
FOS	Factory of Safety
HBTF	HB Mine Tailings Facility
HSRC	Health, Safety, and Reclamation Code
IDF	Inflow Design Flood
MCM	BC Ministry of Mining and Critical Metals
OFI	Opportunities for Improvement
OMS	Operations, Maintenance, and Surveillance
PFM	Potential Failure Modes
PMF	Probable Maximum Flood
QPO	Quantifiable Performance Objective
RCP	Remediation and Closure Plan
RDCK	Regional District of Central Kootenay
SI	Slope Inclinator
TARP	Trigger and Action Response Plan
TSDC	Tailings Surface Drainage Channels
VWP	Vibrating Wire Piezometer

Executive Summary

This report presents the results of the 2025 Annual Facility Performance Report (AFPR) of the HB Mine Tailings Facility located near Salmo, BC. The AFPR has been prepared to comply with Section 10.6.4 of the Health, Safety, and Reclamation Code (HSRC) for Mines in British Columbia and meet the guidelines specified in the HSRC Guidance Document (EMLI 2024b). The review period covered by this AFPR is September 2024 through October 2025.

Summary of Facility Description

The HB Mine Tailings Facility (HBTF) contains approximately 6.3 million tonnes of tailings that are impounded by the HB Dam and cover an approximate area of 26 ha. The tailings have a nominal 0.3 m thick cover and an approximate maximum thickness (tailings + cover) of 23 m immediately upstream of the dam. The dam is an earthen embankment structure with two downstream raises constructed during operations (1975 and 1977), with a toe berm that was constructed in 2005 and expanded in 2021. The dam has a maximum height of 28 m and a crest length of approximately 210 m. No water is stored in the facility. Surface water exits the facility through a bedrock spillway at the west abutment that transitions to a spillway channel in soil downstream of the dam toe.

Summary of Key Hazards and Failure Modes

Failure Mode	Description
Overtopping	Overtopping is considered a close to non-credible failure mode as the spillway was expanded in 2021 to be able to convey the PMF event, and the facility does not impound water. Overtopping would require a spillway blockage that would require a large-scale failure of the bedrock highwall above the spillway. There are no observations to date that would indicate that is any significant risk of a highwall instability.
Internal erosion and piping	A filter compatibility assessment determined that the dam filters are gradationally compatible with the material being protected. However, the dam construction history is not fully understood, and numerous unidentified pipes and wooden drainage features have been discovered during previous site investigations since 2002. As a result, piping along these drainage features is considered credible. This risk has been mitigated in 2021/2022 through the removal and backfilling of the tailings pond and expansion of the toe berm, and as a result, the risk has been reduced to as low as reasonably practicable.
Instability	The most recent stability analysis indicates that the facility exceeds CDA minimum Factor of Safety (FOS) guidelines under static and post-seismic loading conditions under the design event. The 2025 drilling program encountered conditions that differed from the previous characterization of the foundation materials including the identification of a potential contractive glaciolacustrine unit. An updated assessment is currently in progress to refine the condition and strength characteristics, evaluate the potential for liquefaction and susceptibility to earthquake loadings, and to determine if the glaciolacustrine unit poses a risk to dam safety.

Consequence Classification

A dam break analysis and consequence classification assessment were completed in 2018 to evaluate the facility under the current HBTF configuration (SRK 2018). The assessment maintained the “Very

High” consequence classification that is based on economic and infrastructure losses primarily due to a washout of Highway 3. This rating was confirmed during the 2024 Dam Safety Review (DSR) and is the basis for the 2025 AFPR. There have been no changes in upstream or downstream conditions that would warrant a revision of the dam consequence classification.

Summary of Significant Changes

No significant changes to the design, operation, and performance of the facility. No dam safety incidents occurred during the reporting period.

The HB Dam is currently stable and there are no signs of any instability. The tailings cover, expanded toe berm, and spillway side-slopes remain prone to erosion in the short term until vegetation becomes established. The spillway shows no signs of instability or deterioration. The condition of the seepage at the dam toe remains unchanged from previous inspections.

Summary of Review of the OMS and EPP Manuals

Updates to both the OMS Manual and the Emergency Preparedness and Response Plan (EPRP) were completed in February 2026. Both the OMS Manual and EPRP are considered adequate for the facility.

Date of Next Dam Safety Review

The 2024 DSR was submitted to MCM on March 31, 2025. The next DSR is scheduled to be submitted to MCM on March 31, 2030, as per the HSRC.

Table of Recommendations

Recommendations resulting from the 2025 AFPR are presented on the following table. The recommendations include outstanding recommendations from previous AFPRs, as well as the recommendations from the 2024 DSR. Recommendations in *greyed italics* indicate the item has been completed in the past year. The priority rankings (1 to 4) were obtained from the HSRC Guidance Document (EMLI 2024a) and are defined as follows:

1. A high probability or actual dam safety issue considered dangerous to life, health or the environment, or risk of regulatory enforcement if not addressed immediately.
2. If not corrected, could likely result in dam safety issues leading to injury, environmental impact, or significant regulatory enforcement; or a repetitive deficiency that demonstrates a systematic breakdown of procedures.
3. Single occurrences of deficiencies or non-conformances that alone would not be expected to result in dam safety issues.
4. Best Management Practice – further improvements are necessary to meet industry best practices or reduce potential risks.

Table of Recommendations from 2025 AFPR

ID No.	Finding / Existing Condition / Issue	Deficiency/ Non-Conformance/ OFI	Applicable Regulation or Reference	Recommended Action	Priority	Status / Recommended Deadline
2022						
2022-1	<i>On small tailings exposure was observed immediately east of the Main Channel.</i>	<i>Deficiency</i>	<i>OMS Section 5.4</i>	<i>Scrap up all tailings exposures and bury in the Ross Landform Area.</i>	4	Complete <i>All exposures were removed in August 2025.</i>
2023						
2023-3	<i>The existing piezometer instrumentation network includes three piezometer locations that are generally located along the centerline of the dam. The variation of the seepage regime upstream of the dam and closer to the abutments is unknown.</i>	<i>Non-conformance</i>	-	<i>Additional piezometers should be installed along two new cross sections closer to the abutments, as well as within the tailings impoundment upstream of the dam.</i>	4	Complete <i>Piezometers installed in August 2025.</i>
2024						
2024-1	<i>A fallen tree is present approximately 5 m north of the spillway inlet that has the potential to enter the spillway in the event of a large flood.</i>	<i>Deficiency</i>	<i>OMS Section 5.4</i>	<i>Remove the tree.</i>	4	Incomplete <i>End of 2026.</i>
2024-2	<i>The Casagrande tip in Piezometer P2 is partially separated from the above standpipe PVC resulting in the water level meter getting caught 25 cm above the bottom of the piezometer. The piezometer remains functional but is prone to further damage.</i>	<i>Deficiency</i>	<i>OMS Section 5.4</i>	<i>Install a vibrating wire piezometer in the standpipe as part of the piezometer installation program (Recommendation 2023-3).</i>	4	Complete <i>Piezometers installed in August 2025.</i>
2024-3	<i>The 2024 survey hub readings are unreliable due to survey inaccuracies (including control points anchored in bedrock).</i>	<i>Non-conformance</i>	<i>OMS Section 6.2.2</i>	<i>Increase the survey hub frequency for 2025 to be monthly during the snow-free periods until a baseline is established.</i>	4	Complete <i>Survey baseline is established.</i>
2024-4	<i>While there have been no signs of instability of the spillway bedrock highwall, the large-scale failure of the highwall has the potential to block the spillway.</i>	<i>OFI</i>	<i>OMS Section 6.2</i>	<i>Establish an OMS surveillance procedure for photographic monitoring of the highwall adjacent to the spillway.</i>	4	Complete <i>OMS Manual Updated</i>
2024 DSR Recommendations						
DSR-01	<i>The weekly site inspections were not regularly completed during the 2023 freshet period (Mid-March to Mid-April), in accordance with the OMS Manual. (Tetra Tech understands the water level tape was down for repairs during this period).</i>	<i>OFI</i>	<i>OMS Section 4.2</i>	<ul style="list-style-type: none"> <i>Provide updated training on surveillance inspections annually before the freshet period and continue to conduct and document weekly site surveillance (visual inspections) during</i> 	4	Complete <i>OMS Manual updated with additional training requirements details. Water level tape no longer needed for</i>

ID No.	Finding / Existing Condition / Issue	Deficiency/ Non-Conformance/ OFI	Applicable Regulation or Reference	Recommended Action	Priority	Status / Recommended Deadline
				<p><i>the freshet period, as outlined in the OMS Manual.</i></p> <ul style="list-style-type: none"> Secure backups for key equipment to ensure continuous data collection (RDCK noted that an additional water level meter (manufactured by Heron Instruments) has been available since February 2024). 		<i>instrumentation monitoring.</i>
DSR-02	On January 11, 2023, the dam's performance was reported as 'abnormal' due to the formation of a pipe from the weir to the downstream side (with no flow passing over the weir). Despite the pipe not being repaired, the dam's performance was reported as 'normal' during the next routine inspection on February 16, 2023.	OFI	OMS Section 7	Review and revise the OMS Manual to: <ul style="list-style-type: none"> establish a follow up procedure for any unusual site observations. add detailed description of any observed conditions in the site inspection report; and provide the OMS training for the site inspectors. 	4	Complete <i>OMS Manual updated.</i>
DSR-03	<i>No rock slope study/assessment was conducted along the western slope of the bedrock spillway. Major failure of the rock slope may fully/partially block the bedrock spillway and decrease its discharge capacity.</i>	OFI	OMS Section 6	<i>Perform a rock slope stability study/assessment of the western slope of the bedrock spillway.</i>	4	Superseded by 2024-4 See Note 2.
DSR-04	<i>Several surface erosion rills/gullies were observed on the western slope (exposed till) of the spillway outlet channel. Major failure of this slope may fully/partially block the spillway outlet channel and decrease the spillway capacity.</i>	OFI	OMS Appendix F	<i>Update inspection forms to ensure ongoing monitoring of this area for signs of excessive surface erosion or potential slope instability and implement repairs if erosion exceeds acceptable levels or significant instability is detected.</i>	4	Complete <i>Inspection form updated to include spillway channel wall instability.</i>
DSR-05	<i>A series of surface erosion rills/gullies were noted along the east slope of the berm. Some gullies have been developed considerably near the east abutment of the dam. The downstream east slope of the extended berm is prone to surface erosion and sloughing.</i>	Deficiency	OMS Section 5	<i>Repair this area, develop a surface water management plan (e.g., establish vegetation, install drainage ditches, etc.), and implement mitigation measures to control the runoff water along the crest and downstream slope of the extended berm.</i>	4	Complete <i>Area regraded and waterbars installed on east abutment road in 2024.</i>
DSR-06	<i>Surface eroded areas and tailings exposure were observed around the tailing impoundment area during the site inspection. Sparse vegetation was also found in some areas.</i>	Deficiency	OMS Section 5.4	<i>Repair the surface eroded areas and cover all tailing exposures with an approximate coverage of 30 cm and vegetation appropriately, as required.</i>	4	Complete <i>Tailings exposure removed; No actions required for erosion channels as areas</i>

ID No.	Finding / Existing Condition / Issue	Deficiency/ Non-Conformance/ OFI	Applicable Regulation or Reference	Recommended Action	Priority	Status / Recommended Deadline
						<i>determined to be self-armouring and not likely to worsen.</i>
DSR-07	Water ponded areas were observed along the east side of the tailing impoundment area, north of the North Spur Channel. The low point areas and water ponding within these areas appear to be likely the result of the differential settlement.	-	OMS Section 6	Continue regular monitoring of the ponded areas in accordance with the OMS Manual and develop a plan to repair if needed.	4	Complete <i>No action needed as already in OMS Manual.</i>
DSR-08	The seismic shear strength and deformation behavior of the original dam fill is not well understood and there is a risk of potential large-scale deformation due to seismic liquefaction.	Deficiency	HSRC 10.5.9	The shear strength and deformation behavior of the original dam fill should be further investigated to fully understand seismic liquefaction hazard. Conduct further investigation on the material properties and a post-seismic deformation analysis to evaluate their performance under seismic loading.	3	In Progress Original Deadline: Before End of 2025. Status: Field data collected, assessment of data to be completed in 2026.
DSR-09	No information regarding the survey hubs and seepage flow trigger levels was made available to Tetra Tech for review.	-	OMS Appendix E	Establish survey hub and seepage flow trigger levels and incorporate them into the TARP in the next revision of the OMS Manual.	4	Complete <i>TARP in OMS Manual includes survey hub and seepage flow triggers.</i>
DSR-10	It is understood that the current version of the OMS Manual has been updated (May 2024, Ver. 6.0) based on the HBTF Reclamation and Closure Construction Record (May 2023); however, the Emergency Preparedness and Response Plan (EPRP, February 2023) still needs to be updated based on the 2023 Construction Records.	OFI	EPRP Section 2.6	Update the 2023 EPRP with reference to the HBTF Reclamation and Closure Construction Record (May 2023).	4	Complete <i>Latest update includes post-2022 conditions.</i>
DSR-11	<i>The current OMS Manual needs to be updated to meet the HSRC requirements.</i>	<i>Non-conformance</i>	<i>HSRC 10.6.4</i>	<ul style="list-style-type: none"> ■ <i>Incorporate the recent changes in the HSRC regarding the AFPR, as well as revising the annual DSI to the AFPR and ensuring that its scope meets the requirements of the most recent HSRC revision.</i> ■ <i>Ensure that the AFPR includes an analysis and interpretation of the data collected during site surveillance, instrumentation monitoring, and other relevant.</i> 	4	Complete <i>OMS Manual updated.</i>

ID No.	Finding / Existing Condition / Issue	Deficiency/ Non-Conformance/ OFI	Applicable Regulation or Reference	Recommended Action	Priority	Status / Recommended Deadline
				<ul style="list-style-type: none"> Include an annual review of the OMS by a qualified TSF or dam professional, as applicable, and the EOR, with updates implemented as deemed appropriate by the EOR. 		
DSR-12	The previous version of the OMS Manual included a maintenance flowchart (Figure 7) that outlined the facility's maintenance process, responsibilities, documentation, and reporting protocol. It is noticed that this maintenance flowchart was missed in the current version (draft) of the OMS Manual.	OFI	OMS Section 5	Consider adding a maintenance flowchart in the next update of the OMS Manual.	4	Complete See Note 3.
DSR-13	The accuracy of the names and phone numbers of the downstream property owners cannot be confirmed.	OFI	OMS Section 2.3	The list of downstream property owners (no residents) should be called to confirm that the names and phone numbers are still current. The date of these calls should be added to the EPRP for future reference.	4	Complete Latest OMS Manual and EPRP include downstream property owner contact information.
DSR-14	Emergency levels have not been developed in the current version of EPRP.	OFI	EPRP Section 3	Update the EPRP to incorporate the Five-Step Dam Emergency Plan (DEP) Process including the steps as outlined in the Instructions, Guide, and Templates for Preparing a Dam Emergency Plan in British Columbia (updated April 2024).	4	Complete EPRP updated.
2025 AFPR Recommendations						
2025-01	Fine-grained sediment has accumulated in South Spur Channel in the area that was repaired in 2023. The origin of the material is unknown but is suspected to be till and not tailings. (Note: This is not a dam safety concern)	Potential Deficiency	OMS Section 5	Collect a sample of the sediment and undertake geochemical testing to confirm the material origin.	4	New Before the end of 2026.
2025-02	The VWP in standpipe piezometer P5 is stuck in a PVC joint above the water table and is not providing piezometric readings.	Deficiency	OMS Section 5.4	Replace the VWP with a smaller diameter VWP.	4	New Before the end of 2026.
2025-03	The datalogger at SRK25-BH-03 is defective and not able to retain the configuration settings for one of the three VWPs.	Deficiency	OMS Section 5.4	Replace the datalogger.	4	New Before the end of 2026.
2025-04	The survey hub monitoring vertical displacements show no movement trend but continue to show	OFI	OMS Appendix E	Review and revise the survey hub vertical displacement thresholds in the	4	New Before the end of 2026.

ID No.	Finding / Existing Condition / Issue	Deficiency/ Non-Conformance/ OFI	Applicable Regulation or Reference	Recommended Action	Priority	Status / Recommended Deadline
	scatter such that the minor risk alert thresholds were exceeded for most survey hubs (including one of the control points).			TARP considering the accuracy of the survey method used.		
2025-05	QPO triggers have yet to be established for the new instrumentation installed in 2025.	OFI	OMS Appendix E	Update the TARP to include piezometric threshold for the new VWP's and criteria for when to complete slope inclinometer readings.	4	New Before the end of 2027.
2025-06	The 2025 drilling program encountered conditions that differed from previous characterization of the foundation materials. The bedrock depth was deeper than expected near the west abutment and a potentially contractive glaciolacustrine unit was encountered in the foundation.	Potential Deficiency	HSRC 10.5.9	Update the site characterization including strength characteristics of the foundation and Original Dam Fill materials, the potential for liquefaction and susceptibility to earthquake loadings, and complete an updated stability assessment to determine if the foundation poses a risk to dam safety.	3	New Before the end of 2026.

Notes:

- ¹ OFI = Opportunities for Improvement.
- ² The bedrock highwall has shown no signs of instability or any significant spalling to date and the risk of overtopping due to a spillway blockage caused by a large-scale failure of the bedrock highwall to be close to non-credible (SRK 2025b). As a result, a rock slope study/assessment is deemed not to be required at this time. In leu, the OMS Manual has been updated to include a surveillance procedure for photographic monitoring of the highwall. A rock slope study/assessment would be undertaken if signs of instability are observed.
- ³ The flow chart was considered but determined to be unnecessary due to the simplicity of the site and number of personnel involved. The maintenance process, responsibilities, documentation and reporting protocols are adequately described in the OMS Manual.

1 Introduction

1.1 General

SRK Consulting (Canada) Inc. was retained by the Regional District of Central Kootenay (RDCK) to complete the 2025 Annual Facility Performance Report (AFPR) for the HB Mine Tailings Facility (HBTF or “the facility”) located near Salmo, BC.

This report presents the results of the 2025 facility performance for the period of September 2024 through October 2025. The AFPR scope of work consisted of:

- A visual inspection of the physical conditions of the facility to identify deficiencies and non-conformances.
- A review of surveillance data and inspection reports for the review period provided by the RDCK.
- A review of the climate and water balance data for the site.
- A review of the Operation, Maintenance and Surveillance Manual (OMS), Emergency Preparedness and Response Plan to confirm they are appropriate for the facility.
- A review of the HBTF risk assessment including site hazards, potential failure modes, and consequences of failure.
- A review of construction and maintenance activities completed at the site during the review period.

1.2 Regulatory Requirements and Guidelines

The HBTF is authorized un the Mines Act Permit M-218 last amended on March 5, 2025. This report reviews the performance of the facility in accordance with Mines Act Permit and the following regulatory requirements and guidelines:

- Health, Safety and Reclamation Code (HSRC) for Mines in British Columbia (EMLI 2024a)
- Code Guidance Document – Health, Safety and Reclamation Code for Mines in British Columbia, Part 10 – Tailings Storage Facilities and Dams, June 2024 (EMLI 2024b)
- Canadian Dam Association (CDA) Dam Safety Guidelines (CDA 2013)
- Technical Bulletin: Application of Dam Safety Guidelines to Mining Dams (CDA 2019)
- Developing an Operation, Maintenance, and Surveillance Manual for Tailings and Water Management Facilities (MAC 2021a)
- A Guide to the Management of Tailings Facilities (MAC 2021b)

2 Background

2.1 Site Location

The HB Mine Tailings Facility is located approximately 7 km south of Salmo, BC at approximate UTM co-ordinates (NAD83) 481,841 E, 5,442,021 N.

A site location plan is provided in Figure A-1 (Appendix A). Access to the facility is off Emerald Road, through the RDCK Central Landfill property. The facility is in a hanging valley at the base of the west slope of Iron Mountain. The Salmo River occupies a floodplain to the west of the facility. A north-south trending bedrock ridge separates the facility from the Salmo River floodplain. Drainage through the facility is to the south, with water from the spillway discharging into a narrow valley, crossing a culvert under Highway 3 located approximately 500 m to the south of the facility, and flowing through a man-made ditch to the Salmo River.

2.2 HBTF Description and Development

The HB Mine is a lead-zinc mine that was operated by Cominco Ltd. (now Teck Resources Ltd.) from 1955 to 1967 and from 1974 to 1978. The mine site is located approximately 2 km north of the tailings facility on Aspen Creek, with a mill located adjacent to Sheep Creek. A flume was used to transport the tailings from the mill to the tailings facility with the tailings discharged from the north end of the tailings deposition area.

The HBTF is a valley-bottom impoundment with a dam embankment, the HB Dam, located at the south end of the facility and a spillway at the west abutment of the dam. A general arrangement of the HBTF is provided in Figure A-2 (Appendix A) with a summary of the HBTF parameters provided in Table 2.1.

2.2.1 HB Dam

A general arrangement of the HB Dam is provided in Figure A-3 (Appendix A) with a typical dam section provided in Figure A-4 (Appendix A). The dam is an earthen embankment structure with two downstream raises constructed during operations in 1975 and 1977, with a buttress constructed in 2005 that was expanded in 2021.

The dam was initially constructed in 1955 using borrow material excavated from the east and west abutments that consisted of silty sand and gravel till. The materials were transported into place by bulldozers, with the weight of the dozing equipment providing the only compaction. An earth-filled timber crib retaining wall was constructed at the downstream toe. The water levels in the tailings pond during the first phase of operations (1955-66) were controlled by two decant towers, with 600 mm steel pipes that discharged into the downstream creek.

In 1964, a portion of the timber crib wall failed and was reconstructed three to five metres further downstream; a stabilizing berm (till) was constructed downstream of the timber crib. The dam was progressively raised as required through downstream construction methods until mine operations were

suspended in 1967. Throughout this initial phase of operations, several small pipe drains were installed as required to convey seepage.

Table 2.1: HBTF General Information and Current Configuration

Description	Value
CDA dam consequence classification	Very High
Tailings deposition period	1955-1966, 1974-1977
Impounded tailings	6.3 million tonnes
Normal operating pond volume	0 m ³
Tailings impoundment area	26 ha
Contributing watershed area	2.2 km ²
Dam crest length	210 m
Dam crest width	6 m to 7 m
Crest elevation ¹	710.8 m
Spillway invert elevation ¹	706 m
Overall upstream slope	1.5 H:1V
Overall downstream slope	2.9H:1V
Maximum embankment height (measured crest to downstream toe)	28 m

Notes:

⁴ Elevations listed are in UTM NAD83 Zone 11 geodetic elevation datum.

Prior to the restart of operations in 1974, a filter layer consisting of clean sand and gravel was added to the downstream slope. The dam was subsequently raised by ten feet in 1974–75, and by five feet in 1977. The 1975 dam raise included placement of additional “toe protection,” consisting of gravel and waste rock, at locations where seepage was observed at each abutment and at the toe of the dam. The 1977 dam raise included the construction of a rock toe drain on the downstream toe. In addition, the two decant towers were filled with concrete and a new decant structure and 900 mm diameter pipeline outfall system was installed at the east abutment. Tailings deposition in the facility ceased in 1978 when mining at the property was suspended.

In 2005, the following closure works were completed at the site (BGC 2005):

- An open channel spillway was constructed in bedrock at the west abutment; the 1977 decant structure and pipeline were decommissioned.
- A 10 m wide toe berm was constructed with a 1.5 m thick rock drain layer to improve dam stability.
- Riprap was added to the upstream slope of the dam for erosion protection.
- The crest of the dam was regraded to drain towards the tailings pond.

In the summer of 2012, an embankment slough occurred, and two sinkholes were subsequently identified on the upstream face of the dam at the interface with the tailings. A 50 mm diameter standpipe was found at one of the sinkhole locations (EBA 2012), which is believed to be a piezometer

installed in 1973. The standpipe was removed, and the damaged area reconstructed. The reconstruction included a shear key at the toe of the sloughed area, replacement of the core material using locally sourced till, and placement of a coarse rock layer on the downstream face of the dam (2021 Blast Rock Repair Area).

In 2021-2022, additional construction works were completed for the closure and remediation of the facility that included upgrades to the dam to meet CDA guidelines for a facility in passive closure (CDA 2019). The detailed design was documented in the 2020 RCP (RDCK 2020) and construction was completed in 2021 and 2022 (SRK 2023). The constructed works included expansion of the toe berm to improve seismic stability.

2.2.2 Spillway

Surface water exits the facility through a spillway at the west abutment. The spillway was originally constructed in 2005 and was expanded in 2021 to convey the probable maximum flood (PMF). A plan and profile of the spillway is provided in Figure A-5 (Appendix A). The spillway consists of two distinct sections:

- The upper section (71 m long) is situated in bedrock and has a flat longitudinal slope of 3%, a base width that ranges between 5 and 8 m, and typical side slopes between 0.25H:1V and 0.75H:1V.
- The lower section (144 m long) is situated primarily in till and conveys flow down the west side of the valley to the Stilling Basin with a slope of 19%, a base width of 5 m, and a 1.2 m thick riprap layer with a median partial side of 600 mm.

The riprap in the lower section of the spillway is sized to withstand a flood event corresponding to the 1 in 1,000-year event. An erosion assessment was completed to estimate the maximum extent of backwards erosion that may occur during a PMF (SRK 2019c). The results indicated that some erosion and undercutting of the 2012 Blast Rock Repair Area may occur, but no significant erosion of the original dam (pre-2012) and no loss of tailings were expected.

2.2.3 Tailings Impoundment Area

The tailings impoundment area contains approximately 6.3 million tonnes of tailings that cover an approximate area of 26 ha. The tailings area impounded by the HB Dam and have an approximate maximum thickness of 20 m near the south-central portion of the deposition area.

A till cover was placed over the tailings in 2021-2022. The primary objective of the cover is to provide dust and erosion control and to prevent migration of tailings. The cover acts as a barrier to prevent direct contact with the tailings by flora and fauna and to provide a growth medium for vegetation. The cover has a typical thickness of 0.3 m except near the HB Dam where the cover thickness is up to approximately 4 m. The cover thickness is greater near the dam to prevent any ponding within the facility.

Lined Tailings Surface Drainage Channels (TSDC) were constructed within the tailings cover to convey seasonal flows from the Central Landfill wetland area (Main Channel) and from two ephemeral streams that enter the tailings deposition area (North and South Spur Channels). The channels are lined with a

LLDPE liner and covered with a liner protection layer overlain by a layer of turf-reinforcement matting. The channels can convey up to approximately the 1 in 50-year, 24-hour rainfall event before overtopping. For extreme flood events up to the PMF, hydraulic modelling indicates that overland velocities are lower than the expected threshold to initiate cover erosion once the cover vegetation is established.

2.3 Site Characterization

Site characterization including surficial and bedrock geology, seismic, climate, and hydrology characterization are described in the 2020 RCP (2020). Updates to the climate and hydrology characterization are also planned to be completed in 2026 as part of the next Reclamation Program and Closure Plan Update due to be submitted to the Ministry of Mining and Critical Metals (MCM) by March 31, 2027.

In 2025, a drilling investigation was completed to install additional piezometers in the HB Dam area and to provide additional geotechnical characterization of the dam and foundations conditions. Further details are provided in Section 3 and data from the drilling is presented in (SRK 2025c).

Based on previous site investigations around the dam footprint, the foundation conditions consist of bedrock overlain by a dense till overlain by a very stiff, stratified glaciolacustrine deposit consisting of various layers of sands, silts, and clays. The overburden thickness in the valley center at the dam crest is shallow (3 m to 6 m), with the thickness expected to increase on both sides of the valley and further downstream of the dam. The 2025 drill program found that the depth to bedrock was deeper on the west side of the valley, variable lacustrine units ranging from lean clay to gravelly silt/sand units, and a potentially contractive lacustrine unit in the foundation. An assessment of the geotechnical data is currently in progress to refine the condition and strength characteristics of the foundation materials, as well as to evaluate the potential for liquefaction and susceptibility to earthquake loading.

2.4 Design Basis

The HBTF is classified as a “Very High” consequence facility as per CDA (2019) and HSRC criteria (EMLI 2024a). This consequence classification was confirmed in the 2024 Dam Safety Review (Tetra Tech 2025).

Table 2.2 presents the relevant design criteria adopted for the HBTF closure works in 2021-22 (RDCK 2020). The criteria are consistent with “Very High” consequence classification criteria CDA (2019) and HSRC (EMLI 2024a) design criteria for a “Very High” consequence facility. Further details on the design basis area provided in the HBTF Design Summary Memorandum (SRK 2025a).

Table 2.2: HBTF Design Basis

Parameter	Value
Consequence Classification (EMLI 2024a)	Very High
Inflow design Flood (IDF)	
Annual Exceedance Probability	PMF
IDF Peak Flow (m ³ /s)	70 m ³ /s peak inflow during 24hr event that results in a peak spillway discharge of 58 m ³ /s.
Freeboard	
Normal Operating Freeboard (m)	n/a – No pond is present under normal conditions
Minimum Required Freeboard during passage of the design event (m)	0.94
Seismic Event	
Minimum Annual Exceedance Probability	1 in 10,000-year event
Peak Ground Acceleration (g)	0.21 g
Slope Stability Target Factors of Safety	
Static	1.5
Post-earthquake	1.2

Sources: SRK (2025b)

Notes:

1. IDF = Inflow design flood
2. PMF = Probable maximum flood

3 Site Activities during Reporting Period

During the reporting period, no dam safety incidents were reported and there have been no material changes to the design and operation of the facility. A review of the surveillance activities is provided in Sections 5 and 6. A summary of the maintenance and construction activities for the reporting period is presented in the following sections.

3.1 Maintenance

Maintenance activities completed during the reporting period consisted of:

- Removal of tailings exposures on the cover surface (addresses AFPR recommendation 2022-01). On July 29, 2025, all identified tailings exposures were excavated from the cover using hand-shovels and were placed in a low-lying area adjacent to the Ross Landform and were subsequently buried. Further details are provided in Appendix D.
- A burrowing rodent assessment was completed on the downstream slope of the dam on August 8, 2025. Monitoring and backfilling of burrows (completed upon the advice of a qualified pest control specialist) was completed on August 29, September 29, and October 29, 2025.
- In September, repairs were completed on the toe berm crest near the east abutment to address a small sinkhole where settlement of toe berm fills into the underlying weighted filter, and to construct a small swale to direct water away from the toe berm slope. This maintenance work was completed in response to April 28, 2025, site inspection observations (Section 5.1)
- Brush clearing on the downstream slope of the dam and in the bedrock portion of the spillway was completed on October 10, 2025.

3.2 Instrumentation Installation and Site Investigations

A drilling program was completed between August 6 and 12, 2025 that included five boreholes near the HB Dam to install ten vibrating wire piezometers (VWPs) plus slope inclinometer (SI) casings in four of the boreholes. The main objective of the additional instrumentation is intended to improve the understanding of the hydrogeological regime through the dam and to allow for the evaluation of lateral displacements through the dam. Geotechnical characterization was also completed during the drill program to improve the understanding of the dam and foundation through laboratory testing and Standard Penetration Tests.

The borehole locations are shown in Figure A-3 (Appendix A), and the instrumentation data is presented in Section 6.2. Further details of the drilling program are presented in SRK (2025c). Table 3.1 provides a summary of the VWP installation locations and sensor stratigraphy units. SI casing was installed in all the boreholes except for the borehole upstream of the dam (SRK25-BH-02) with the SI casings anchored bedrock.

Table 3.1: 2025 Piezometer Instrumentation Summary

Borehole	Location	Stratigraphy Units
SRK25-BH-01	Dam crest, west side of valley.	<ul style="list-style-type: none"> ■ BH1-P1: Dam filter ■ BH1-P2: Original Dam Fill (1955-1967) ■ BH1-P3: Foundation
SRK25-BH-02	Upstream of dam, center of valley.	<ul style="list-style-type: none"> ■ BH2-P1: Tailings
SRK25-BH-03	Dam crest, east side of valley.	<ul style="list-style-type: none"> ■ BH1-P1: Dam filter ■ BH1-P2: Original Dam Fill (1955-1967) ■ BH1-P3: Foundation
SRK25-BH-04	Dam toe, east side of valley.	<ul style="list-style-type: none"> ■ BH4-P1: Foundation
SRK25-BH-05	Dam toe berm near the dam toe, center of valley.	<ul style="list-style-type: none"> ■ BH5-P1: Foundation ■ BH5-P2: Foundation

Sources: SRK (2026a)

Notes:

- ¹ See Figure A-3 in Appendix A for borehole locations.
- ² See Figure A-4 in Appendix A for additional details of the stratigraphy units.

4 Climate Data, Seismic Events and Water Balance

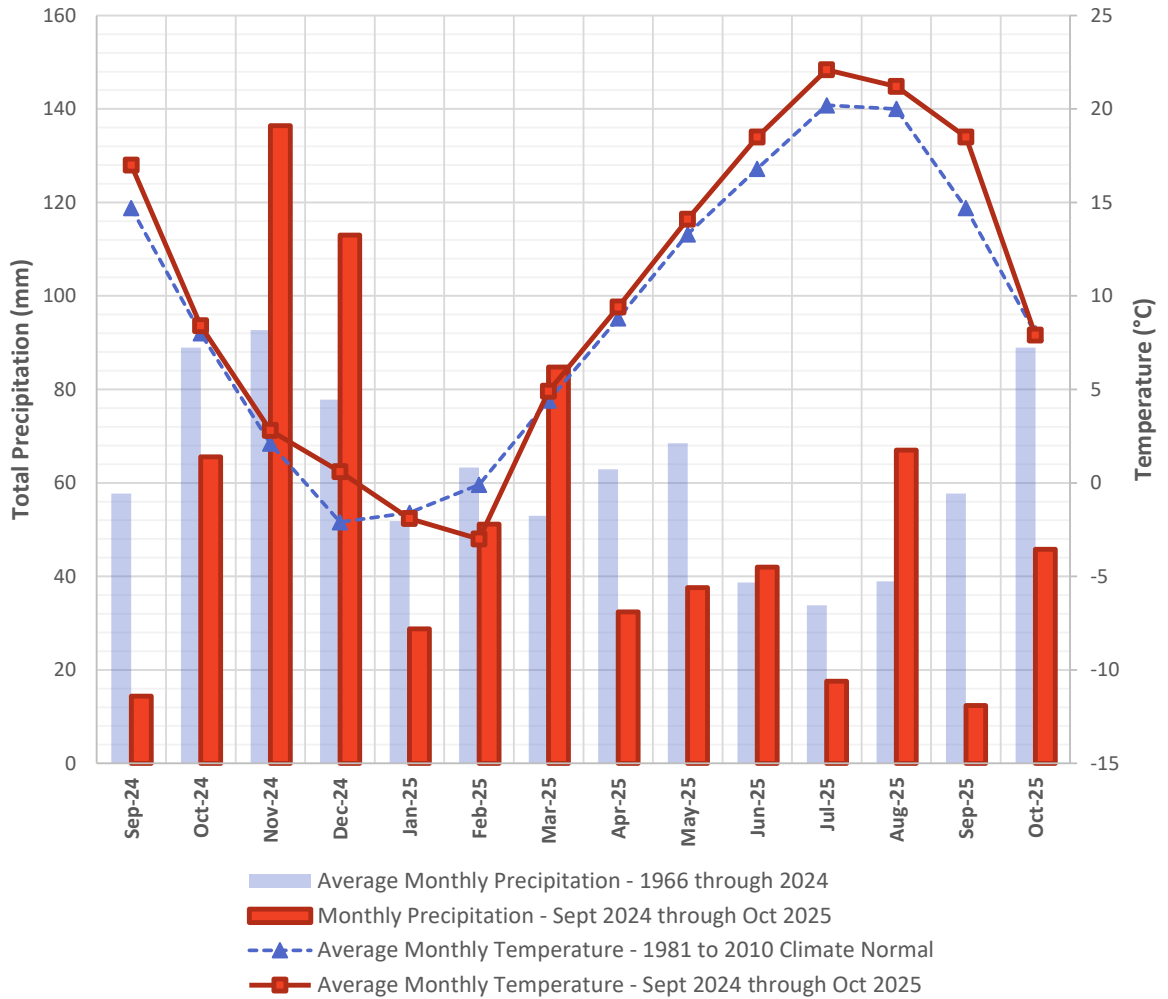
4.1 Review of Climate Data

Daily temperature and precipitation data were reviewed from the closest active Environment Canada climate station to the facility at the Castlegar Airport (No. 1141455) located approximately 36 km to the northwest. The station has been collecting data since 1966. A hydrological analysis was completed for the site in 2019 in support of the 2021-22 closure design that included a regional analysis to estimate the site precipitation and temperatures with consideration of climate change (SRK 2019a). The regional analysis results indicate that the site mean air temperature is approximately 1.4°C cooler than indicated at the Castlegar Airport station, and that the site receives approximately 10% greater precipitation than the Castlegar Airport.

Figure 1 presents the monthly temperature and precipitation data from the Castlegar Airport from September 2024 through October 2025 compared to the climate normal from 1981 to 2010. The data has not been corrected for elevation effects relative to the tailings facility. Temperatures were generally higher than normal except for in February 2025. Precipitation was drier than normal with a total precipitation of 748 mm over the 14-month period compared to the average precipitation of 825 mm. The Castlegar Airport experienced significantly higher than average precipitation in November and December 2024, with significantly lower-than-average precipitation totals in the Spring and Summer of 2025. The largest total daily precipitation recorded was 42 mm on December 7, 2024.

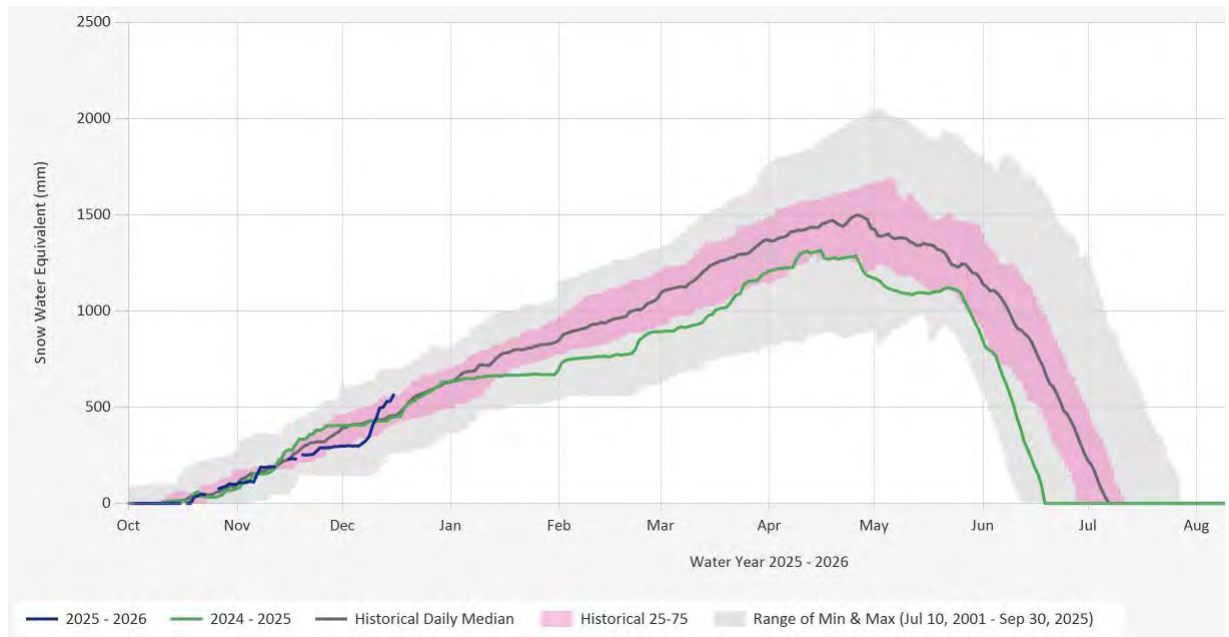
Figure 2 plots snow depth data from the nearest automated BC snow weather station at Redfish Creek (El. 2,104 m) north of Nelson. The data from the region indicates that the snow depths were less than average.

Figure 1: Castlegar Airport Climate Data



Sources:
https://srk.sharepoint.com/sites/FS1273/Internal/!020_Site_Wide_Data/Piezometer%20Data/HB_Dam_Instrumentation_Data_2024.xlsx?web=1

Figure 2: Redfish Creek Snow Depths



Sources : <https://aqrt.nrs.gov.bc.ca/Report/Show/Snow.2D14P.Automated%20Snow%20Weather%20Station%20Graph/>

Notes: Elevation = 2,104 m. Latitude: 49.694721 degrees, Longitude: -117.084724 degrees.

4.2 Review of Seismic Events

No significant earthquakes were recorded within 500 km of the site during the reporting period. The closest earthquake was a 2.6 magnitude event on April 26, 2025, located 50 km ENE of site (Kootenay Lake near Sanca, BC).

4.3 Review of Water Balance and Freeboard

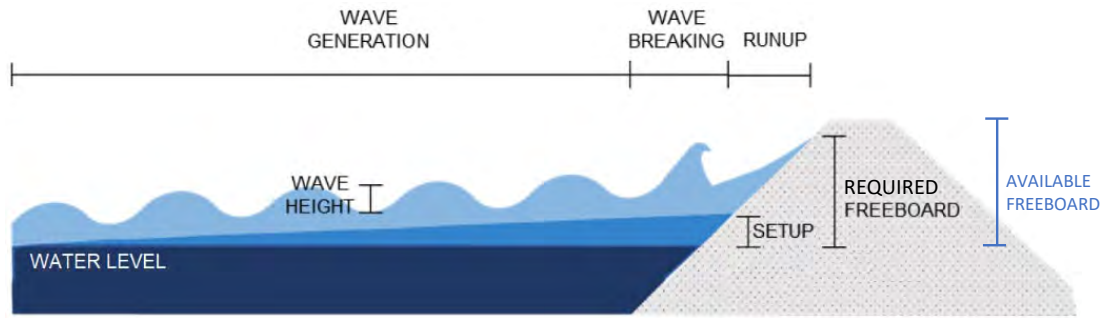
The HBTF is a flow-through facility. Inflows consist of surface water run-on, groundwater infiltration, and precipitation. Outflows consist of evaporation, seepage through the dams, groundwater exfiltration, and outflows through the spillway.

The water balance for the facility is functional. With the expansion of the spillway in 2021, the facility does not impound water, and the spillway is sized to convey the PMF event with an IDF of 70 m³/s and a peak outflow of 58 m³/s (SRK 2019b).

Table 4.1 provides a freeboard assessment summary that evaluates the facility under present conditions against the CDA closure-passive care' criteria for a 'Very High' consequence facility. The table provides a comparison of the required normal and minimum freeboards to the available freeboards. The assessment shows that the facility meets CDA freeboard requirements under both conditions.

Table 4.1: Freeboard Evaluation

Condition	Required Freeboard (m)	Available Freeboard (m)	Meets Criteria?
a) Normal freeboard	n/a (no ponded water under normal conditions)	4.8	Yes
b) Minimum freeboard	0.94	2.4	Yes



Notes:

1. Criteria:
 - a. Normal freeboard criterion: No overtopping by 95% of waves by 1-in-1,000-year winds when reservoir at maximum normal elevation.
 - b. Minimum freeboard criterion: No overtopping by 95% of the waves caused by critical wind when the reservoir is at its maximum extreme level during the passage of the IDF.
 - i. For 'Very high' consequence dams, the critical wind is the 1 in 2-year wind event.

4.4 Water Discharge Volumes

The facility does not have any provision that regulates the volume of water discharging over the spillway or seepage monitoring weir. The flow rate over the spillway is not measured. Seepage flow is measured at the dam toe using a v-notch weir during routine inspections and was typically measured weekly during freshet.

Figure C-9 in Appendix C provides the flow measurements at the seepage monitoring weir since 2013. Since construction of the tailings cover and removal of the tailings pond in 2021-22, the recorded seepage rates are generally lower compared to pre-construction values. The highest flow rate during the reporting period was 1.3 L/s measured on March 27, 2025, which is consistent with previous years observations. The seepage has been clear with no signs of sediment transport.

Water quality at the HBTF is monitored quarterly as per the site Water Quality Management and Monitoring Plan (SLR 2022). The RDCK reports water quality results directly to EMLI in accordance with Mines Act Permit M-218.

5 Site Inspection

5.1 Annual Site Inspection

A site inspection was completed by the Engineer-of-Record, Peter Mikes, P.Eng., of SRK Consulting, on April 28, 2025, while accompanied by Alayne Hamilton (RDCK). The inspection included all aspects of the facility. This section presents of the HB Dam, spillway, and general observations of the tailings cover and TSDCs. Further details of the tailings cover and TSDC inspection are provided in Section 5.2.

Weather during the site inspection was sunny with temperatures around 15°C. Ground conditions were mostly dry with some areas of ponding on the tailings cover surface, particularly along the perimeter of the TSF where seepage and small ephemeral streams discharge onto the cover. No significant precipitation occurred on site in the previous four days prior to the inspection.

The HB Dam was found to be in satisfactory condition with no signs of instability observed (tension cracks, settlement, slough, slumps). The key observations from the inspection are listed in Table 5.1 with accompanying photographs provided in Appendix B. Recommendations arising from the inspection are provided in Section 8.

Table 5.1: Site Observations

Area	Observation	Photo (App. B)	Associated Recommendation
General	<ul style="list-style-type: none"> Two new gates were installed along roads leading to the tailings impoundment to restrict access. 	1	n/a
Dam	<ul style="list-style-type: none"> The dam crest is in satisfactory condition, and the condition is unchanged from the previous inspection. No significant deformation of settlement was observed. The upstream slope of the dam and tailings pond backfill areas are in good condition with vegetation continuing to establish. Several small parallel ridges are present in the tailings pond backfill area that are about 10 cm high and spaced 3.0 to 3.5 m apart and orientated in an east-west direction. The ridges are believed to be located above overlaps in the geocomposite (geogrid + geotextile) product placed over between the tailings and cover soils during the 2021-22 construction works. The ridges do not impact drainage and no action is required. The downstream dam slope above the expanded toe berm is in good condition with well established grassy vegetation throughout the slope. No signs of active erosion or instability were observed. "No signs of seepage were observed in the Horsetail" vegetation area located at the west (downslope) end of the Weighted Filter. No change in condition compared to the 2023 annual site inspection. Vegetation growth on the downstream slope of the expanded toe berm has improved in the past year but continues to be prone to surficial erosion. No signs of instability were observed. 	<p>3, 6, 19</p> <p>4, 5</p> <p>4</p> <p>3, 6, 7, 26</p> <p>n/a</p> <p>19</p>	<p>n/a</p> <p>n/a</p> <p>n/a</p> <p>n/a</p> <p>n/a</p> <p>n/a</p>

Area	Observation	Photo (App. B)	Associated Recommendation
	<ul style="list-style-type: none"> ■ A small erosion gully (5 cm deep, up to 5 cm wide and approximately 5 m long) is present downslope of piezometer P3 at the west abutment. The area should continue to be monitored but no action is recommended at this time as the issue may resolve as vegetation establishes. 	23	n/a
	<ul style="list-style-type: none"> ■ A small erosion gully is present on the toe berm crest near the east abutment due to concentrated flow from the toe berm crest. ■ Following the site inspection, SRK provided guidance to the RDCK for excavation of a small swale in the toe berm crest area to re-direct water further to the east away from the gully. The area was subsequently inspected by SRK in November with the swale constructed. 	27	n/a
	<ul style="list-style-type: none"> ■ A small sinkhole was present on the toe berm crest near the east abutment that had an approximate 10 cm diameter and a depth of 15 cm. The sinkhole was likely the result of settlement of till fill into the underlying weighted filter layer. ■ Following the site inspection, SRK provided guidance to the RDCK for a repair to the sinkhole that included excavation of the area, placement of a geotextile layer, and backfilling with the excavated soils. ■ The area was subsequently inspected by SRK during a site visit in November with the sinkhole found to be filled in. As no construction records of the repair are available, the area should continue to be monitored as part of the routine inspections for additional settlement. 	28, 29	n/a
Spillway	<ul style="list-style-type: none"> ■ Flow with a few centimeters depth was observed over the bedrock spillway inlet at the time of the inspection. ■ No signs of instability of the bedrock slope above the spillway were observed. ■ A fallen tree is present approximately 5 m north of the spillway inlet that has the potential to enter the spillway in the event of a large flood. The tree is recommended to be cut up and removed. ■ The riprap at the spillway inlet is in good condition with no signs of displacement/movement. ■ Some vegetation is present on the channel bottom of the bedrock portion of the riprap. While the amount of vegetation is not expected to significantly impact the spillway conveyance capacity, it was subsequently cleared as part of routine maintenance in the fall of 2025. ■ The condition of the erosion gully present at the downstream end of the bedrock highwall adjacent to the spillway is unchanged compared to the 2024 inspection. The gully is self-armouring and is with no action required. ■ Vegetation growth on the south bank of the spillway continues to improve. There is no significant change in the condition of the erosion rills/gulleys on the slope. ■ The right bank of the spillway that was repaired in 2023 is in good condition with no signs of instability. Vegetation is establishing in the erosion control blanket that was placed as part of the repairs. 	11-12	n/a
		13	n/a
		11	2024-01
		11, 12	n/a
		14, 15	n/a
		16	n/a
		17	n/a
		18	n/a

Area	Observation	Photo (App. B)	Associated Recommendation
Dam Instrumentation	<ul style="list-style-type: none"> All instrumentation present at the time of the inspection (five piezometers, 12 survey hubs, and the seepage weir) was functional. 	8, 20, 22, 24	n/a
	<ul style="list-style-type: none"> The condition of Piezometer P2 is unchanged since the 2024 AFPR with the water level meter continuing to be blocked 25 cm above the bottom of the standpipe piezometer (but remains functional) as a result of the Casagrande tip becoming partially separated from the above PVC pipe. As noted in Section 3.2, a VWP was installed in the standpipe. The VWP installation addresses AFPR recommendation 2024-02 to modify the piezometer reading and surveillance procedure to minimize the risk of further damage. 	8	n/a
	<ul style="list-style-type: none"> The seepage monitoring weir was in good condition and functional. 	20	n/a
Dam Seepage	<ul style="list-style-type: none"> Other than at the dam toe, no signs of seepage were observed. 	n/a	n/a
	<ul style="list-style-type: none"> Seepage emerging from the dam toe was observed to be clear. The measured flow rate at the weir was 0.26 L/s at the time of the inspection. Additional information on the historical seepage rate is provided in Section 6.2. 	20, 21	n/a
Tailings Cover	<ul style="list-style-type: none"> There are no significant changes in the condition of the tailings cover compared to the 2024 AFPR. Further details are provided in Section 5.2 and Appendix D. 	30-40	n/a
Tailings Surface Drainage Channels	<ul style="list-style-type: none"> There are no significant changes in the condition of the tailings cover compared to the 2024 AFPR. Further details are provided in Section 5.2 and Appendix D. 	10, 31, 35-36, 40	n/a

5.2 Cover Inspection

As per the OMS Manual surveillance requirements, an annual detailed tailings cover inspection is to be completed following freshet. The 2025 inspection was completed during the AFPR site visit by Peter Mikes, P.Eng., accompanied by Alayne Hamilton of the RDCK on April 28, 2025. The details and results of the inspection are provided in Appendix D, which are summarized as follows:

- Three additional tailings exposures were identified that are all believed to be remnants from the 2021-22 construction based on the amount of vegetation growth present. The exposures were subsequently excavated and buried within the tailings cover as noted in Section 3.1.
- A review of the 2024 and 2025 drone cover survey found no significant differential settlement.
- No change was observed to the surface erosion channel located on the west side of the TSF. The channel was observed in the 2023 Dam Safety Inspection (DSI). No action is required as the channel is not expected to worsen.
- Three additional areas of TSDC deformation were identified. These features should continue to be monitored with no action required at this time.
 - 2025-TSDC-01:** Area of liner uplift on the north side of the South Spur Channel that is approximately 23 m long. This feature is visible on the 2024 drone survey.

- **2025-TSDC-02:** Two areas of sand deposition were observed in close proximity. One is on the north side-slope that is believed to be the result of animal burrowing in the tailings cover. The second is on the channel bottom that appears to be sediment deposition from upstream areas.
- **2025-TSDC-03:** Area of liner uplift on the channel bottom of the North Spur Channel. The feature is 3 m long and 10 cm high. This feature is visible on the 2024 drone survey.

No change in conditions was observed to the previously identified features except at 2023-TSDC-01 where additional fine-grained sediment appears to have accumulated in the South Spur Channel. This feature was an area of liner uplift due to artesian conditions that was repaired in 2023 where the liner was punctured and a layer of geotextile placed over top that was covered with till (SRK 2023). The material is suspected to be till; however, geochemical testing of the material is recommended to confirm (**Recommendation ID 2025-01**).

6 Monitoring and Instrumentation Review

6.1 Monitoring Inspections

Four main types of inspections are typically conducted at the facility:

1. Routine inspections are completed monthly by RDCK staff (weekly during freshet) or their designate to inspect the condition of the dam, spillway, and tailings pond backfill, and to collect instrumentation readings.
2. Annual site inspections are completed by the EOR, which includes the dam, spillway, Tailings Surface Drainage Channels (TSDC), and Tailings Cover.
3. Event-driven inspections are completed in response to weather or seismic events.

All personnel conducting the routine inspections have reviewed the OMS Manual and have received instruction by the EOR on the observation of visual signs that are indicative of possible distress and instability, as well as steps for notification if abnormal conditions exist.

No unusual circumstances related to dam safety were reported by RDCK during the reporting period. On November 15, 2024, standpipe piezometer P2 was found to be blocked with the water level probe unable to advance below a depth of 13.96 m from the top of pipe (0.24 m above the pipe bottom). A down-hole camera inspection was completed on January 17, 2025, that indicated that the blockage occurs at the joint between the PVC pipe and the Casagrande piezometer tip. The pipe joint appeared to be partially separated with the bottom of the piezometer observed to be clear of debris. The P2 piezometer tip is in the loose “Original Dam Fill (1955-1967)” zone (See Figure A-4 in Appendix A). Before the removal of the tailings pond in 2021, piezometer P2 was saturated year-round, and since the tailings pond removal, the piezometer is typically dry in the summer and fall. The pipe deformation is suspected to be caused by a combination of the settlement of the Original Dam Fill caused by the lower water table, and/or deterioration of the pipe joint. As noted in Section 3.3, a vibrating wire piezometer (VWP) was subsequently installed inside the P2 standpipe in the fall of 2025. No indication of deformation was detected in this area by the survey hubs or drone surveys. The VWP sensor is located below early warning “yellow” threshold specified in the Trigger and Action Response Plan (TARP).

6.2 Instrumentation Review

Instrumentation at the HB Dam consists of 15 piezometers at 8 locations, a v-notch weir at the toe of the dam to monitor seepage, 12 survey hubs on the downstream dam slope, and four slope inclinometer (SI) casings. The instrumentation locations are provided in Figure C-1 (Appendix C).

Instrumentation data, observations of the spillway flow, spillway condition, and seepage clarity are collected during the routine inspections of the facility and provided to SRK for review by spreadsheet throughout the year. Piezometer and seepage readings were generally collected once per month with weekly readings obtained during freshet.

Piezometers

The dam piezometric and seepage flow data are provided in Figures C-2 to C-9 (Appendix C). Table 6.1 lists the maximum readings recorded during the reporting period compared to the historical maximum, and Quantitative Performance Objective (QPO) instrumentation triggers and Table 6.2 provides additional commentary on the piezometer instrumentation trends. No trigger exceedances occurred over the reporting period.

As noted in Section 3.3, ten VWP's were installed at five locations in August 2025, along with the SI casings. The additional piezometers were installed to address the AFPR recommendation 2023-3 to evaluate the pore pressures closer to the abutments, upstream of the dam and at the dam toe. QPO triggers have yet to be established for the new VWP's. Trends from the new instrumentation are not included in Table 6.2 as trends have yet to be established as there is limited data during the reporting period.

Two issues with the installation of the new instrumentation require follow-up in 2026 to resolve:

1. The VWP in standpipe piezometer P5 was unable to be lowered to the target elevation as the VWP tip is stuck at a PVC pipe joint. As a result, the VWP is above the water table and is not providing piezometric readings. Follow-up actions are needed to either retrieve the tip or lower the tip below the water table (**Recommendation ID 2025-02**).
2. The datalogger at SRK25-BH-03 is defective and not able to retain the configuration settings for one of the three VWP's. In follow-up discussions with the supplier, it was determined that the datalogger requires to be replaced (**Recommendation ID 2025-03**).

Table 6.1: Piezometer and Seepage Weir QPO Instrumentation Triggers

Instrument	Identifier	Trigger ¹	Historical Maximum Reading ²	Maximum Reading During Reporting Period	Trigger Exceeded (Y/N)
Piezometers ³	P1	698.0 m	697.86 m (July 6, 2012)	697.36 m (April 6, 2025)	No
	P2	698.5 m	702.48 m (July 6, 2012)	697.85 m (April 6, 2025)	No
	P3	687.1 m	687.25 m (May 11, 2011)	686.83 m (March 27, 2025)	No
	P5	693.3 m	693.71 m (July 6, 2012)	692.50 m (April 14, 2025)	No
	P6	694.6 m	694.91 m (July 6, 2012)	694.16 m (April 6, 2025)	No
Seepage weir	V-notch	Turbid seepage or abnormal flow ⁴	3.3 L/s (Dec 1, 2021)	1.3 L/s (March 28, 2025)	No

Notes:

1. Triggers levels are the early warning “yellow triggers” based on the stability assessment in SRK (2024). The trigger levels will not result in dam instability but indicate that levels are higher than expected and the EOR should be contacted.
2. The historical maximum readings consider all available data since May 2010.
3. QPO triggers have yet to be established for the new VWP's installed in 2025 and as a result are not included in the table. The available VWP data for the new instrumentation is presented in Figures C-7 to C-9 in Appendix C.
4. Abnormal flow is flow that is outside of the typical seasonal range that is plotted in Figure C-4 that cannot be explained by recent precipitation.

Table 6.2: Piezometer Instrumentation Trends

Instrument	Figure	Trends
Piezometer P1	C-2	<ul style="list-style-type: none"> ■ P1 is located at the dam crest and is screened in the dam foundation. ■ Since removal of the tailings pond in 2021, there appears to be a slight increasing trend in the annual peak piezometric pressures during freshet in March. However, the increasing trend may be correlated to the increasing precipitation values in March which has also increased over the same period. Additional readings are needed to confirm any trends.
Piezometer P2	C-3	<ul style="list-style-type: none"> ■ P2 is in the same borehole as P1 at the dam crest and is screened in the till core of the dam. ■ Since completion of construction in 2022, the piezometer has been dry or within a 50 cm of the bottom of the standpipe with no trend observed. The water levels are significantly less than those recorded prior to removal of the tailings pond.
Piezometer P3	C-4	<ul style="list-style-type: none"> ■ P3 is in the foundation near the dam toe. ■ Water levels in the past year have been within the historical range observed since 2012 with no trend observed.
Piezometer P5	C-5	<ul style="list-style-type: none"> ■ P5 is located at the crest of the toe berm and is screened in the dam sand filter (Zone 7, Figure A-4 in Appendix A). ■ The water levels during the reporting period were within the typical range as those observed since 2021 with no trend observed. Readings are also lower than those observed prior to the 2021-2022 remediation. As noted above, the VWP installed in August 2025 is above the phreatic surface and required to be lowered.
Piezometer P6	C-6	<ul style="list-style-type: none"> ■ P6 is in the same borehole as P5 at the toe berm crest and is screened near the base of the dam. ■ Trends for P6 were the similar to P1 within the dam foundation and have trended higher during freshet in 2025 compared to 2024 and lowered in the summer to be similar to those observed in 2024.
Tailings Impoundment Groundwater Monitoring Wells	C-10	<ul style="list-style-type: none"> ■ Water levels from two select tailings impoundment groundwater wells are monitored quarterly during water quality sample collections: MW-06-01 is located at the north end of the impoundment and MW-04S-05 is located on the east side of the facility. As noted in Section 3.2, a VWP (SRK25-BH02-P1) was installed at the south end of the impoundment to monitor piezometric pressures upstream of the HB Dam in August 2025. ■ For the two groundwater wells, the data shows that groundwater levels remain higher compared to those observed prior to the 2021-2022 remediation and remain stable. ■ The VWP (SRK25-BH02-P1) was installed in August 2025 and since installation the piezometric pressures have increased and is reached the typical historical tailings pond water elevation prior to the 2021-22 remediation. Additional readings are needed to determine any trends.

Seepage Weir

The seepage weir flow measurements at the v-notch weir located at the dam toe were typical with readings ranging between 0.14 L/s and 1.3 L/s during the reporting period. The seepage was observed to be clear during all inspections.

Survey Hubs

Twelve survey hubs were installed on the downstream slope of the dam in November 2021. The primary objective of the hubs is to monitor for long-term deformation that may occur as a result of

rotting of wooden features within the dam. As per the OMS Manual, the hubs are to be read annually until a baseline is established, then every 5 years thereafter (years to coincide with Dam Safety Reviews). Two control points (installed in 2013) located in bedrock at each abutment are also surveyed to improve the survey accuracy.

Five sets of survey hub readings were collected in 2025 between April and September. The increase in frequency was the result of 2024 AFPR Recommendation ID No. 2024-3 to increase the frequency to establish a baseline as a result of significant scatter in the previous readings (including in control points anchored in bedrock). Horizontal and vertical displacement are provided in Figure C-11 (Appendix C). The horizontal displacements show no movement trends with displacement less than the minor risk alert thresholds specified in the TARP. The vertical displacements show no movement trends but continue to show some scatter such that the minor risk alert threshold (<50 mm displacement) was exceeded for most survey hubs (including one of the control points). As a result of the exceedances, the 2025 drone cover survey was used to evaluate displacement relative to the 2022 construction asbuilt survey. The isopach comparison of the two surveys is provided in Figure C-12 and shows no signs of deformation.

The 2024 AFPR Recommendation ID No. 2024-3 is considered complete with a baseline established, however, the vertical displacement thresholds in the TARP are recommended to be revised in consideration of the survey hub reading accuracy (**Recommendation ID 2025-04**).

7 Dam Safety Assessment

7.1 Review of Upstream and Downstream Conditions

There are no changes to the upstream or downstream conditions that affect the consequences of failure or warrant a revision of the dam consequence classification.

7.2 Consequence Classification Review

In 2018, SRK undertook a dam break analysis and consequence classification assessment to evaluate the facility under the present HBTF configuration after the 2020 RCP was implemented (SRK 2018).

Table 7.1 presents a summary of the consequence classification assessment based on the CDA Dam Safety Guidelines (CDA 2013) and BC Ministry of Forests, Lands and Natural Resource Operations (FLNRO) guidelines for the interpretation of the CDA guidelines that includes additional details to quantify economic and infrastructure losses (FLNRO 2017). The dam consequence classification process individually considers three consequence rating components (i.e., loss of life, environmental and cultural values, and infrastructure and economics) and the overall rating is defined by the component with the highest (i.e., most severe) rating. The assessment resulted in a “Very High” classification that was dictated by infrastructure and economic losses as a result of the inundation of Highway 3.

The 2024 Dam Safety Review (Tetra Teck 2025) included a review of the consequence classification ratings against the more recent HSRC classification criteria (EMLI 2024a and b) and confirmed the current ratings are appropriate for the facility.

Table 7.1: Consequence Classification Summary

Overall Classification	Population at Risk	Loss of Life	Environmental and Cultural Values	Infrastructure and Economics
Very High	High	High	Significant	Very High

7.3 Hazards and Failure Modes Review

Table 7.2 provides a summary assessment of the potential failure modes for the facility. The assessment is informed by the Potential Failure Modes Analysis and risk register developed in 2018 (SRK 2018b). The risk register has been annually reviewed and updated since 2018.

Table 7.2: Hazard and Failure Mode Review

Overtopping	Overtopping is considered to be a close to non-credible failure mode as the spillway was expanded in 2021 to convey the PMF event, and the facility no longer retains water. Overtopping would require a spillway blockage that would require a large-scale failure of the bedrock highwall above the spillway and no remedial action for a significant period. There are no observations to date that would indicate that is any significant risk of a highwall instability.
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<p>Internal Erosion and Piping</p>	<p>A filter compatibility assessment found that the filters are gradationally compatible with the materials being protected (Thurber 2016). However, the dam construction history is not fully understood. Numerous unidentified pipes and wooden drainage features have been encountered during previous dam investigations. As noted in Section 2.3, a slough of the embankment occurred in 2012, with a significant contributing factor being a preferential flow path along a previously unidentified piezometer in the upstream slope of the dam. It is possible that other structures are present in the dam that have not been identified.</p> <p>As a result, piping along these drainage features is considered possible. This risk was mitigated in 2021 through the removal and backfilling of the tailings pond and expansion of the toe berm, and as a result, the risk has been reduced to as low as reasonably practicable.</p>
<p>Slope Instability</p>	<p>The most recent stability analysis of the facility (SRK 2020 and 2024a) concluded that:</p> <ul style="list-style-type: none"> ■ Lower portions of the “Original Dam Fill” placed between 1955 and 1965 (Zone 5 in Figure 5) may be susceptible to liquefaction in the event of an earthquake. A liquefaction assessment based on available at the time estimated that the material could liquefy somewhere between the 2,500-year and 5,000-year seismic event (SRK 2020). ■ The facility exceeds CDA minimum FOS requirements under static and post-seismic loading conditions under the design event and considering full liquefaction of the tailings and original dam fill (SRK 2020). As a result, while some deformation of the dam crest may occur that may require remedial work, large-scale deformation is not expected that would lead to a dam failure. <p>The 2025 drilling program encountered conditions that differed from previous characterization of the foundation materials. As noted in Section 2.3, the depth to bedrock was deeper than expected near the west abutment and a potentially contractive glaciolacustrine unit was encountered in the foundation. An assessment is currently in progress to refine the condition and strength characteristics of the foundation and Original Dam Fill materials and to determine the potential for liquefaction and susceptibility to earthquake loadings, as well as update the stability assessment to determine if the glaciolacustrine unit poses a risk to dam safety (Recommendation ID No. 2025-6).</p>
<p>Surface Erosion</p>	<p>Routine inspections include monitoring of the slopes for surficial erosion caused by snowmelt or rainfall runoff. No significant erosion has been observed since 2013 when minor erosion of the repaired portion of the dam occurred due to limited vegetation present on the recently repaired slope.</p> <p>The tailings cover, and disturbed slopes of the expanded toe berm and spillway were hydroseeded in September 2022 but remain prone to surficial erosion until vegetation is further established. In the short-term, there is a heightened risk of silt erosion from the exposed till materials that could escape the facility. A post-construction monitoring plan has been developed that specifies increased monitoring of silt mobilization and downstream impact, especially during freshet and following significant rainfall events until vegetation is established.</p> <p>Once the site is vegetated with well-established grass coverage, an erosion assessment of the downstream slope of the dam concluded that the slope is adequate to withstand the runoff from the 200-year, 24-hour rainfall event without any significant erosion (SRK 2019c).</p>

7.4 Management System Review

7.4.1 Key Personnel

All key roles required by the HSRC are identified in the OMS Manual and are appropriate for the TSF. The Mine Manager has overall responsibility for the site. The Engineer of Record is Peter Mikes, P.Eng., who assists the TSF Qualified Person with managing the facility.

7.4.2 OMS Manual

The OMS Manual is required as per Section 10.6.6 of the HSRC. The latest revision of the OMS Manual was updated in February 2026. The OMS Manual follows the Mining Association of Canada's guidelines for OMS Manuals (MAC 2021a) and is considered adequate for the facility. The most recent update to the OMS Manual includes the addition of highwall monitoring surveillance procedures (Section 7.2), instrumentation monitoring procedures for the new VWP and SI instrumentation (Section 3.2), and to address 2024 Dam Safety Review recommendations.

Additional updates to the OMS Manual are planned to be completed in 2026 to include new QPO triggers for the new instrumentation installed in 2025.

7.4.3 Emergency Preparedness and Response

An Emergency Preparedness and Response Plan (EPRP) is required by Section 10.6.10 of the HSRC. The plan is to provide information that allows for planning and co-ordination by the owner, emergency authorities, government regulators, and other parties that would be affected during an emergency. The EPRP was updated in February 2026 to update contact information and address recommendations from the 2024 Dam Safety Review. The EPRP meets Canadian Dam Association Dam Safety Guidelines (CDA 2013) and BC Guidelines for Mine Emergency Response Plans (EMLI 2017).

7.4.4 Dam Safety Review

The last DSR was completed by Tetra Tech and was submitted to MCM in March 2025. The DSR recommendations have been included in the table of AFPR recommendations provided in Section 8.6).

As per Section 10.6.2 of the HSRC, DSRs are required every five years and the next DSR is scheduled to be submitted to MCM in March 2030.

8 Summary and Recommendations

8.1 Assurance Statement

This AFPR has been prepared to meet the requirements of the April 2024 revision of the HSRC. An AFPR assurance statement, as required by Section 10.6.4 of the HSRC, is provided in Appendix E.

8.2 Summary of Site Activities During Reporting Period

During the reporting period, no dam safety incidents were reported and there have been no material changes to the design, construction, and operation of the facility.

Maintenance was completed to remove tailings exposures from the cover surface that were all remnants from the 2021-2022 construction works, and repairs were completed on the toe berm crest near the east abutment to address an area of differential settlement, and to construct a swale to direct water away from the toe berm slope to reduce erosion.

In August 2025, a drilling program was completed to install ten vibrating wire piezometers and slope inclinometer casing to improve the understanding of the hydrogeological regime through the dam and to allow for the evaluation of lateral displacements through the dam.

8.3 Summary of Climate and Water Balance

The HBTF is a flow-through facility. The water balance for the facility is functional as the spillway can convey the PMF. The facility meets CDA (2013) freeboard requirements, and the required freeboard was not compromised at any point during the reporting period.

The snow depth that accumulated during the winter of 2024-2025 was below average, as indicated by data from regional snow weather stations. Additionally, the total precipitation during the reporting period was less (9%) than the long-term average with no extreme precipitation events. Based on the available data, the climate review found no indication of an extreme event that would have compromised the facility.

8.4 Summary of Performance

The HB Dam is currently stable and there are no signs of any instability. The tailings cover, expanded toe berm, and spillway side-slopes remain prone to erosion in the short term until vegetation becomes established. The spillway shows no signs of instability. The condition of the seepage at the dam toe remains unchanged from previous inspections.

8.5 Summary of Changes to Facility or Upstream or Downstream Conditions

There are no changes to the upstream or downstream conditions that affect the consequences of failure or warrant a revision of the dam consequence classification.

8.6 Table of Recommendations

Table 8.1 provides the recommendations from the 2025 AFPR as well as outstanding recommendations from previous AFPRs and recommendations from the 2024 DSR. Where needed, the suggested completion dates from previous year's recommendations have been revised. Recommendations in *greyed italics* indicate the item has been completed in the past year.

The recommendations have been categorized as deficiencies, non-conformances, or opportunities for improvement (OFI) that would be worthwhile in terms of good dam safety practices. CDA (2016) defines deficiencies and non-conformances as follows:

- a deficiency as “an inadequacy, or uncertainty in the adequacy, of the dam system to meet its performance goals in accordance with good dam safety practices”.
- a non-conformance as “an inadequacy in the nonphysical controls (procedures, processes and management systems) necessary to maintain the safety of the dam”.

In both cases, deficiencies or non-conformances can be “potential” if an item may be an inadequacy but further information is needed for confirmation (CDA 2016).

The priority rankings in the table are based on the HSRC Guidance Document (EMLI 2016) and are defined as follows:

1. A high probability or actual dam safety issue considered dangerous to life, health or the environment, or risk of regulatory enforcement if not addressed immediately.
2. If not corrected, could likely result in dam safety issues leading to injury, environmental impact, or significant regulatory enforcement; or a repetitive deficiency that demonstrates a systematic breakdown of procedures.
3. Single occurrences of deficiencies or non-conformances that alone would not be expected to result in dam safety issues.
4. Best Management Practice – further improvements are necessary to meet industry best practices or reduce potential risks.

The 2024 DSR recommendations did not include the same priority ranking system described above. Instead, the recommendations included suggested priorities of Low, Medium, High, or Very High, which corresponded to recommended response times of 5, 3, 1, and 0.5 years, respectively. In Table 8.1, the recommended response times have been adopted, and priority rankings assigned based on the above criteria.

Table 8.1: Table of Recommendations for the 2025 AFPR

ID No.	Finding / Existing Condition / Issue	Deficiency/ Non-Conformance/ OFI	Applicable Regulation or Reference	Recommended Action	Priority	Status / Recommended Deadline
2022						
2022-1	<i>On small tailings exposure was observed immediately east of the Main Channel.</i>	<i>Deficiency</i>	<i>OMS Section 5.4</i>	<i>Scrap up all tailings exposures and bury in the Ross Landform Area.</i>	4	Complete <i>All exposures were removed in August 2025.</i>
2023						
2023-3	<i>The existing piezometer instrumentation network includes three piezometer locations that are generally located along the centerline of the dam. The variation of the seepage regime upstream of the dam and closer to the abutments is unknown.</i>	<i>Non-conformance</i>	-	<i>Additional piezometers should be installed along two new cross sections closer to the abutments, as well as within the tailings impoundment upstream of the dam.</i>	4	Complete <i>Piezometers installed in August 2025.</i>
2024						
2024-1	A fallen tree is present approximately 5 m north of the spillway inlet that has the potential to enter the spillway in the event of a large flood.	Deficiency	OMS Section 5.4	Remove the tree.	4	Incomplete End of 2026.
2024-2	<i>The Casagrande tip in Piezometer P2 is partially separated from the above standpipe PVC resulting in the water level meter getting caught 25 cm above the bottom of the piezometer. The piezometer remains functional but is prone to further damage.</i>	<i>Deficiency</i>	<i>OMS Section 5.4</i>	<i>Install a vibrating wire piezometer in the standpipe as part of the piezometer installation program (Recommendation 2023-3).</i>	4	Complete <i>Piezometers installed in August 2025.</i>
2024-3	<i>The 2024 survey hub readings are unreliable due to survey inaccuracies (including control points anchored in bedrock).</i>	<i>Non-conformance</i>	<i>OMS Section 6.2.2</i>	<i>Increase the survey hub frequency for 2025 to be monthly during the snow-free periods until a baseline is established.</i>	4	Complete <i>Survey baseline is established.</i>
2024-4	While there have been no signs of instability of the spillway bedrock highwall, the large-scale failure of the highwall has the potential to block the spillway.	OFI	OMS Section 6.2	Establish an OMS surveillance procedure for photographic monitoring of the highwall adjacent to the spillway.	4	Complete OMS Manual Updated
2024 DSR Recommendations						
DSR-01	<i>The weekly site inspections were not regularly completed during the 2023 freshet period (Mid-March to Mid-April), in accordance with the OMS Manual. (Tetra Tech understands the water level tape was down for repairs during this period).</i>	<i>OFI</i>	<i>OMS Section 4.2</i>	<ul style="list-style-type: none"> Provide updated training on surveillance inspections annually before the freshet period and continue to conduct and document weekly site surveillance (visual inspections) during 	4	Complete <i>OMS Manual updated with additional training requirements details. Water level tape no longer needed for</i>

ID No.	Finding / Existing Condition / Issue	Deficiency/ Non-Conformance/ OFI	Applicable Regulation or Reference	Recommended Action	Priority	Status / Recommended Deadline
				<p><i>the freshet period, as outlined in the OMS Manual.</i></p> <ul style="list-style-type: none"> ■ <i>Secure backups for key equipment to ensure continuous data collection (RDCK noted that an additional water level meter (manufactured by Heron Instruments) has been available since February 2024).</i> 		<i>instrumentation monitoring.</i>
DSR-02	On January 11, 2023, the dam's performance was reported as 'abnormal' due to the formation of a pipe from the weir to the downstream side (with no flow passing over the weir). Despite the pipe not being repaired, the dam's performance was reported as 'normal' during the next routine inspection on February 16, 2023.	OFI	OMS Section 7	Review and revise the OMS Manual to: <ul style="list-style-type: none"> ■ establish a follow up procedure for any unusual site observations. ■ add detailed description of any observed conditions in the site inspection report; and ■ provide the OMS training for the site inspectors. 	4	Complete OMS Manual updated.
DSR-03	<i>No rock slope study/assessment was conducted along the western slope of the bedrock spillway. Major failure of the rock slope may fully/partially block the bedrock spillway and decrease its discharge capacity.</i>	OFI	OMS Section 6	<i>Perform a rock slope stability study/assessment of the western slope of the bedrock spillway.</i>	4	Superseded by 2024-4 See Note 1.
DSR-04	<i>Several surface erosion rills/gullies were observed on the western slope (exposed till) of the spillway outlet channel. Major failure of this slope may fully/partially block the spillway outlet channel and decrease the spillway capacity.</i>	OFI	OMS Appendix F	<i>Update inspection forms to ensure ongoing monitoring of this area for signs of excessive surface erosion or potential slope instability and implement repairs if erosion exceeds acceptable levels or significant instability is detected.</i>	4	Complete <i>Inspection form updated to include spillway channel wall instability.</i>
DSR-05	<i>A series of surface erosion rills/gullies were noted along the east slope of the berm. Some gullies have been developed considerably near the east abutment of the dam. The downstream east slope of the extended berm is prone to surface erosion and sloughing.</i>	Deficiency	OMS Section 5	<i>Repair this area, develop a surface water management plan (e.g., establish vegetation, install drainage ditches, etc.), and implement mitigation measures to control the runoff water along the crest and downstream slope of the extended berm.</i>	4	Complete <i>Area regraded and waterbars installed on east abutment road in 2024.</i>
DSR-06	<i>Surface eroded areas and tailings exposure were observed around the tailing impoundment area during the site inspection. Sparse vegetation was also found in some areas.</i>	Deficiency	OMS Section 5.4	<i>Repair the surface eroded areas and cover all tailing exposures with an approximate coverage of 30 cm and vegetation appropriately, as required.</i>	4	Complete <i>Tailings exposure removed; No actions required for erosion</i>

ID No.	Finding / Existing Condition / Issue	Deficiency/ Non- Conformance/ OFI	Applicable Regulation or Reference	Recommended Action	Priority	Status / Recommended Deadline
						<i>channels as areas determined to be self-armouring and not likely to worsen.</i>
DSR-07	Water ponded areas were observed along the east side of the tailing impoundment area, north of the North Spur Channel. The low point areas and water ponding within these areas appear to be likely the result of the differential settlement.	-	OMS Section 6	Continue regular monitoring of the ponded areas in accordance with the OMS Manual and develop a plan to repair if needed.	4	Complete <i>No action needed as already in OMS Manual.</i>
DSR-08	The seismic shear strength and deformation behavior of the original dam fill is not well understood and there is a risk of potential large-scale deformation due to seismic liquefaction.	Deficiency	HSRC 10.5.9	The shear strength and deformation behavior of the original dam fill should be further investigated to fully understand seismic liquefaction hazard. Conduct further investigation on the material properties and a post-seismic deformation analysis to evaluate their performance under seismic loading.	3	In Progress Original Deadline: Before End of 2025. Status: Field data collected, assessment of data to be completed in 2026.
DSR-09	No information regarding the survey hubs and seepage flow trigger levels was made available to Tetra Tech for review.	-	OMS Appendix E	Establish survey hub and seepage flow trigger levels and incorporate them into the TARP in the next revision of the OMS Manual.	4	Complete <i>TARP in OMS Manual includes survey hub and seepage flow triggers.</i>
DSR-10	It is understood that the current version of the OMS Manual has been updated (May 2024, Ver. 6.0) based on the HBTF Reclamation and Closure Construction Record (May 2023); however, the Emergency Preparedness and Response Plan (EPRP, February 2023) still needs to be updated based on the 2023 Construction Records.	OFI	EPRP Section 2.6	Update the 2023 EPRP with reference to the HBTF Reclamation and Closure Construction Record (May 2023).	4	Complete <i>Latest update includes post-2022 conditions.</i>
DSR-11	<i>The current OMS Manual needs to be updated to meet the HSRC requirements.</i>	<i>Non-conformance</i>	<i>HSRC 10.6.4</i>	<ul style="list-style-type: none"> ■ <i>Incorporate the recent changes in the HSRC regarding the AFPR, as well as revising the annual DSI to the AFPR and ensuring that its scope meets the requirements of the most recent HSRC revision.</i> ■ <i>Ensure that the AFPR includes an analysis and interpretation of the data collected during site surveillance,</i> 	4	Complete <i>OMS Manual updated.</i>

ID No.	Finding / Existing Condition / Issue	Deficiency/ Non- Conformance/ OFI	Applicable Regulation or Reference	Recommended Action	Priority	Status / Recommended Deadline
				<i>instrumentation monitoring, and other relevant.</i> <ul style="list-style-type: none"> ■ Include an annual review of the OMS by a qualified TSF or dam professional, as applicable, and the EOR, with updates implemented as deemed appropriate by the EOR. 		
DSR-12	<i>The previous version of the OMS Manual included a maintenance flowchart (Figure 7) that outlined the facility's maintenance process, responsibilities, documentation, and reporting protocol. It is noticed that this maintenance flowchart was missed in the current version (draft) of the OMS Manual.</i>	OFI	OMS Section 5	Consider adding a maintenance flowchart in the next update of the OMS Manual.	4	Complete See Note 2.
DSR-13	<i>The accuracy of the names and phone numbers of the downstream property owners cannot be confirmed.</i>	OFI	OMS Section 2.3	<i>The list of downstream property owners (no residents) should be called to confirm that the names and phone numbers are still current. The date of these calls should be added to the EPRP for future reference.</i>	4	Complete Latest OMS Manual and EPRP include downstream property owner contact information.
DSR-14	<i>Emergency levels have not been developed in the current version of EPRP.</i>	OFI	EPRP Section 3	<i>Update the EPRP to incorporate the Five-Step Dam Emergency Plan (DEP) Process including the steps as outlined in the Instructions, Guide, and Templates for Preparing a Dam Emergency Plan in British Columbia (updated April 2024).</i>	4	Complete EPRP updated.
2025 AFPR Recommendations						
2025-01	Fine-grained sediment has accumulated in South Spur Channel in the area that was repaired in 2023. The origin of the material is unknown but is suspected to be till.	Potential Deficiency	OMS Section 5	Collect a sample of the sediment and undertake geochemical testing to confirm the material origin.	4	New Before the end of 2026.
2025-02	The VWP in standpipe piezometer P5 is stuck in a PVC joint above the water table and is not providing piezometric readings.	Deficiency	OMS Section 5.4	Replace the VWP with a smaller diameter VWP.	4	New Before the end of 2026.
2025-03	The datalogger at SRK25-BH-03 is defective and not able to retain the configuration settings for one of the three VWPs.	Deficiency	OMS Section 5.4	Replace the datalogger.	4	New Before the end of 2026.

ID No.	Finding / Existing Condition / Issue	Deficiency/ Non-Conformance/ OFI	Applicable Regulation or Reference	Recommended Action	Priority	Status / Recommended Deadline
2025-04	The survey hub monitoring vertical displacements show no movement trend but continue to show scatter such that the minor risk alert thresholds were exceeded for most survey hubs (including one of the control points).	OFI	OMS Appendix E	Review and revise the survey hub vertical displacement thresholds in the TARP considering the accuracy of the survey method used.	4	New Before the end of 2026.
2025-05	QPO triggers have yet to be established for the new instrumentation installed in 2025.	OFI	OMS Appendix E	Update the TARP to include piezometric threshold for the new VWP's and criteria for when to complete slope inclinometer readings.	4	New Before the end of 2027.
2025-06	The 2025 drilling program encountered conditions that differed from previous characterization of the foundation materials. The bedrock depth was deeper than expected near the west abutment and a potentially contractive glaciolacustrine unit was encountered in the foundation.	Potential Deficiency	HSRC 10.5.9	Update the site characterization including strength characteristics of the foundation and Original Dam Fill materials, the potential for liquefaction and susceptibility to earthquake loadings, and complete an updated stability assessment to determine if the foundation poses a risk to dam safety	3	New Before the end of 2026.

Notes:

- ³ The bedrock highwall has shown no signs of instability or any significant spalling to date and the risk of overtopping due to a spillway blockage caused by a large-scale failure of the bedrock highwall to be close to non-credible (SRK 2025b). As a result, a rock slope study/assessment is deemed not to be required at this time. In lieu, the OMS Manual has been updated to include a surveillance procedure for photographic monitoring of the highwall. A rock slope study/assessment would be undertaken if signs of instability are observed.
- ⁴ The flow chart was considered but determined to be unnecessary due to the simplicity of the site and number of personnel involved. The maintenance process, responsibilities, documentation and reporting protocols are adequately described in the OMS Manual.

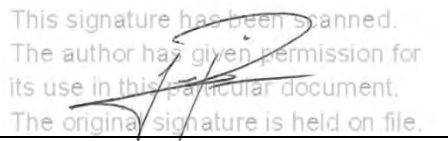
Closure

This report, 2025 Annual Facility Performance Report – HB Mine Tailings Facility, was prepared by



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SRK Consulting (Canada) Inc Engineers and Geoscientist BC Permit to Practice No: 1003655

All data used as source material plus the text, tables, figures, and attachments of this document have been reviewed and prepared in accordance with generally accepted professional engineering and environmental practices.

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SRK Consulting (Canada) Inc. 2025a. HB Mine Tailings Facility – Design Summary. Prepared for Regional District of Central Kootenay: Nelson, BC. Project number: CAPR003603. Issued May 23.

SRK Consulting (Canada) Inc. 2025b. HB Mine Tailings Facility Risk Register. Prepared for Regional District of Central Kootenay: Nelson, BC. Project number: CAPR003603. Issued April 17.

SRK Consulting (Canada) Inc. 2026a. 2025 Piezometer Installation Report. Final. Prepared for Regional District of Central Kootenay: Nelson, BC. Project number: CAPR003603. Issued January.

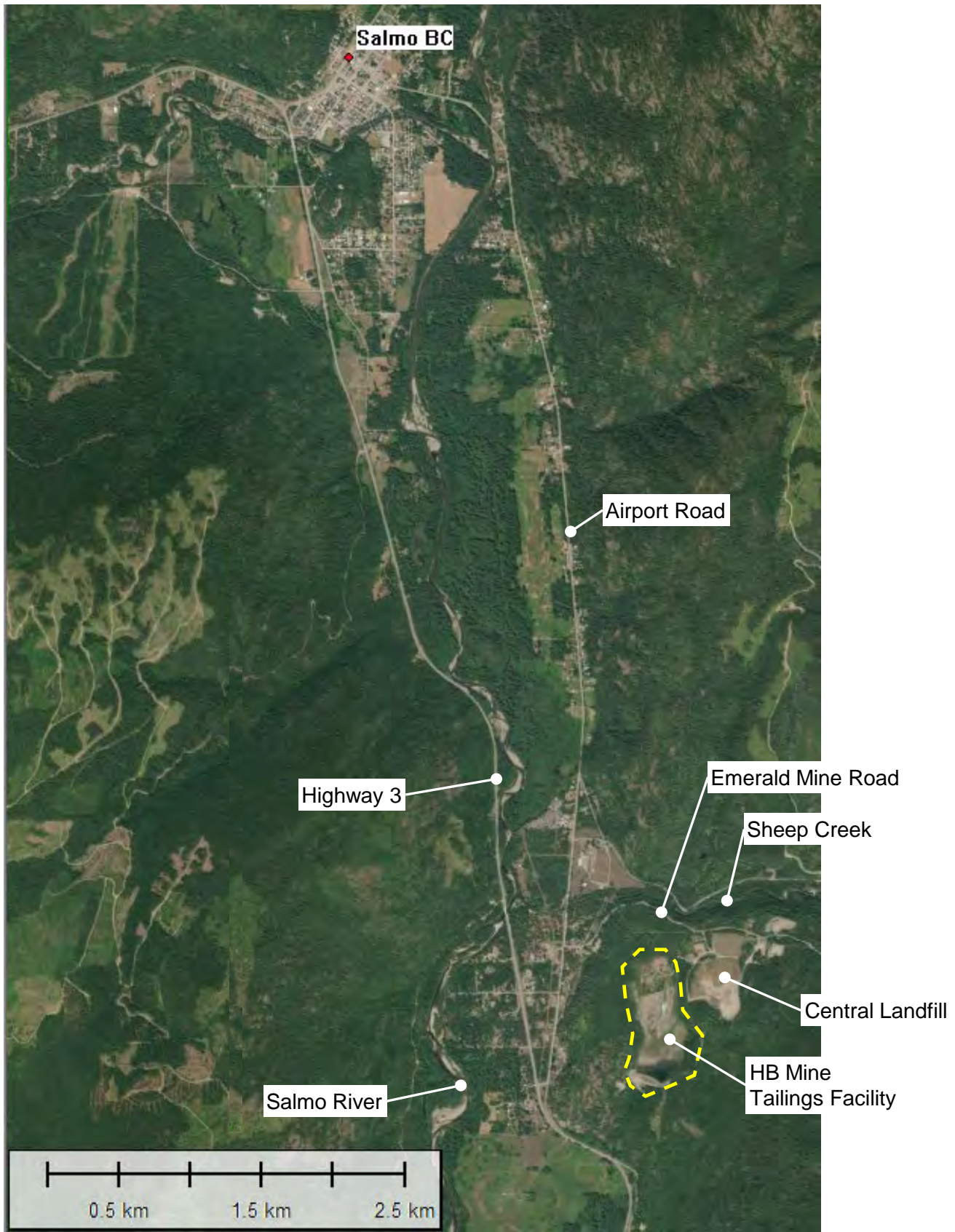
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Appendix A Plans and Drawings





Legend

- Paved Road (Yellow)
- Rough Road
- Water course

Note:

1. Drone orthophoto of the tailings area and Central Landfill was taken on April 16, 2025. The aerial photo outside of the project area (lighter shading) was taken in 2016.

		2025 AFPR		
		Tailings Facility General Arrangement		
Job No: CAPR003603 Filename: HB_2025-AFPR_TailingsGenArrangement.pptx	HB Mine Tailings Facility	Date: December 2025	Approved: PHM	Figure: A-2



- LEGEND**
- △ Control Point
 - ⊕ Borehole Location
 - ⊕ Monitoring Well Location
 - ⊕ Piezometer Location
 - ⊕ Test Pit Location
 - ⊕ Seepage Measurement Weir
 - Access Road
 - ▭ Dam Crest
 - ▭ Riprap
 - ▭ Upstream Beach Extents
 - ▭ As-Constructed Infrastructure

- NOTES**
1. All units are in meters unless otherwise specified.
 2. Contours are shown at 2.0 m intervals.

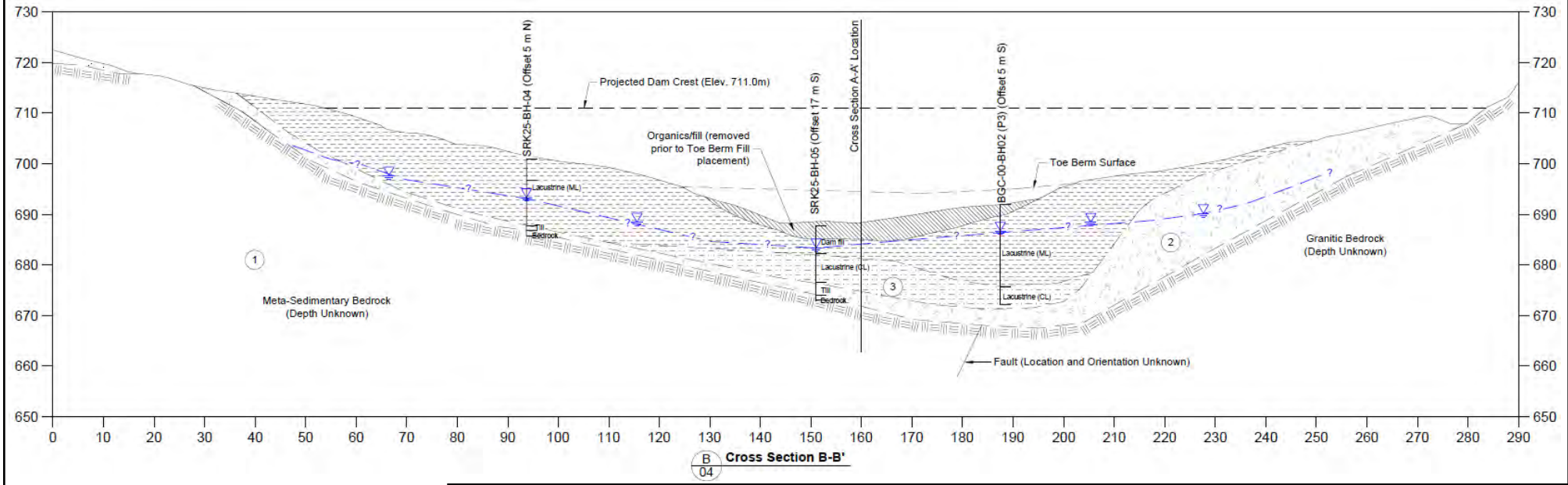
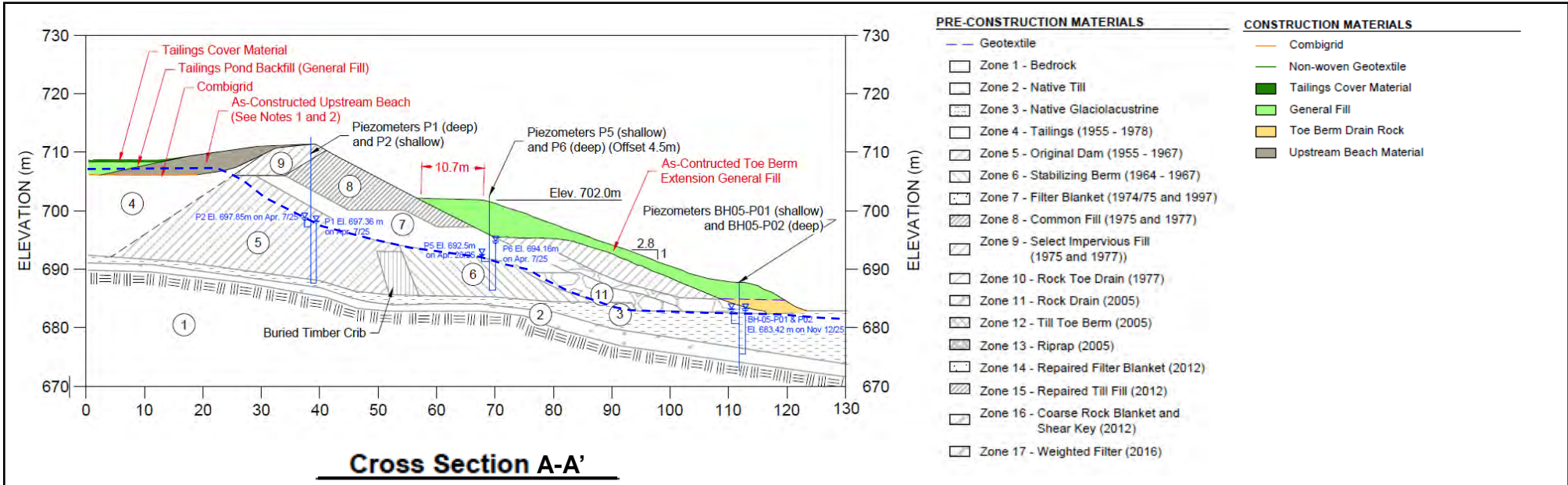
REFERENCES

Preconstruction topographical contour data was obtained from RDCK and is based on a 2016 aerial LiDAR survey.

As-built survey data was collected by Integrated Sustainability and is based on a drone LiDAR survey dated September 13, 2022.

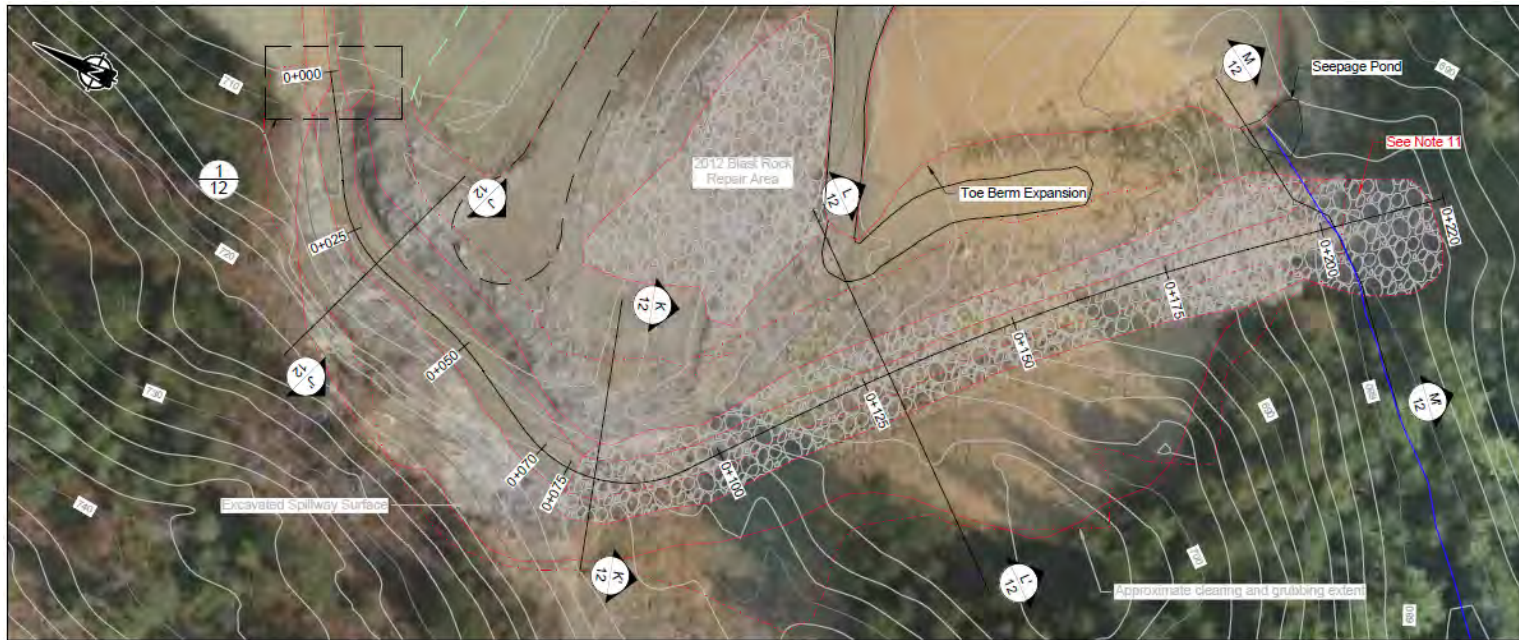
- Notes:**
1. Drawing from the 2021-22 Remediation and Closure Construction Record Report (SRK 2023a).
 2. Piezometers installed in 2025 (SRK25-BH-01 to -05) were added to the figure.

		2025 AFPR		
		HB Dam General Arrangement		
Job No: CAPR003603 Filename: HB_2025AFPR_FiguresLandscape_CAPR003603.pptx	HB Mine Tailings Facility	Date: December 2025	Approved: PHM	Figure: A-3



File Sources:
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 Section B: C:\Users\pmikes\SRK Consulting\NA CAPR003603 HB Mine 2025 26 Engineer of Record Services - Internal\I030_AutoCAD\CAPR002046 - Dam EC.dwg"

		2025 AFPR		
		HB Dam Sections		
Job No: CAPR003603 Filename: HB_2025AFPR_FiguresLandScape_CAPR003603.pptx	HB Mine Tailings Facility	Date: December 2025	Approved: PHM	Figure: A-4



LEGEND

- As-Constructed Infrastructure
- ▨ Riprap
- ▭ Site Access Road

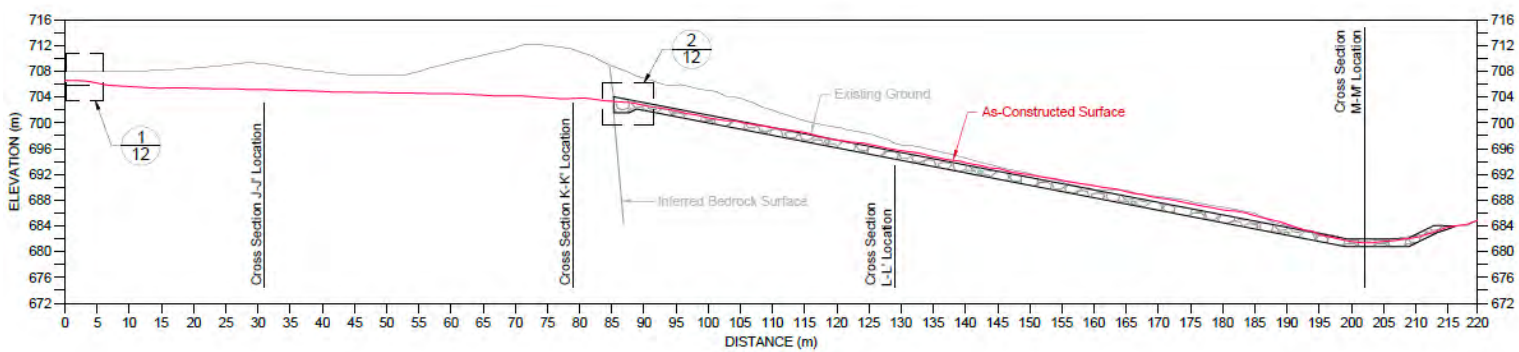
NOTES

1. All units are in meters unless otherwise specified.
2. Contours are shown at 2.0 m intervals.
3. All dimensions in meters unless stated otherwise.
4. The contractor shall use controlled blasting methods to minimize damage to the abutment rock and to ensure the stability of the dam embankment.
5. A blast plan is to be submitted and approved by the Engineer and requires to be submitted to EMPR for approval a minimum 30 days prior to the planned start of blasting.
6. A blast monitoring station shall be placed on bedrock within 50m of the spillway at the dam centerline. Blast monitoring data, including the distance to the monitoring station, the vibration frequency, and peak particle velocity shall be reported to the Engineer following each blast.
7. The peak particle velocity must be kept below 2.5 cm/second.
8. Additional excavation may be required to remove rock deemed by the Engineer to be a potential future spillway blockage risk.
9. Spillway riprap to have a median particle size (D_{50}) of 600mm and meet the material specifications provided in Drawing 02.
10. The geotextile is to meet the product specifications provided in the Technical Specifications.
11. Geotextile panels are to have a minimum 0.3m overlap, with the upstream panel placed over the downstream panel.
12. The upgraded spillway was tied into the existing stilling basin at STA 0+175. Additional riprap was placed on the north bank of the stilling basin to minimize flow velocity and for any floodwater that could backwater into the seepage pond monitoring weir area. Further details are provided in Field Instruction #10.

REFERENCES

Preconstruction topographical contour data was obtained from RDCK and is based on a 2016 aerial LIDAR survey.

Spillway Plan



Spillway Profile



2025 AFPR

HB Dam Spillway – Plan and Profile

Job No: CAPR003603
 Filename: HB_2025AFPR_FiguresLandscape_CAPR003603.pptx

HB Mine Tailings Facility

Date: December 2025	Approved: PHM	Figure: A-5
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Appendix B Site Photographs



C:\Users\pmikes\SRK Consulting\F\1273 HB - Internal\020_Site_Wide_Data\Cover Monitoring\HB-Cover Inspections.gmw



Global Mapper File: HB-Cover Inspections.gmw

Note:

1. Drone orthophoto of the tailings area taken on April 16, 2025. Aerial photo outside of the project area (lighter shading) is based on a 2016 aerial LiDAR survey.

		2025 AFPR		
		Photo Locations		
Job No: CAPR003603 Filename: HBTF_2025_PhotoLocations.pptx	HB Mine Tailings Facility	Date: December 2025	Approved: PHM	Figure: B-01

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Global Mapper File: HB-Cover Inspections.gmw

Note:

1. Drone orthophoto of the tailings area taken on April 16, 2025.

		2025 AFPR		
		Photo Locations		
Job No: CAPR003603 Filename: HBTF_2025_PhotoLocations.pptx	HB Mine Tailings Facility	Date: December 2025	Approved: PHM	Figure: B-02



Photo 1: New gate installed on the road from the Central Landfill to the HB Dam to restrict access.



Photo 2: East abutment of the Dam crest looking west.



		2025 AFPR		
		Photo Log		
Job No: CAPR003603 Filename: HBTf_2025_Photolog_rev00.pptx	HB Mine Tailings Facility	Date: Dec 2025	Approved: PHM	Figure: B-03



Photo 3: Dam crest and downstream slope looking west from the east abutment.



Photo 4: Small ridges are present in the tailings pond backfill area that are about 10 cm high and spaced 3.0-3.5 m apart. Ridges are suspected to be located where the Combigrid overlaps occur from the 2021-2022 construction.



		2025 AFPR		
		Photo Log		
Job No: CAPR003603 Filename: HBTf_2025_Photolog_rev00.pptx	HB Mine Tailings Facility	Date: Dec 2025	Approved: PHM	Figure: B-04



Photo 5: Tailings impoundment looking north from the dam crest.



Photo 6: Dam crest and downstream slope looking east from near piezometers P1/P2.

		2025 AFPR		
		Photo Log		
Job No: CAPR003603 Filename: HBTF_2025_Photolog_rev00.pptx	HB Mine Tailings Facility	Date: Dec 2025	Approved: PHM	Figure: B-05



Photo 7: Dam crest and downstream slope looking west from near piezometers P1/P2.



Photo 8: Piezometers P1/P2 at the dam crest.

		2025 AFPR		
		Photo Log		
Job No: CAPR003603 Filename: HBTf_2025_Photolog_rev00.pptx	HB Mine Tailings Facility	Date: Dec 2025	Approved: PHM	Figure: B-06



Photo 9: 2012 Blast Rock Repair area looking southwest.



Photo 10: Main Tailings Surface Drainage Channel looking upstream from near the spillway inlet.



		2025 AFPR		
		Photo Log		
Job No: CAPR003603 Filename: HBTf_2025_Photolog_rev00.pptx	HB Mine Tailings Facility	Date: Dec 2025	Approved: PHM	Figure: B-07



Photo 11: Riprap at the spillway inlet. The sand material upstream of the inlet (circled) is overtop the Turf Reinforcement Mat (TRM) and is not a tear of the TRM. Sand was likely deposited during the riprap placement in 2023.



Photo 12: Riprap at the spillway inlet. No signs of riprap movement observed.

		2025 AFPR		
		Photo Log		
Job No: CAPR003603 Filename: HBTF_2025_Photolog_rev00.pptx	HB Mine Tailings Facility	Date: Dec 2025	Approved: PHM	Figure: B-08



Photo 13: Spillway highwall.



		2025 AFPR		
		Photo Log		
Job No: CAPR003603 Filename: HBTf_2025_Photolob_B-09.pptx	HB Mine Tailings Facility	Date: Dec 2025	Approved: PHM	Figure: B-09



Photo 14: Bedrock spillway looking downstream.



Photo 15: Bedrock spillway looking downstream.

		2025 AFPR		
		Photo Log		
Job No: CAPR003603 Filename: HBTf_2025_Photolog_rev00.pptx	HB Mine Tailings Facility	Date: Dec 2025	Approved: PHM	Figure: B-10



Photo 16: Erosion gully at the downstream end of the bedrock highwall adjacent to the spillway. The gully is self-armouring and the conditions are unchanged compared to the 2024 inspection.



Photo 17: Right bank of the spillway looking downstream. A small erosion gully is present. Any water flowing down the gully flows overtop the geotextile and into the spillway. No actions are required.



		2025 AFPR		
		Photo Log		
Job No: CAPR003603 Filename: HBTF_2025_Photolog_rev00.pptx	HB Mine Tailings Facility	Date: Dec 2025	Approved: PHM	Figure: B-11



Photo 18: Right bank of the spillway looking downstream showing the area repaired in 2023. The repair is in good condition with no signs of instability.



Photo 19: Downstream slope of the dam and left bank of the spillway looking north.



		2025 AFPR		
		Photo Log		
Job No: CAPR003603 Filename: HBTF_2025_Photolog_rev00.pptx	HB Mine Tailings Facility	Date: Dec 2025	Approved: PHM	Figure: B-12



Photo 20: V-notch seepage weir. Seepage was clear with no signs of sediment deposition..



Photo 21: Area between the dam toe and seepage weir.



		2025 AFPR		
		Photo Log		
Job No: CAPR003603 Filename: HBTf_2025_Photolog_rev00.pptx	HB Mine Tailings Facility	Date: Dec 2025	Approved: PHM	Figure: B-13



Photo 22: Piezometer P3.



Photo 23: Downstream slope of the toe berm at the west abutment looking downslope from Piezometer P3. A small erosion gully is present orientated parallel to the slope approximately 5 cm deep, 5 cm wide. Continue to monitor.



		2025 AFPR		
		Photo Log		
Job No: CAPR003603 Filename: HBTf_2025_Photolog_rev00.pptx	HB Mine Tailings Facility	Date: Dec 2025	Approved: PHM	Figure: B-14



Photo 24: Survey hub H-10.



Photo 25: Crest of the toe berm looking east.

		2025 AFPR		
		Photo Log		
Job No: CAPR003603 Filename: HBTf_2025_Photolog_rev00.pptx	HB Mine Tailings Facility	Date: Dec 2025	Approved: PHM	Figure: B-15



Photo 26: Downstream slope of the dam looking northeast from near piezometers P5/P6.



Photo 27: Erosion gully in the toe berm crest near the east abutment. Due to concentrated flow from the toe berm crest.

		2025 AFPR		
		Photo Log		
Job No: CAPR003603 Filename: HBTF_2025_Photolog_rev00.pptx	HB Mine Tailings Facility	Date: Dec 2025	Approved: PHM	Figure: B-15



Photo 28



Photo 29

Photo 28 and 29: Small sinkhole on the toe berm crest near the east abutment caused by settlement of till into the underlying weighted filter. Approx 10 cm diameter; 15 cm deep.



Photo 30: Area of ponding in the tailings pond backfill area. A review of the 2022 and 2025 cover surveys indicates no to minimal (i.e.. < 10 cm) differential settlement in the area.



		2025 AFPR		
		Photo Log		
Job No: CAPR003603 Filename: HBTF_2025_Photolog_rev00.pptx	HB Mine Tailings Facility	Date: Dec 2025	Approved: PHM	Figure: B-15



Photo 31: South Spur Channel Energy Dissipation Structure looking upstream.



Photo 32: Small channel formed from runoff on the west side of the TSF looking south. Water flows parallel to the Main Channel and enters the Main channel near the spillway. No change compared to the 2024 inspection.



		2025 AFPR		
		Photo Log		
Job No: CAPR003603 Filename: HBTF_2025_Photolog_rev00.pptx	HB Mine Tailings Facility	Date: Dec 2025	Approved: PHM	Figure: B-15



Photo 33: Small channel formed from runoff on the west side of the TSF looking north. Water flows parallel to the Main Channel and enters the Main channel near the spillway. No change compared to the 2024 inspection.



Photo 34: Small misc. stockpiles from the Central Landfill operations at the north end of the tailings impoundment. Several areas of ponded water are present with watering having a reddish colour.

		2025 AFPR		
		Photo Log		
Job No: CAPR003603 Filename: HBTf_2025_Photolog_rev00.pptx	HB Mine Tailings Facility	Date: Dec 2025	Approved: PHM	Figure: B-15



Photo 35: Main Tailings Surface Drainage Channel looking upstream.



Photo 36: Main Tailings Surface Drainage Channel looking downstream.



		2025 AFPR		
		Photo Log		
Job No: CAPR003603 Filename: HBTf_2025_Photolog_rev00.pptx	HB Mine Tailings Facility	Date: Dec 2025	Approved: PHM	Figure: B-15



Photo 37: Area where surface run-on from east of the tailings area enters the Main Channel.



Photo 38: Several dead trees are present around the perimeter of the TSF as a result of the cover placement.




		2025 AFPR		
		Photo Log		
Job No: CAPR003603 Filename: HBTf_2025_Photolog_rev00.pptx	HB Mine Tailings Facility	Date: Dec 2025	Approved: PHM	Figure: B-15



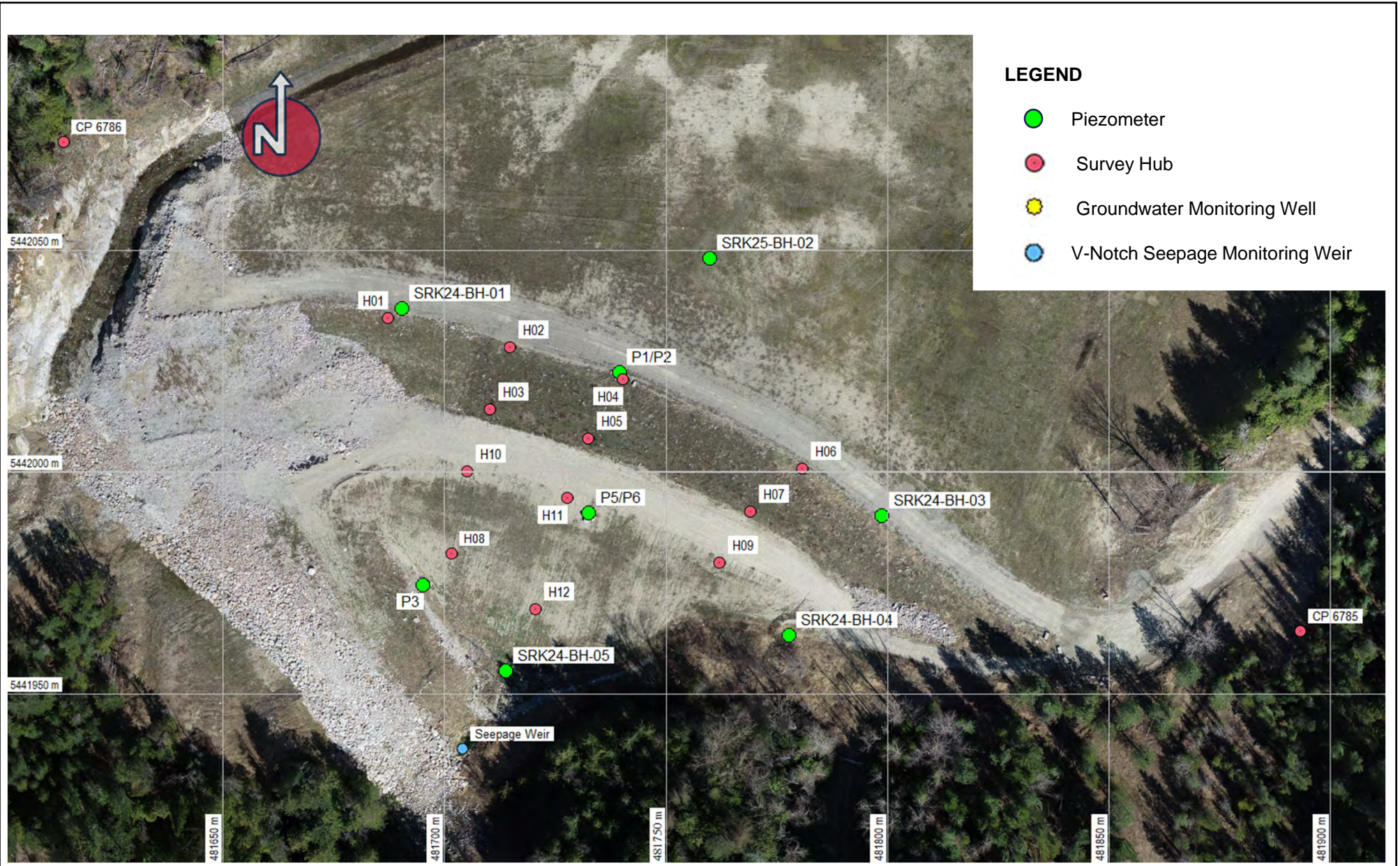
Photo 39: Area of groundwater discharge to surface water and ponding located north of the North Spur Channel.



Photo 40: North Spur Energy Dissipation Structure looking upstream.

		2025 AFPR		
		Photo Log		
Job No: CAPR003603 Filename: HBTf_2025_Photolog_rev00.pptx	HB Mine Tailings Facility	Date: Dec 2025	Approved: PHM	Figure: B-15

Appendix C Instrumentation Data



LEGEND

- Piezometer
- Survey Hub
- ★ Groundwater Monitoring Well
- V-Notch Seepage Monitoring Weir

Notes:
1. UAV Imagery dated September 13, 2022.



2025 AFPR

HB Dam Instrumentation Locations

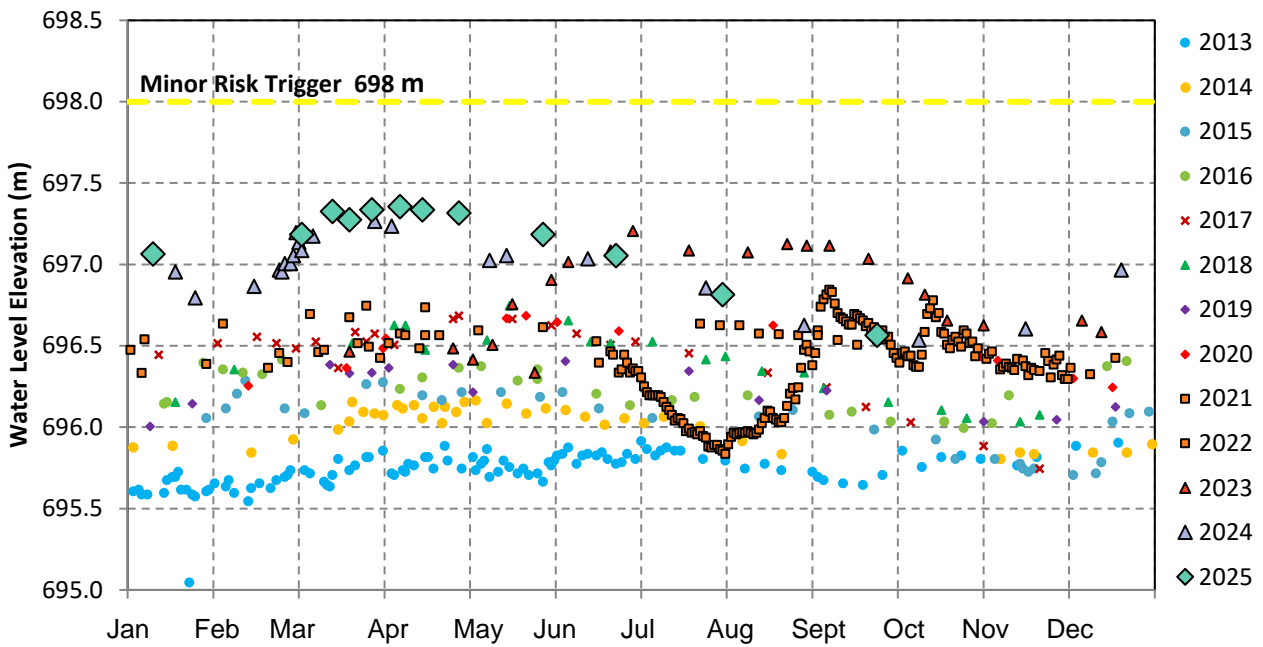
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HB Mine Tailings Facility

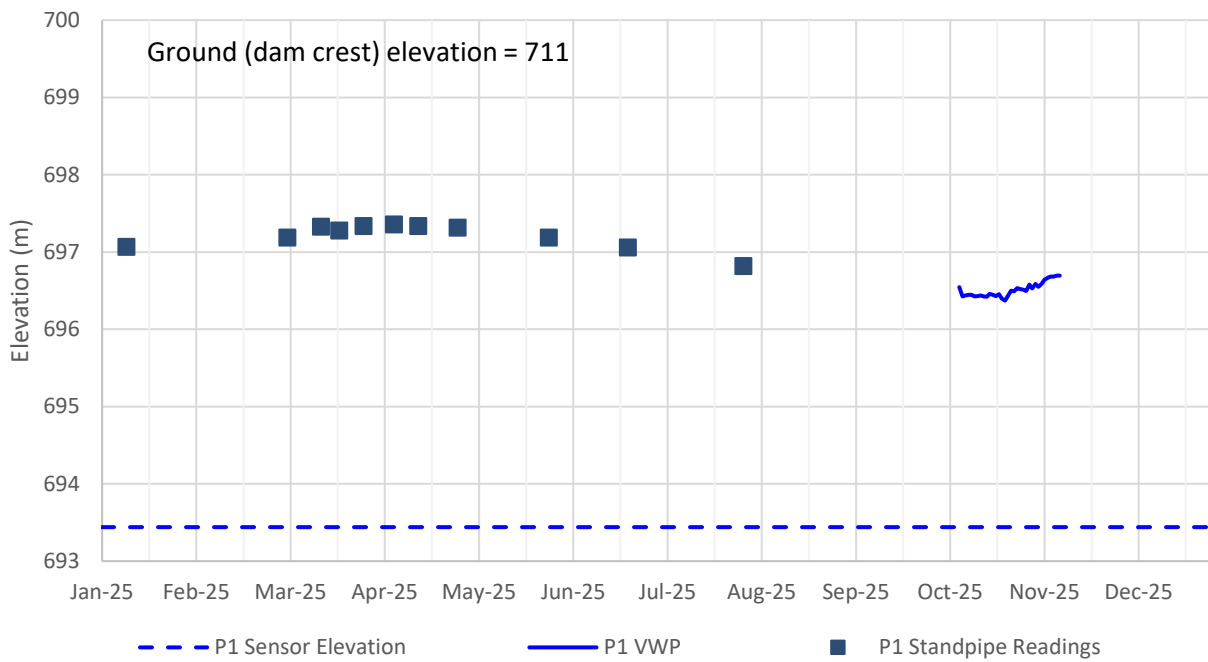
Date: December 2025

Approved: PHM

Figure: **C-1**



a) Historical standpipe piezometer readings





b) VWP Readings (Oct/Nov 2025) compared to 2025 standpipe piezometer readings

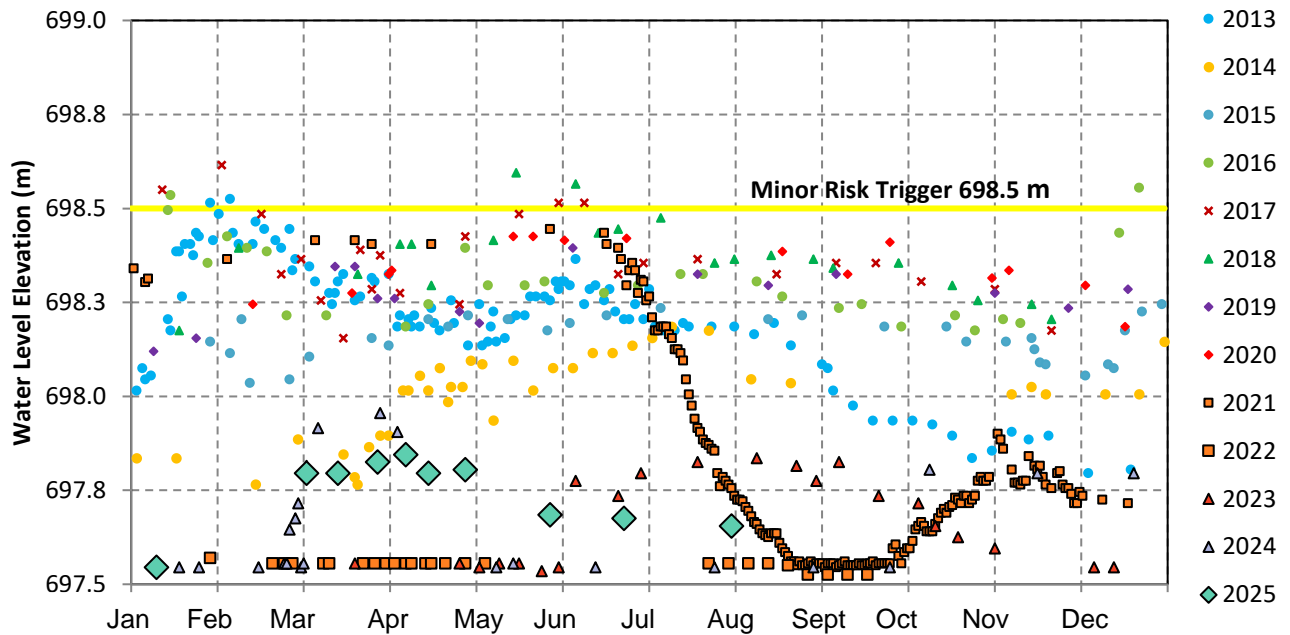
Notes:

1. Piezometer P1 is located on the dam crest near the valley center and is screened in the dam foundation.

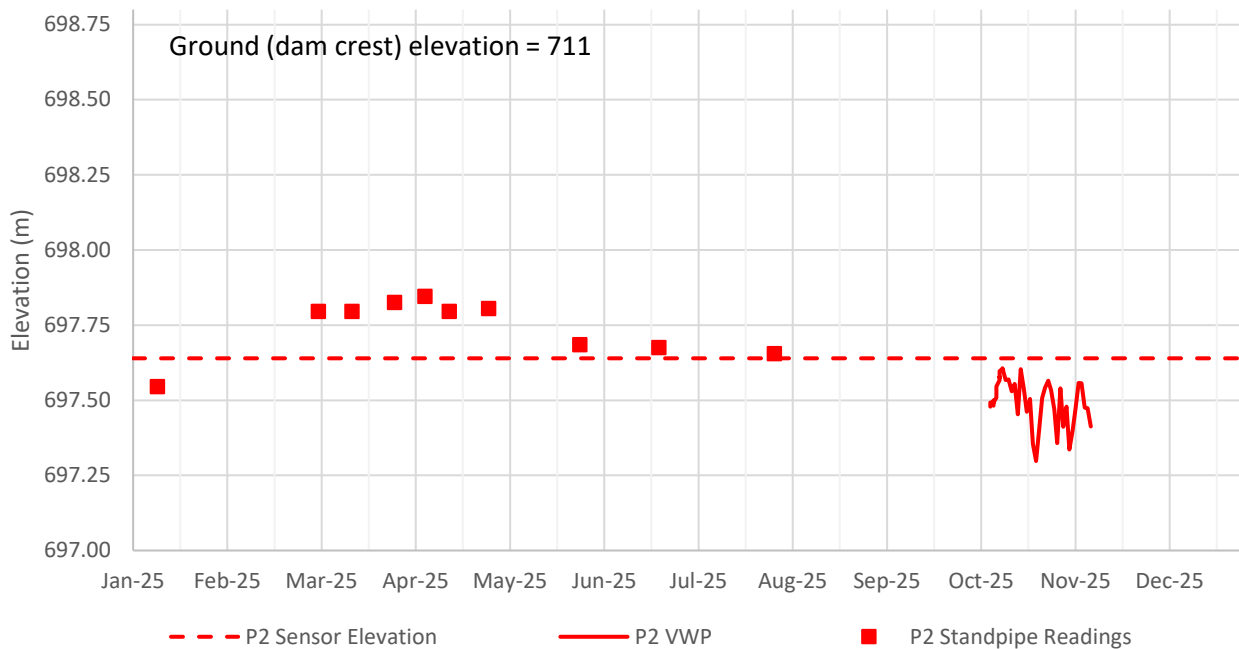
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		2025 AFPR		
		Piezometer P1		
Job No: CAPR003603 Filename: HB_2025AFPR_Instrumentation_CAPR003603.pptx	HB Mine Tailings Facility	Date: December 2025	Approved: PHM	Figure: C-2



a) Historical standpipe piezometer readings





b) VWP Readings (Oct/Nov 2025) compared to 2025 standpipe piezometer readings

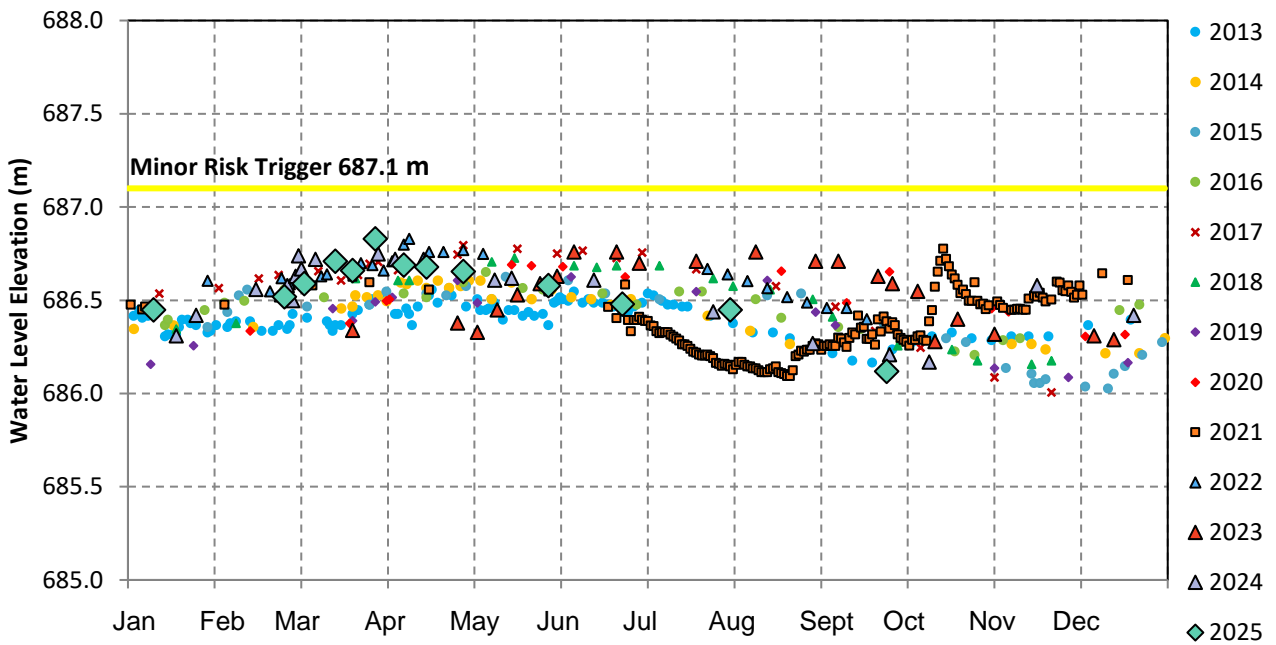
Notes:

1. Piezometer P2 is located on the dam crest near the valley center and is screened in the till core (Original Dam Fill).
2. Starting in October 2024, the water level tape is unable to be lowered past 13.96 m from the top of pipe (~0.24 m from bottom). A downhole camera inspection indicates the well is dry and that the Casagrande tip has become slightly separated at a joint, with the tape unable to advance past the joint.

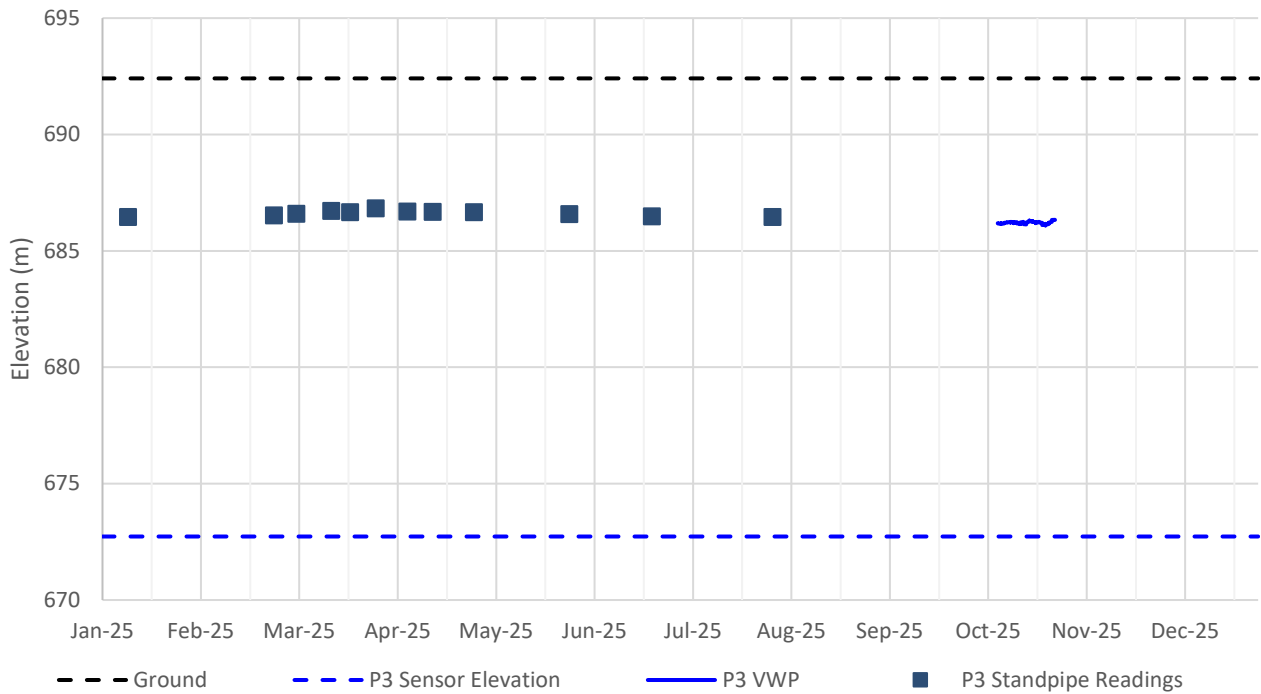
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		2025 AFPR		
		Piezometer P2		
Job No: CAPR003603 Filename: HB_2025AFPR_Instrumentation_CAPR003603.pptx	HB Mine Tailings Facility	Date: December 2025	Approved: PHM	Figure: C-3



a) Historical standpipe piezometer readings



b) VWP Readings (Oct/Nov 2025) compared to 2025 standpipe piezometer readings

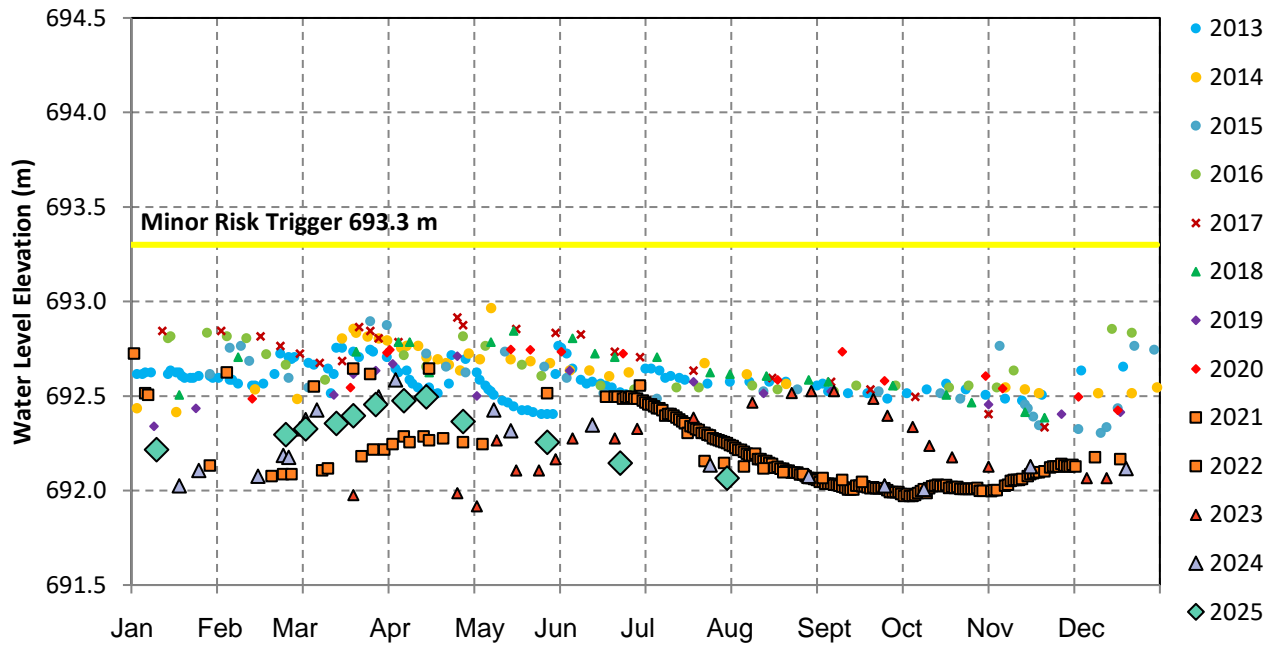
Notes:

1. Piezometer P3 is located at the dam toe near the west abutment.

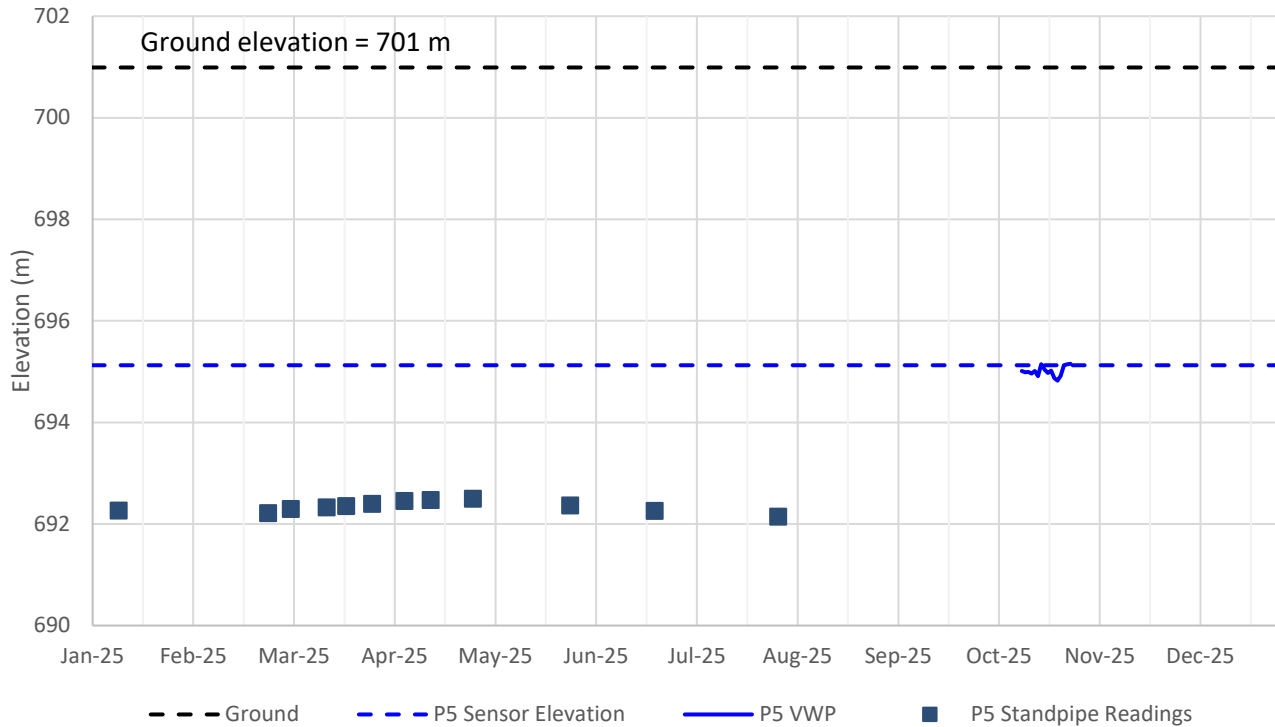
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		2025 AFPR		
		Piezometer P3		
Job No: CAPR003603 Filename: HB_2025AFPR_Instrumentation_CAPR003603.pptx	HB Mine Tailings Facility	Date: December 2025	Approved: PHM	Figure: C-4



a) Historical standpipe piezometer readings





b) VWP Readings (Oct/Nov 2025) compared to 2025 standpipe piezometer readings

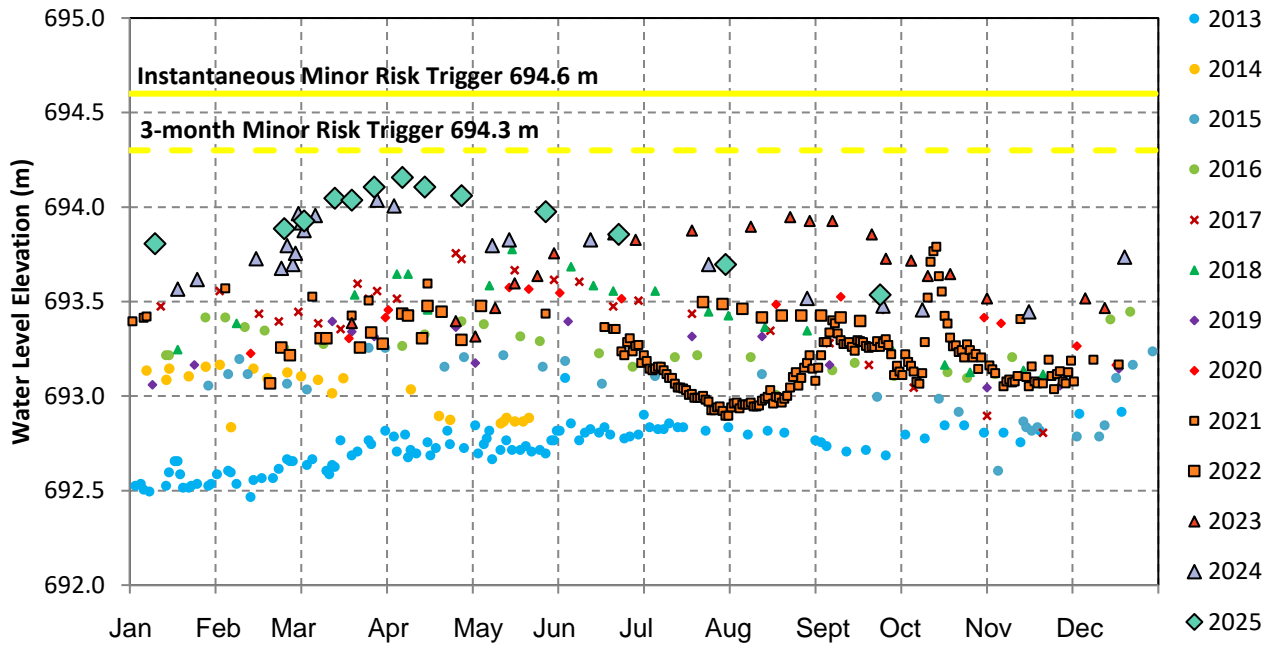
Notes:

1. Piezometer P5 is located on the toe berm crest and is screened in the dam filter blanket unit.
2. The VWP was unable to be lowered to the target elevation past a PVC standpipe joint and is to be replaced with a smaller diameter VWP.

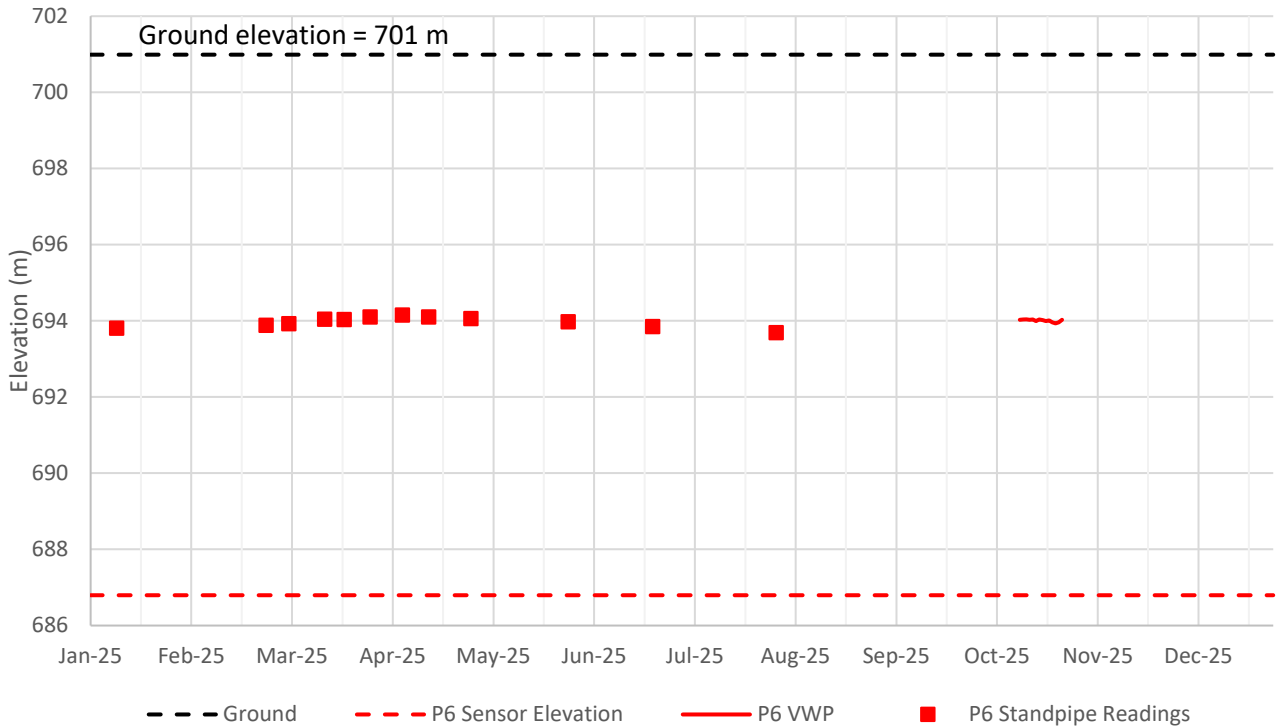
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		2025 AFPR		
		Piezometer P5		
Job No: CAPR003603 Filename: HB_2025AFPR_Instrumentation_CAPR003603.pptx	HB Mine Tailings Facility	Date: December 2025	Approved: PHM	Figure: C-5



a) Historical standpipe piezometer readings





b) VWP Readings (Oct/Nov 2025) compared to 2025 standpipe piezometer readings

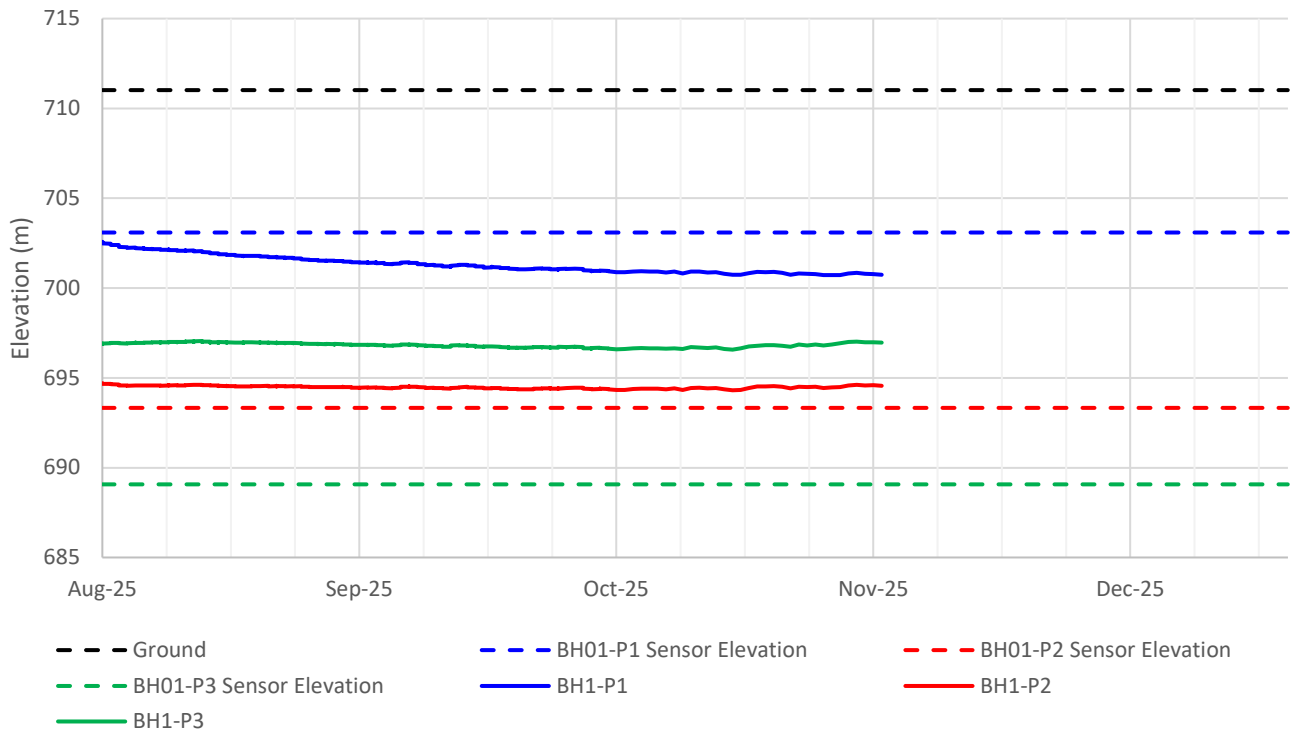
Notes:

1. Piezometer P6 is located on the toe berm crest and is screened in the dam filter blanket unit.

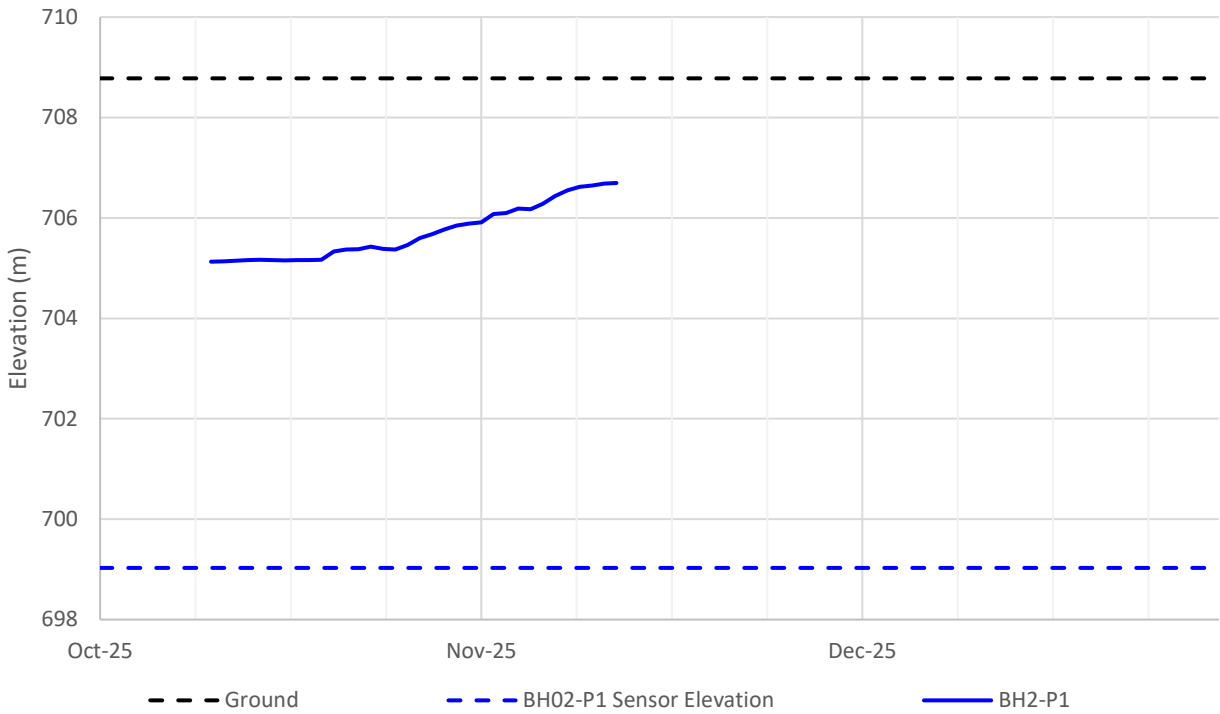
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2. https://srk.sharepoint.com/sites/FS1273/Internal/020_Site_Wide_Data/Piezometer%20Data/HB_VWP_WaterLevels_rev00.xlsx?web=1

		2025 AFPR		
		Piezometer P6		
Job No: CAPR003603 Filename: HB_2025AFPR_Instrumentation_CAPR003603.pptx	HB Mine Tailings Facility	Date: December 2025	Approved: PHM	Figure: C-6





SRK25-BH01 Vibrating Wire Piezometers

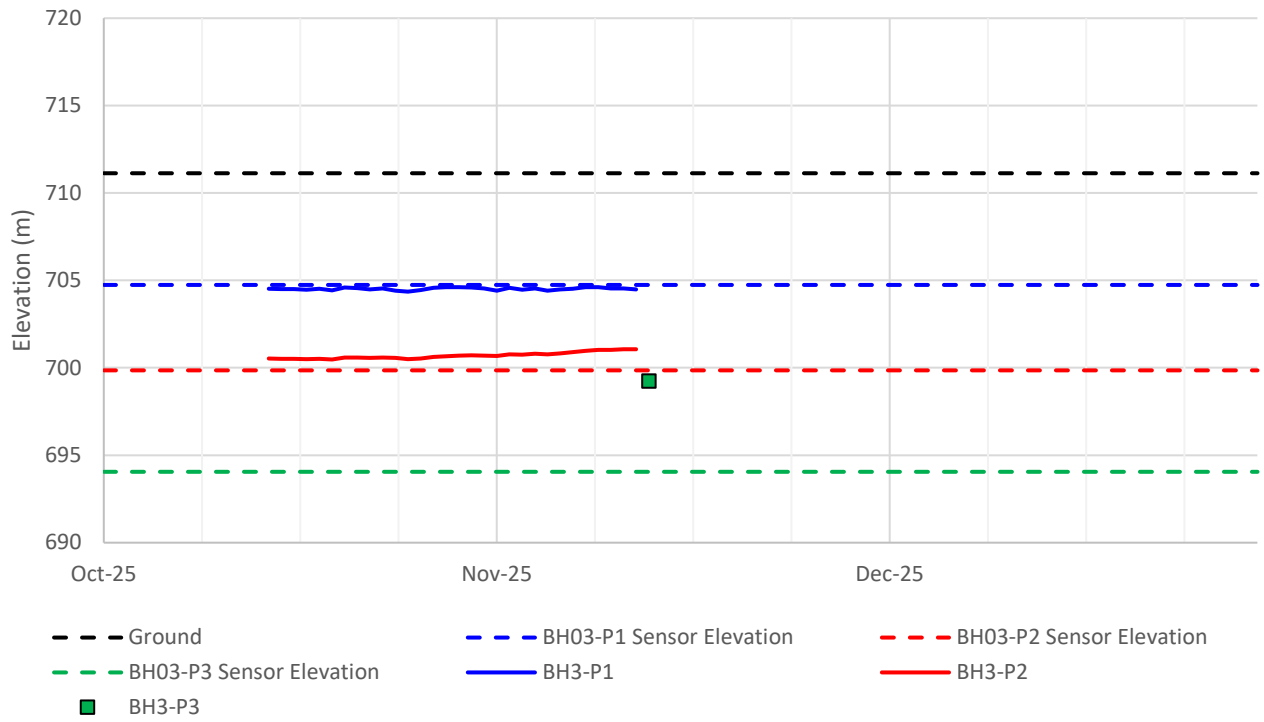


SRK25-BH02 Vibrating Wire Piezometer

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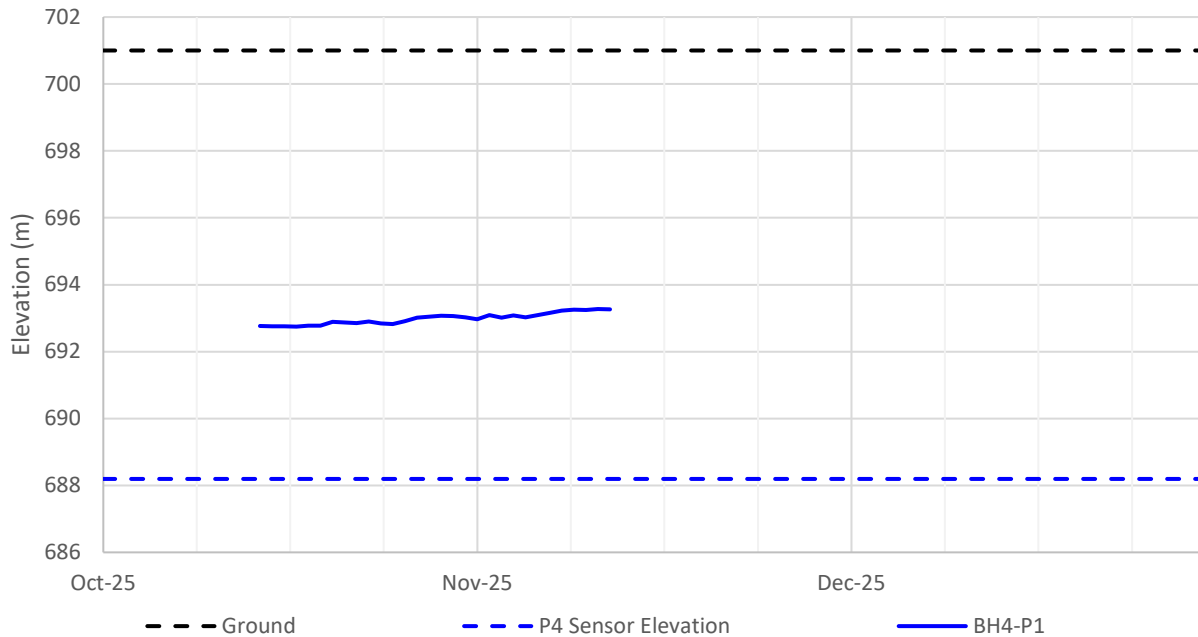
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		SRK25-BH01 and SRK25-BH02 Piezometers		
Job No: CAPR003603 Filename: HB_2025AFPR_Instrumentation_CAPR003603.pptx	HB Mine Tailings Facility	Date: December 2025	Approved: PHM	Figure: C-7



SRK25-BH03 Vibrating Wire Piezometers

Note:



1. There is an issue with one of the datalogger channels that results in the BH-P3 data not being recorded. The single BH3-P3 reading on November 13 , 2025 was manually recorded.

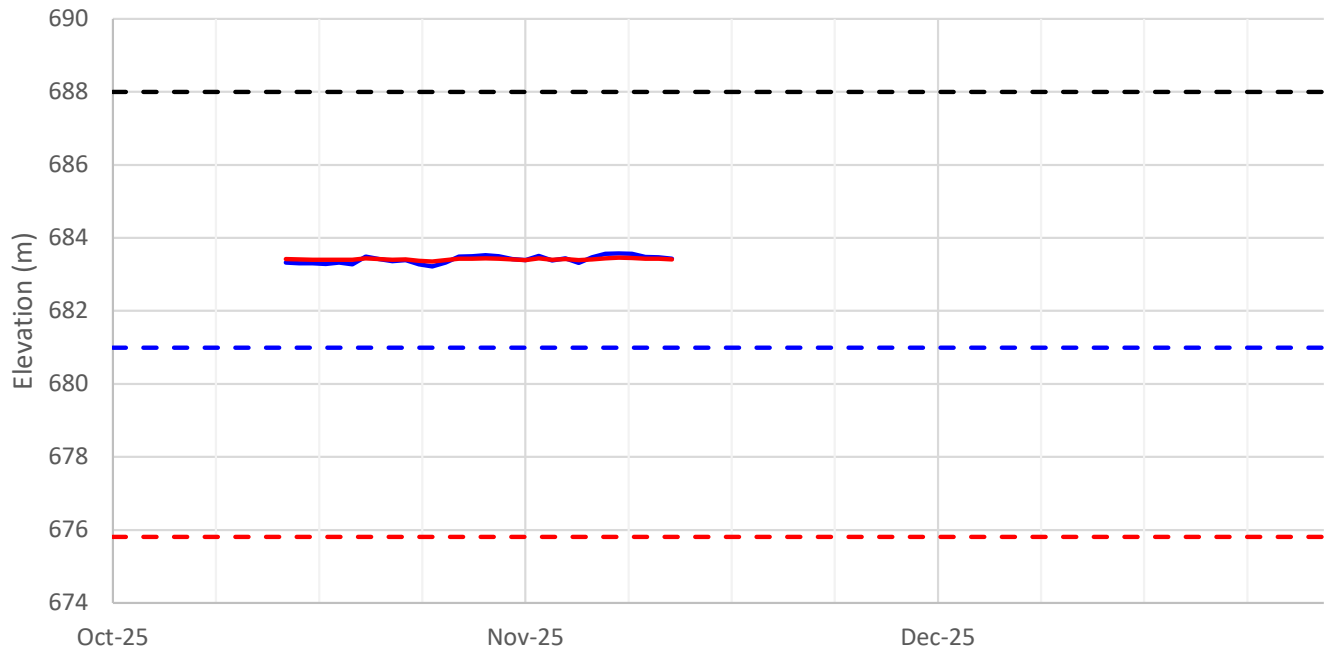


SRK25-BH04 Vibrating Wire Piezometer

File Sources:

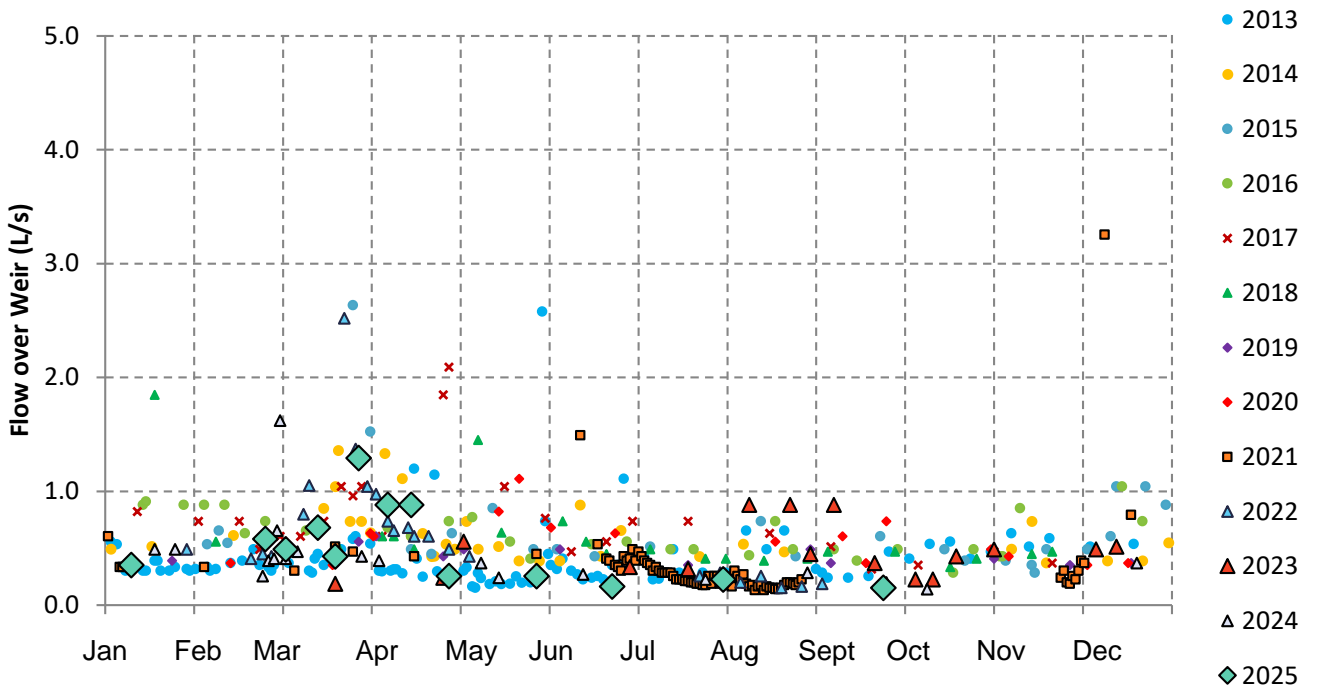
1. https://srk.sharepoint.com/sites/FS1273/Internal/020_Site_Wide_Data/Piezometer%20Data/HB_Dam_Instrumentation_Data_2025.xlsx?web=1
2. https://srk.sharepoint.com/sites/FS1273/Internal/020_Site_Wide_Data/Piezometer%20Data/HB_VWP_WaterLevels_rev00.xlsx?web=1

		2025 AFPR		
		SRK25-BH03 and SRK25-BH04 Piezometers		
Job No: CAPR003603 Filename: HB_2025AFPR_Instrumentation_CAPR003603.pptx	HB Mine Tailings Facility	Date: December 2025	Approved: PHM	Figure: C-8



--- Ground
 --- P1 Sensor Elevation
 --- P2 Sensor Elevation
 — P1 VWP
 — P2 VWP


SRK25-BH05 Vibrating Wire Piezometers

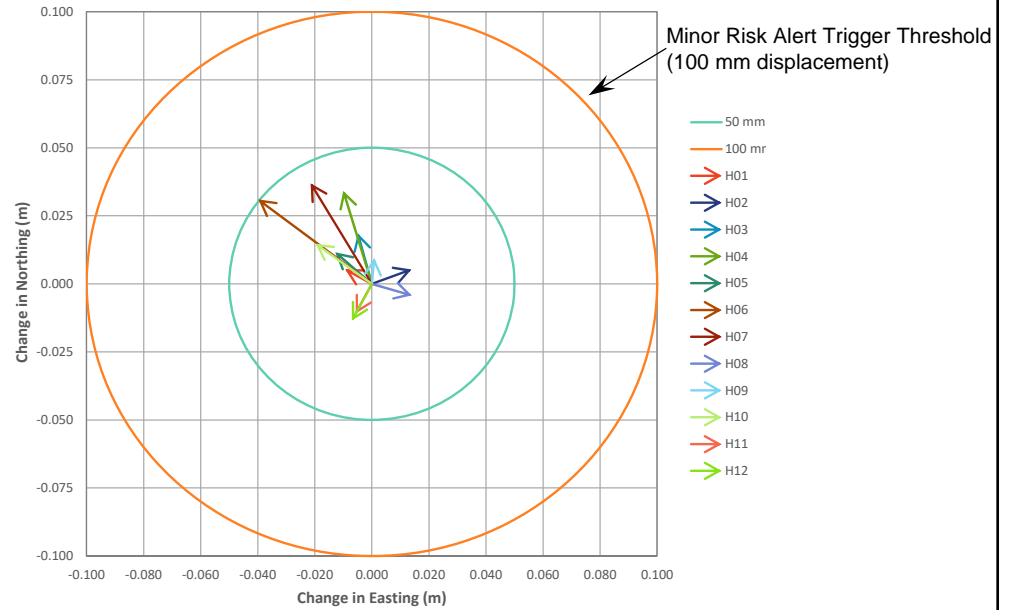
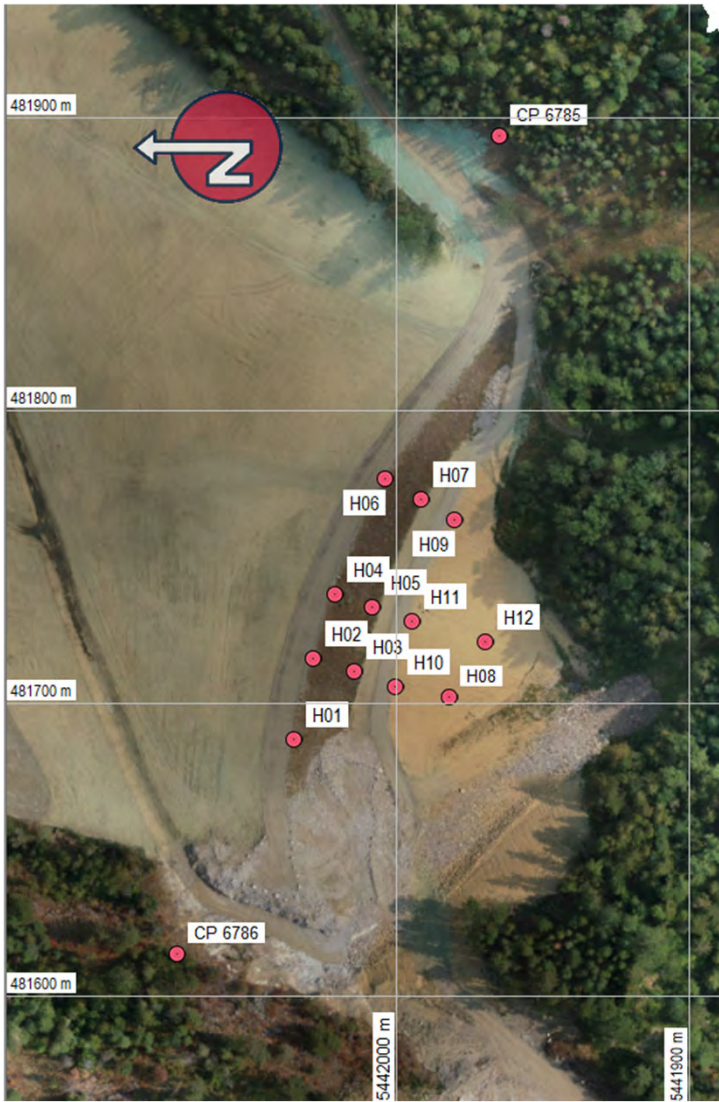


Seepage Weir Flow Rates

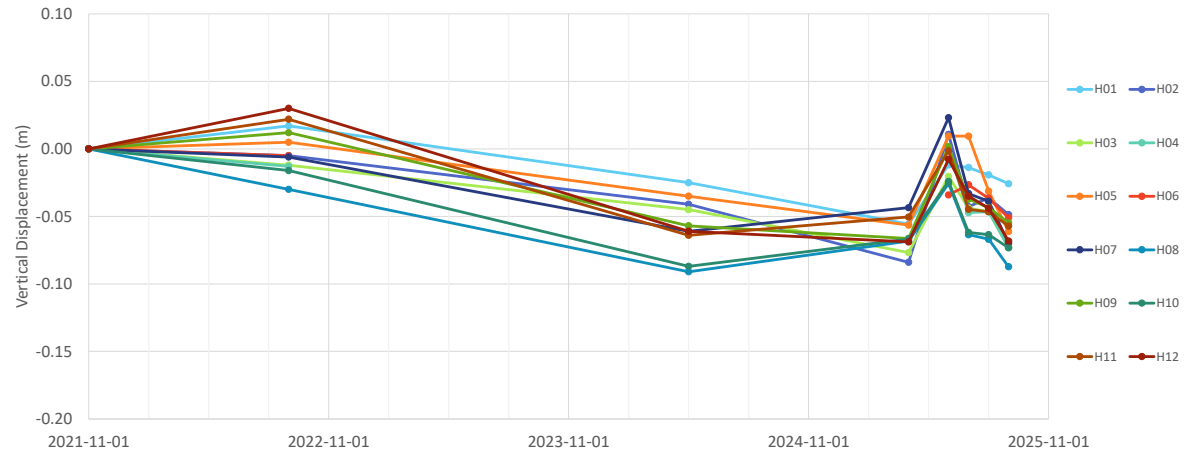
File Sources:

- https://srk.sharepoint.com/sites/FS1273/Internal/020_Site_Wide_Data/Piezometer%20Data/HB_Dam_Instrumentation_Data_2025.xlsx?web=1
- https://srk.sharepoint.com/sites/FS1273/Internal/020_Site_Wide_Data/Piezometer%20Data/HB_VWP_WaterLevels_rev00.xlsx?web=1

		2025 AFPR		
		SRK25-BH05 Piezometers and Seepage Weir		
Job No: CAPR003603 Filename: HB_2025AFPR_Instrumentation_CAPR003603.pptx	HB Mine Tailings Facility	Date: December 2025	Approved: PHM	Figure: C-9



A) Horizontal Displacement between November 2021 and September 2025 (only first and last readings shown)

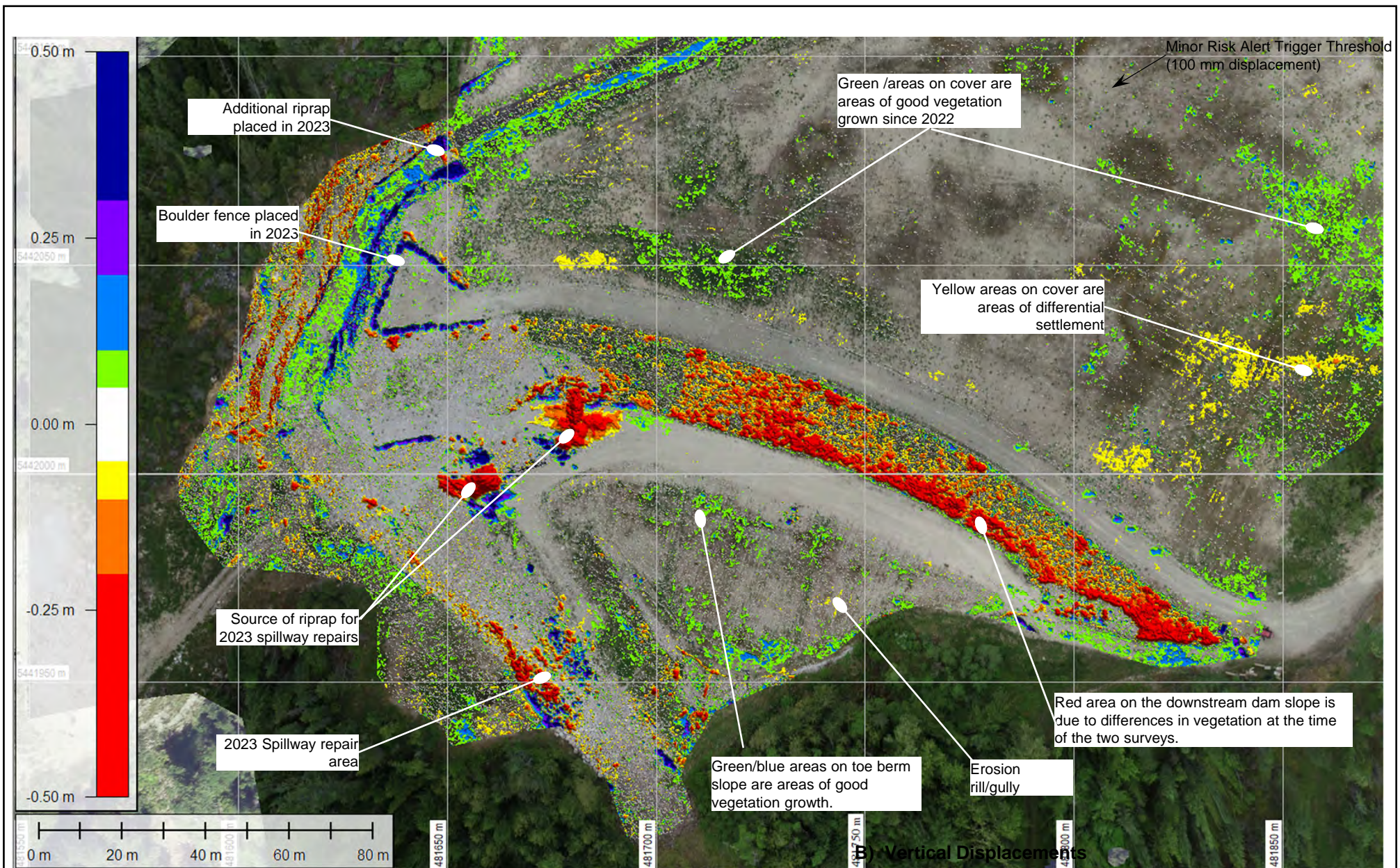


B) Vertical Displacements

Notes:



- Vertical displacement Trigger and Action Response Plan thresholds are not shown as the survey method used is not accurate enough for the current thresholds.

		2025 AFPR		
		HB Dam Survey Hub Readings		
Job No: CAPR003603 Filename: HB_AFPR_GWLandScape_CAPR003603.pptx	HB Mine Tailings Facility	Date: December 2025	Approved: PHM	Figure: C-11



Notes:

1. Isopach is a comparison of the April 16 2025 drone survey and the September 2022 construction asbuilt survey. The 2025 surface was adjusted downward by 0.405 m to match the 2022 survey using control points near the HB Dam.
2. Positive values indicate areas where the 2025 survey is higher than the 2022 survey.

		2025 AFPR		
		2022 – 2025 Site Survey Isopach		
Job No: CAPR003603 Filename: HB_AFPR_GWLandScape_CAPR003603.pptx	HB Mine Tailings Facility	Date: December 2025	Approved: PHM	Figure: C-12

Appendix D 2025 Tailings Cover Inspection

DRAFT

Memorandum

To	Alayne Hamilton	Client	Regional District of Central Kootenay
From	Peter Mikes	Project	CAPR003031
Cc		Date	December 2, 2025
Subject	HB Mine Tailings Facility – 2025 Tailings Cover Inspection		

File name: 2025-HBCoverInsepection_Memo_CAPR003603_rev00.docx

1 Introduction

The HB Mine Tailings Facility (HBTF) OMS Manual (SRK 2024a) requires annual inspections of the tailings cover and Tailings Surface Drainage Channels (TSDC) to be completed as part of the annual geotechnical inspection by the Engineer-of Record (EOR). The cover inspection is to include GIS tracking of the inspection observations and note the following:

- Areas of differential settlement and ponding.
- Cover erosion
- Tailings exposures
- TSDC deformation, blockages, and any exposure of the TSDC liners.

The inspection also includes a review of the annual tailings cover drone surveys that is used to track any development of ponding/differential settlement. The 2025 drone survey was completed by the RDCK on April 16, 2025.

This memo summarizes the cover inspection completed on April 28, 2025. This is the second formal cover inspection completed with the first completed on May 14, 2024. The 2024 results are documented in (SRK 2024b).

Section 2 of this document describes the methodology for the site inspection, GIS tracking of the site inspection observations, and the drone cover survey review. The inspection results are provided in the attachments.

- Attachment 1 provides a table with the inspection observation co-ordinates, description, recommendations, and recommendation status.
- Attachment 2 provides the 2025 inspection photographs and figures.

The recommendations will be carried forward as required in the Annual Facility Performance Report.

2 Methodology

2.1 Site Inspection

The site inspection was completed by Peter Mikes, P.Eng., accompanied by Alayne Hamilton of the RDCK on April 28, 2025. The weather during the site inspection was sunny with a temperature of approximately 15°C. The tailings cover surface was generally dry except for some areas of ponding, particularly along the perimeter of the TSF where seepage/groundwater discharges onto the TSF surface. No significant precipitation occurred on site in the previous four days prior to the inspection.

The inspection was completed by generally walking in strips across the tailings cover. Observations (photographs, GPS co-ordinates, notes) were recorded in the “Avenza” cell phone app that was loaded with a geo-rectified orthophoto to adjust the GPS location as required to match field observations. Previous years’ observation features were also inspected to assess any change in conditions.






Survey stakes were placed at all observed tailings exposures to allow for easy identification for remediation works (subsequently removed on July 29, 2025).

2.2 GIS Tracking

Field data was compiled in the GlobalMapper file “[HB-Cover Inspections.gmw](#)” Observation features were classified in the types listed in Table 1. Each feature was assigned an ID that includes the year or identification, feature type, and a unique number as noted in the table.

An KMZ export of the GlobalMapper features has been provided in the transmittal of this document.

Table 1: Cover Inspection Feature Types

Type	Symbol	Description	ID format (YYYY-Type-##)
Tailings Exposures		Tailings exposures.	YYYY-TB-XX
Ponding/ Settlement		Areas of ponding and/or suspected differential settlement (see note 1).	YYYY-PDS-XX
Erosion Features		Signs of cover erosion and sediment transport that should be monitored or repaired.	YYYY-ERSN-XX
TSDC		Observations related to TSDC performance including channel deformation, blockages, liner deformation or exposure, or excessive vegetation growth.	YYYY-TSDC-XX
Other		Any other observations that should continue to be monitored as part of future inspections.	YYYY-Other-XX

Notes:

¹ Areas of ponding/settlement were not delineated in the field. As per the OMS Manual, drone surveys of the cover area are completed annually for this purpose.

2.3 Drone Cover Survey Review

Annual drone surveys are completed on the tailings cover to assist in monitoring of differential settlement, ponding and erosion. The 2025 survey was completed on April 15, 2025. A review of the 2025 surface found that it was generally 0.4 m higher than the 2022 construction asbuilt survey. The 2025 surface was adjusted downward and an isopach was created to identify areas of potential settlement. Where needed, the isopach was also compared to the 2024 surface to determine if settlement was recent or ongoing.

3 Results and Recommendations

3.1 Site Inspection

The cover survey identified three additional tailings exposures (2025-TB-01, 2025-TB-02, and 2025-TB-03), one additional area of ponding (2025-PDS-01), and two additional areas of Tailings Surface Drainage Channel deformation (2025-TSDC-01 and 2025-TSDC-02).

Tailings Exposures

All three tailings exposures are believed to be remnants from the 2021-2022 cover construction due to the presence of mossy vegetation on the tailings (Figure 2 – Attachment 2). The mossy vegetation was also present on the exposures observed in 2023 and 2024. No changes in condition were observed to the previously identified features.

On July 29, 2025, all identified tailings exposures were excavated using hand-shovels and 5-gallon buckets and placed in a low-lying area adjacent to the Ross Landform. The area was then covered with the adjacent stockpile from the Central Landfill operations. The disposal location is identified as “2025-Other-01) in Figure 1 – Attachment 2.

Ponding and Differential Settlement

A review of the additional area of ponding (2025-PDS-01) against the 2024 and 2025 cover surveys indicated that no differential settlement has occurred.

Tailings Surface Drainage Channel Features

Three additional features were noted in the 2025 inspection (Figures 5 to 7 in Attachment 2. These features should continue to be monitored with no action required at this time.

- **2025-TSDC-01:** Area of liner uplift on the north side of the South Spur Channel that is approximately 23 m long. This feature is visible on the 2024 drone survey.
- **2025-TSDC-02:** Two areas of sand deposition observed in close proximity. One is on the north side-slope that is believed to be the result of animal burrowing in the tailings cover. The second is on the channel bottom that appears to be sediment deposition from upstream areas.

- **2025-TSDC-03:** Area of liner uplift on the channel bottom. The feature is 3 m long and 10 cm high. This feature is visible on the 2024 drone survey.

No change in conditions was observed to the previously identified features except at 2023-TSDC-01 where additional fine-grained sediment appears to have accumulated. This feature was an area of liner uplift that was repaired in 2023 where the liner was punctured and a layer of geotextile placed over top that was covered with till (SRK 2023). The material is suspected to be till; however, geochemical testing of the material is recommended to confirm.

3.2 Drone Cover Survey Review

Figure 4 in Attachment 2 presents an isopach 2025 drone cover surface (April 16, 2025) minus the 2022 construction asbuilt survey (September 13, 2022). The survey data indicates that minimal differential settlement of the tailings cover has occurred generally less than 10 cm.

Up to approximately 25 cm of differential settlement has occurred in the TSDC at the confluence of the Main TSDC and the Spur Channels over a 15 m length. The settlement results in ponded water in the channel but does not impact the design intent.

Additional details of the survey cover review are provided in Figure 4 in Attachment 2. No actions are required to address settlement.

4 Closure

We trust that this document meets your present requirements. Should you have any questions or comments, please contact the undersigned at your convenience.

Regards,
SRK Consulting (Canada) Inc.

DRAFT

Peter Mikes, P.Eng.
Principal Consultant

Attachments:

Attachment 1	Inspection Observation Table
Attachment 2	Inspection Photographs
Attachment 3	Google Earth “KMZ” Export File

EGBC Permit to Practice: 1003655

SRK Consulting (Canada) Inc. has prepared this document for Regional District of Central Kootenay, our client. Any use or decisions by which a third party makes of this document are the responsibility of such third parties. In no circumstance does SRK accept any consequential liability arising from commercial decisions or actions resulting from the use of this report by a third party.

The opinions expressed in this document have been based on the information available to SRK at the time of preparation. SRK has exercised all due care in reviewing information supplied by others for use on this project. While SRK has compared key supplied data with expected values, the accuracy of the results and conclusions from the review are entirely reliant on the accuracy and completeness of the supplied data. SRK does not accept responsibility for any errors or omissions in the supplied information, except to the extent that SRK was hired to verify the data.

References

- SRK Consulting (Canada) Inc., 2023. HB Mine Tailings Facility – 2023 Repair Construction Observations. November 24.
- SRK Consulting (Canada) Inc., 2024a. Operation, Maintenance and Surveillance Manual, HB Mine Tailings Facility. Version 6. June 27.
- SRK Consulting (Canada) Inc., 2024b. HB Mine Tailings Facility – 2024 Tailings Cover Inspection. September 10.

Attachment 1

Inspection Observation Table

ID	Easting (m)	Northing (m)	Description / Comments	Recommendations	2025 Status	
					Change in condition?	Recommendation Status
Tailings Exposures						
2024-TB-01	481,715	5,442,141	Small tailings exposure that is a remnant from construction. Can be removed by hand shovel.	Remove by hand shovel. Bury beneath tailings cover at the Ross Landform.	Y	Complete - Tailings exposures removed on July 27, 2025. Exposures were hand-dug into 5-gallon buckets and disposed of at north end of tailings impoundment at 2025-Other-01.
2024-TB-02	481,786	5,442,164	Small tailings exposure that is a remnant from construction. Can be removed by hand shovel.		Y	
2024-TB-03	481,800	5,442,178	Medium size exposure (multiple 5-gallon buckets) that is a remnant from construction; removable by hand shovel.		Y	
2024-TB-04	481,663	5,442,105	Small tailings exposure (construction remnant); can be removed by hand shovel.		Y	
2024-TB-05	481,699	5,442,126	Photo blurry and not included in report. Small tailings exposure; can be removed by hand shovel.		Y	
2024-TB-06	481,713	5,442,171	Small tailings exposure (construction remnant) removable by hand shovel.		Y	
2024-TB-07	481,985	5,442,241	Small tailings exposure; remnant from construction; can be removed with hand shovels.		Y	
2024-TB-08	481,807	5,442,247	Medium sized tailings exposure (multiple 5-gallon buckets); construction remnant; removable by hand shovel.		Y	
2024-TB-09	481,824	5,442,200	Medium sized tailings exposure - not fully delineated; likely 2-4 5 gallon buckets; removable by hand shovel.		Y	
2024-TB-10	481,829	5,442,188	Small tailings exposure (1 5-gallon bucket); construction remnant; removable by hand shovels		Y	
2024-TB-11	481,819	5,442,190	Small tailings exposure (1 5-gallon bucket); construction remnant; removable by hand shovels		Y	
2024-TB-12	481,822	5,442,193	Largest exposure - not fully delineated; construction remnant; removeable by hand shovels/5-gallon buckets/wheelbarrow.		Y	
2025-TB-01	481,758	5,442,199	Small tailings exposure that is a remnant from construction. Can be removed by hand shovel.		Y	
2025-TB-02	481,808	5,442,399	Small tailings exposure that is a remnant from construction (based on the amount of vegetation (mossy) growth over the tailings. Can be removed with hand shovel.	Y		
2025-TB-03	481,792	5,442,428	Small tailings exposure (est. 2-3 gallon buckets); construction remnant (based on amount of vegetation (mossy) growth over the exposure. Can be removed with hand shovel.	Y		
Ponding / Settlement						
2024-PDS-01	481,796	5,442,177	Small area of ponding, horsetail vegetation, water up to 10 cm deep.	No action needed.	N	n/a
2024-PDS-02	481,833	5,442,182	Small pond area up to 10 cm deep with no vegetation growth.	No action needed.	N	n/a
2024-PDS-03	481,817	5,442,059	Small area of moist ground/minor ponding; potential differential settlement.	No action needed.	N	n/a
2024-PDS-04	481,763	5,442,304	Small pond area at the upstream end of where erosion has been observed.	No action needed.	N	n/a
2024-PDS-05	481,941	5,442,172	Ponding in Excavator tracks from 2022 construction.	No action needed.	N	n/a
2024-PDS-06	481,991	5,442,166	Area of ponding from seepage inflow. Significant iron precipitates.	No action needed.	N	n/a
2024-PDS-07	481,990	5,442,225	Ponding from seepage inflows	No action needed.	N	n/a
2024-PDS-08	482,000	5,442,367	Wetland area from seepage inflows	No action needed.	N	n/a
2024-PDS-09	481,648	5,442,475	Ponding area along edge of tailings area due to seepage inflows. Stressed/dying trees present.	No action needed.	N	n/a
2024-PDS-10	481,740	5,442,739	Ponding adjacent Ross Landform Central Landfill debris piles	Consider infilling/regrading the area to prevent ponding.	N	Not started.
2024-PDS-11	481,648	5,442,800	Spongy; pooled water	No action needed.	N	n/a
2024-PDS-12	481,699	5,442,828	Seepage run-on; spongy ground	No action needed.	N	n/a
2025-PDS-01	481,879	5,442,091	Ponding near the base of the Upstream Beach.	No action needed - vegetation growing.	N	n/a
Erosion Features						
2024-ERSN-01	481,748	5,442,165	Erosion channel from inflows on the west side of the TSF. Flow goes parallel to the Main Channel and enters the Main Channel near the spillway	No action; not expected to worsen. Continue to monitor.	N	n/a
Tailings Surface Drainage Channel						
2023-TSDC-01	481,961	5,442,183	<ul style="list-style-type: none"> South Spur Channel repair area. Area was repaired to remove air/water bubble in 2023. 2025 Update: non-cohesive fine sediment is present above the repair area that is suspected to be till. 	<ul style="list-style-type: none"> Continue to monitor for potential tailings migration through the repair. 2025: Recommend sampling the sediment to confirm the origin of the fine sediment. 	Y	• Sampling recommendation not started.
2023-TSDC-02	482,016	5,442,295	2023 North Spur Hippo Repair Area. Area was repaired in 2023 to remove an air/water bubble beneath the liner. Geotextile installed to allow water to drain into the channel	Continue to monitor for potential tailings migration.	N	n/a
2024-TSDC-01	481,997	5,442,289	Area of TSDC liner uplift on the side of the channel.	Continue to monitor; the uplift has no impact on channel performance	N	n/a
2025-TSDC-01	481,908	5,442,174	Area of TSDC liner uplift on the north side of the South Spur Channel. Feature is about 23 m long and is noticeable in the 2024 cover survey (i.e., not new).	Continue to monitor. No action needed.	N	n/a
2025-TSDC-02	481,926	5,442,255	Two areas of sand deposition. One is on the north side-slope that is likely from animal burrowing north of the channel. The second is on the channel bottom that is believed to be sediment deposition from upstream.	Continue to monitor. No action needed.	n/a	n/a
2025-TSDC-03	481,954	5,442,270	Area of liner uplift on channel bottom. Feature is about 3 m long and 10 cm high.	Continue to monitor. No action needed.	n/a	n/a

HBTF Cover Inspection Observations

Other						
2024-Other-01	481,987	5,442,132	Ephemeral stream entering TSF area. iron staining. Appears to be a groundwater component to as there is significant iron precipitates. Water makes its way to the South spur channel. No action needed.	No action needed.	N	n/a
2024-Other-02	481,654	5,442,090	Fallen dead tree. Tree has the potential to block TSDC channel in the event of an extreme flood.	Cut-up remove tree to prevent spillway debris.	N	Not Started.
2024-Other-03	482,000	5,442,291	Filamentous Algae in the South Spur Channel	Review water quality from the groundwater seepage as part of the water prediction model update (additional gw samples may be needed).	N	Complete: Comparison of water quality upstream and downstream samples indicates no worsening WQ. Results to be incorporated into SW prediction model.
2025-Other-01	481,728	5,442,753	Designated tailings exposure disposal location for 2025 maintenance.	n/a	n/a	n/a



Attachment 2 Inspection Photographs



Source: Global Mapper File: HB-Cover Inspections.gmw

Notes:

1. Drone orthophoto of the tailings area taken on April 16, 2025
2. Tailings Exposures observed on site inspections on May 14, 2024, and April 28, 2025.
3. All tailings exposures were remediated on July 29, 2025. Tailings were buried adjacent to the Ross Landform near the north end of the tailings area on July 29, 2025.

 Job No: CAPR003603 Filename: HBTf_2025_CoverInspection_PhotoLog.pptx	 HB Mine Tailings Facility	2025 Cover Inspection		
		Tailings Exposure Locations		
		Date: Dec 2025	Approved: P. Mikes	Figure: 1



2025-TB-01





2025TB-02



2025-TB-03

Notes:

1. Tailings Exposures observed on a site inspection on April 28, 2025.

		2025 Cover Inspection		
		2025 Tailings Exposure Photographs		
Job No: CAPR003603 Filename: HBTf_2025_CoverInspection_PhotoLog.pptx	HB Mine Tailings Facility	Date: Dec 2025	Approved: P. Mikes	Figure: 2



Source: Global Mapper File: HB-Cover Inspections.gmw

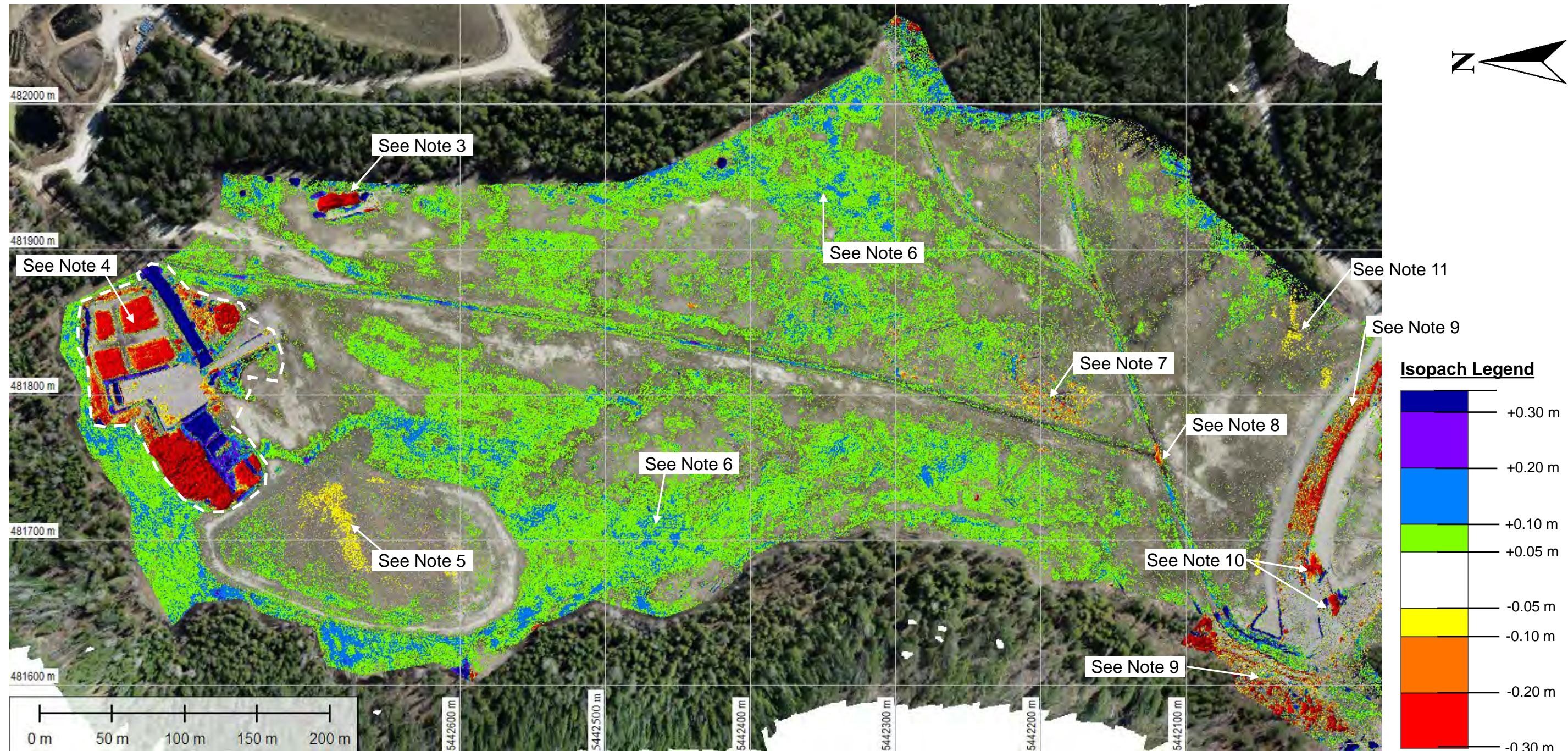
Notes:

1. Site inspection on April 28, 2025





2025-PDS-01

		2025 Cover Inspection		
		2025 Erosion and Ponding Observations		
Job No: CAPR003603 Filename: HBTF_2025_CoverInspection_PhotoLog.pptx	HB Mine Tailings Facility	Date: Dec 2025	Approved: P. Mikes	Figure: 3



Notes:

1. Isopach is a comparison of the April 16 2025 drone cover survey to the 2022 construction asbuilt survey.
2. The 2025 was adjusted downward by 0.405 m to match the 2022 survey using control points near the HB Dam. The accuracy of the isopach may decrease to the north.
3. Positive values indicate areas where the 2025 surface is higher than the 2022 surface.
4. Sand and Gravel stockpile from the 2022 construction has been depleted with the material used for landfill operations/maintenance.
5. Apparent differential settlement on the Ross Landform (yellow area). The 2025 orthophoto indicates this is an area of poor vegetation growth and the apparent settlement may be due to survey inaccuracies (see Note 2).
6. Areas in green and blue north of the South Spur channel are typically in areas of good vegetation growth and/or where there is seasonal ponding in the spring that was captured by the April 2025 survey.
7. This is an area where the ground undulates due to soft ground during construction. The apparent settlement maybe due to small horizontal discrepancies in the 2022 and 2025 survey. A comparison of the 2025 and 2024 shows no change in this area.
8. Apparent differential settlement at the confluence of the Main channel and Spur Channels. Water in the channel pools in this area. There is no apparent change between 2024 and 2025 surfaces in this area.
9. Red zone on the downstream slope of the HB Dam and west of the spillway are due to differences in the vegetation at the time of the two surveys. The 2022 survey was completed on September 13, while the 2025 survey was completed on April 16. Based on the survey hub data no settlement is occurring in this area.
10. Two red areas on the 2012 HB Dam Repair Zone is due to material excavated from these areas in 2023 for spillway maintenance. Excess riprap material from the 2021-22 construction was stockpiled in this area. The removal of this material is not a dam safety concern.
11. Area of differential settlement. The amount of settlement observed is within the predicted settlement range and does not impact drainage.

		2025 Cover Inspection		
		Cover Differential Settlement Review		
Job No: CAPR003603 Filename: HBTf_2025_CoverInspection_PhotoLog.pptx	HB Mine Tailings Facility	Date: Dec 2025	Approved: P. Mikes	Figure: 4



Source: Global Mapper File: HB-Cover Inspections.gmw

Notes:

1. Drone orthophoto of the tailings area taken on April 16, 2025
2. Location of 2025-Other-01 can be found on Figure 1.

		2025 Cover Inspection		
		2025 Tailings Surface Drainage Channel and Other Observations		
Job No: CAPR003603 Filename: HBTF_2025_CoverInspection_PhotoLog.pptx	HB Mine Tailings Facility	Date: Dec 2025	Approved: P. Mikes	Figure: 5



2025-TSDC-01 – Photo 1



2025-TSDC-01 – Photo 2



2025-TSDC-02 – Photo 1



2025-TSDC-02 – Photo 2

Notes:

1. Site inspection on April 28, 2025

		2025 Cover Inspection		
		2025 Tailings Surface Drainage Channel and Other Observations		
Job No: CAPR003603 Filename: HBTf_2025_CoverInspection_PhotoLog.pptx	HB Mine Tailings Facility	Date: Dec 2025	Approved: P. Mikes	Figure: 6



2025-TSDC-03 – Photo 1



2025-TSDC-03 – Photo 2

Notes:

1. Site inspection on April 28, 2025

		2025 Cover Inspection		
		2025 Tailings Surface Drainage Channel and Other Observations		
Job No: CAPR003603 Filename: HBTf_2025_CoverInspection_Pholog.pptx	HB Mine Tailings Facility	Date: Dec 2025	Approved: P. Mikes	Figure: 7

Attachment 3 Google Earth “KMZ” Export File

Provided separately “2025-05-28_HBTF Cover Inspection.kmz”

Appendix E AFPR Assurance Statement



Annual Facility Performance Report Assurance Statement

This assurance statement is to be read and completed by the Engineer of Record in conjunction with the Health Safety and Reclamation Code for Mines in British Columbia (HSRC), and the HSRC Part 10 Guidance document. This statement is to be provided to the Chief inspector with the Annual Facility Performance Report (AFPR) in accordance with HSRC S 10.6.4(4). An assurance statement is required for:

- each Tailings Storage Facility (TSF), including supporting structures such as spillways, seepage collection ponds, diversion channels, etc.
- Dam(s) that is not part of a TSF.

Date:

Mine Manager Name:

Mine Name:

Mine Address:

With reference to the Mines Act Permit and the HSRC.

Name of the facility or description:

For a (check one):

TSF, including supporting structures as listed below:

dam (that is not part of a TSF), and supporting structures as listed below:

UTM (location):

Located at (description):



Annual Facility Performance Report Assurance Statement

As the Engineer of Record under HSRC 10.4.1 of the above facility, I have signed, sealed, and dated the attached annual facility performance report in accordance with the Code 10.6.4(4). The AFPR report must be read in conjunction with this statement. In preparing the attached AFPR I have (check all that apply):

- Reviewed Site Characterization per HSRC 10.5.2(2).
- Reviewed Design report(s) per HSRC 10.5.3(2).
- Reviewed the Design Summary document per HSRC 10.5.4(2)(a)
- Reviewed the Failure and Breach or Runout Assessment per HSRC 10.5.5(2)
- Reviewed the latest Dam Safety Review report recommendations per HSRC 10.6.2(3)(a)
- Reviewed the Operations, Maintenance and Surveillance Manual per HSRC 10.6.6(2)
- Reviewed the quantifiable performance objectives and trigger action response plans per HSRC 10.6.7(6)(b)
- Reviewed the Risk Assessment per HSRC 10.6.8(2)
- Reviewed the Climate Change assessment per HSRC 10.6.11(2)

Firm:

Firm Permit to Practice Number:

Address:

Telephone:

EOR Name:

