



Regional District of Central Kootenay  
JOINT RESOURCE RECOVERY COMMITTEE  
Open Meeting Agenda

**Date:** Wednesday, December 13, 2023  
**Time:** 1:00 pm  
**Location:** Hybrid Model - In-person and Remote

Directors will have the opportunity to participate in the meeting electronically. Proceedings are open to the public.

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Pages

**1. WEBEX REMOTE MEETING INFO**

To promote openness, transparency and provide accessibility to the public we provide the ability to attend all RDCK meetings in-person or remote.

**Meeting Time:**

1:00 pm PST / 2:00 pm MST

**Join by Video:**

<https://nelsonho.webex.com/nelsonho/j.php?MTID=m3697f748f41aa25c998a899f5c9bcb8b>

**Join by Phone:**

+1-604-449-3026 Canada Toll (Vancouver)

**Meeting Number (access code):** 2774 361 9070

**Meeting Password:** stPaAVXg332

**In-person Location:** RDCK Board Room, 202 Lakeside Drive, Nelson, BC

**2. CALL TO ORDER & WELCOME**

Director Popoff to call the meeting to order at 1:00 pm PST / 2:00 pm MST.

**2.1 Traditional Lands Acknowledgement Statement**

We acknowledge and respect the indigenous peoples within whose traditional lands we are meeting today.

## 2.2 Adoption of the Agenda

### **RECOMMENDATION:**

The agenda for the December 13, 2023 Joint Resource Recovery meeting be adopted as circulated.

## 2.3 Receipt of Minutes

4 - 9

The November 15, 2023 Joint Resource Recovery minutes, have been received.

## 3. RESOURCE RECOVERY FACILITIES REGULATORY BYLAW AMENDMENT

10 - 30

The November 15, 2023 Committee Report from Todd Johnson, Environmental Coordinator, presenting the proposed Resource Recovery Amendment Bylaw No. 2937, 2023 to amend Resource Recovery Facilities Regulatory Bylaw No. 2905, 2023, has been received.

### **RECOMMENDATION:**

**[All Areas]**

That the Resource Recovery Facilities Regulatory Bylaw No. 2937, 2023, be read a first, second and third time by content to amend Regional District of Central Kootenay Resource Recovery Facilities Regulatory Bylaw No. 2905, 2023.

### **RECOMMENDATION:**

**[All Areas]**

That the Regional District of Central Kootenay Resource Recovery Facilities Regulatory Amendment Bylaw No. 2937, 2023 be ADOPTED and the Chair and Corporate Officer be authorized to sign the same.

## 4. HB TAILINGS FACILITY: 2024 SCOPE OF WORK

31 - 60

The November 27, 2023 Committee Report from Alayne Hamilton, Environmental Projects Lead, outlining the HB Tailings Storage Facility scopes of work for 2024 has been received.

### **RECOMMENDATION:**

**[Central Sub-region]**

That the Board accept the proposed 2024 Scope of Work submitted by SRK Consulting (Canada) Inc. for Engineer-of-Record tasks and engineering support at the HB Mine Tailings Facility in the amount of up to \$228,117 not including GST;

AND FURTHER that the Board Chair and Corporate Officer be authorized to sign the necessary documents;

AND FURTHER that the Board direct staff to include the funds in the 2024-2028 Financial Plan for Service S187.

## 5. DIRECTOR MOTIONS: RECYCLING SALVAGED MATERIALS

**RECOMMENDATION:**

**[All Areas]**

The Board direct staff to re-evaluate the no scavenging/salvage policy, including the safety and potential liability concerns, and how to mitigate them to identify areas of opportunity for residents to access waste goods that they desire to repurpose.

**RECOMMENDATION:**

**[Central Sub-region]**

The Board direct staff to investigate options to create an Eco-Depot for Area D and Kaslo.

**6. PUBLIC TIME**

The Chair will call for questions from the public and members of the media at 2:30 pm PST / 3:30 pm MST.

**7. ADJOURNMENT**

**RECOMMENDATION:**

The Joint Resource Recovery Committee meeting adjourn at \_\_\_\_\_ a.m./p.m.



## Regional District of Central Kootenay

### JOINT RESOURCE RECOVERY COMMITTEE MEETING

### Open Meeting Minutes

A Joint Resource Recovery Committee meeting was held on Wednesday, November 15, 2023 at 1:00 pm PST / 2:00 pm MST through a hybrid meeting model.

<b>ELECTED OFFICIALS</b>	<b>Director G. Jackman</b>	<b>Electoral Area A (Chair)</b>	<b>In-person</b>
<b>PRESENT</b>	Director R. Tierney	Electoral Area B	In-person
	Director K. Vandenberghe	Electoral Area C	
	Director A. Watson	Electoral Area D	In-person
	Alt. Director J. Smienk	Electoral Area E	
	Director T. Newell	Electoral Area F	
	Director H. Cunningham	Electoral Area G	
	Director W. Popoff	Electoral Area H	In-person
	Director A. Davidoff	Electoral Area I	
	Director H. Hanegraaf	Electoral Area J	In-person
	Alt. Director P. Peterson	Electoral Area K	
	Alt. Director B. Bogle	City of Castlegar	
	Councillor A. Mondia	Town of Creston	In-person
	Director S. Hewat	Village of Kaslo	In-person
	Director T. Zeleznik	Village of Nakusp	
	Director K. Page	City of Nelson	In-person
	Director L. Casely	Village of New Denver	
	Director D. Lockwood	Village of Salmo	In-person
	Director C. Ferguson	Village of Silverton	
	Alt. Director E. Buller	Village of Slocan	
<b>STAFF PRESENT</b>	S. Horn	Chief Administrative Officer	
	Y. Maloff	GM – Finance, IT, ED	
	U. Wolf	GM – Environmental Services	
	A. Wilson	Resource Recovery Manager	
	N. Schilman	Environmental Technologist	
	M. Morrison	Organics Coordinator	
	H. Bench	Projects Advisor	
	S. Eckman	Meeting Coordinator	

#### 1. WEBEX REMOTE MEETING INFO

##### Join by Video:

<https://nelsonho.webex.com/nelsonho/j.php?MTID=m376e81da71c806e5303df61fb4eca4c1>

##### Join by Phone:

1-844-426-4405 Canada Toll Free

+1-604-449-3026 Canada Toll (Vancouver)

**Meeting Number (access code):** 2771 762 5017

**Meeting Password:** 8agGc8s3r3V

**In-Person Meeting Location for Hybrid Meeting Model**

The following location was determined to hold the in-person meetings for the Joint Resource Recovery Committee:

**Location Name:** RDCK Board Room

**Location Address:** 202 Lakeside Drive, Nelson, BC

The facility listed above was able to accommodate the remote requirements for the meeting.

**2. CALL TO ORDER & WELCOME**

Director Jackman assumed the chair and called the meeting to order at 1:01 pm PST / 2:01 pm MST.

**2.1 Traditional Lands Acknowledgement Statement**

We acknowledge and respect the indigenous peoples within whose traditional lands we are meeting today.

**2.2 Adoption of the Agenda**

**Moved** and seconded,  
And resolved:

The Agenda for the November 15, 2023 Joint Resource Recovery Committee meeting be adopted, as circulated.

**Carried**

**2.3 Receipt of Minutes**

The October 18, 2023 Joint Resource Recovery Committee Minutes have been received.

**ORDER OF AGENDA CHANGED**      The Order of Business was changed to discuss the West Sub-region Transfer Stations item at this time.

**3. WEST SUB-REGION TRANSFER STATIONS**

The November 9, 2023 Committee Report from Nathan Schilman, Environmental Technologist, providing proposed options for transfer station upgrades at Nakusp, Slocan, and Rosebery Facilities and obtain Joint Resource Recovery Committee direction prior to advancing into detailed design, has been received.

**DIRECTOR PRESENT**      Director Newell joined the Meeting at 1:27 pm PST / 2:27 pm MST.

**Moved** and seconded,  
And resolved that it be recommended to the Board:

That the Board direct staff to advance to detailed design and tendering with Sperling Hansen Associates for the Rosebery Transfer Station Upgrade Option 1 (add compactor and Y&G bin), Slocan Transfer Station Upgrade Option 1 (new bin wall), and Nakusp Transfer Station Upgrade Option 2 (SE of weigh scale).

**Carried**

**4. SERVICE ESTABLISHMENT BYLAW: RURAL CURBSIDE COLLECTION SERVICE**

The November 2, 2023 Committee Report from Matt Morrison, Organics Coordinator, presenting the Service Establishment Bylaws for curbside collection services in Electoral Areas F, H, and J to the Committee for First, Second, and Third Reading, has been received.

**Moved** and seconded,  
And resolved that it be recommended to the Board:

That the Defined Areas F and H Curbside Collection Service Establishment Bylaw No. 2933, 2023 be read a FIRST, SECOND, AND THIRD time by content.

**Carried**

**Moved** and seconded,  
And resolved that it be recommended to the Board:

That the Defined Area J Curbside Collection Service Establishment Bylaw No. 2934, 2023 be read a FIRST, SECOND, AND THIRD time by content.

**Carried**

**RECESS** Meeting recessed from 2:16 pm to 2:25 pm for a break.

**5. CENTRAL SUB-REGION RECYCLING SERVICES**

The October 10, 2023 Committee Report from Akane Norimatsu and Travis Barrington, Resource Recovery Technicians, presenting an analysis of the Central Resource Recovery recycling services and use of depots by communities that provide curbside recycling collection services (City of Nelson and Village of Kaslo), has been received.

**Moved** and seconded,  
**MOTION ONLY:**

The Board formally respond to the November 13, 2019 letter from the City of Nelson regarding Refuse Disposal Service S187 – Curbside Recycling Collection and include the October 10, 2023 Committee Report from Akane Norimatsu and Travis Barrington, Resource Recovery Technicians;

AND FURTHER that the letter and report be sent to the Village of Kaslo.

**Moved** and seconded,

And Resolved:

**AMENDMENT TO THE MOTION**

That the foregoing motion being:

The Board formally respond to the November 13, 2019 letter from the City of Nelson regarding Refuse Disposal Service S187 – Curbside Recycling Collection and include the October 10, 2023 Committee Report from Akane Norimatsu and Travis Barrington, Resource Recovery Technicians;

AND FURTHER that the letter and report be sent to the Village of Kaslo.

Be amended to include the words ‘AND FURTHER that any additional staff time for further action on this item be approved by the Board’, thus reading:

*The Board formally respond to the November 13, 2019 letter from the City of Nelson regarding Refuse Disposal Service S187 – Curbside Recycling Collection and include the October 10, 2023 Committee Report from Akane Norimatsu and Travis Barrington, Resource Recovery Technicians;*

*AND FURTHER that the letter and report be sent to the Village of Kaslo.*

*AND FURTHER that any additional staff time for further action on this item be approved by the Board.*

**Carried**

**Moved** and seconded,

And resolved that it be **recommended** to the Board:

**MAIN MOTION**

The Board formally respond to the November 13, 2019 letter from the City of Nelson regarding Refuse Disposal Service S187 – Curbside Recycling Collection and include the October 10, 2023 Committee Report from Akane Norimatsu and Travis Barrington, Resource Recovery Technicians;

AND FURTHER that the letter and report be sent to the Village of Kaslo.

AND FURTHER that any additional staff time for further action on this item be approved by the Board.

**Carried**

**DIRECTOR**  
**ABSENT**

Director Casley left the meeting at 3:17 pm PST / 4:17 pm MST.

**6. STAFF VERBAL UPDATES/REPORTS**

Amy Wilson, Resource Recovery Manager provided a verbal report on the following:

- a. Waste Composition Study: In draft; expect to bring final to JRRC in December or January.
- b. Creston Eco-Depot Request for Proposal: Will be issued as soon as possible with the intent to bring authorization to award to the January/February JRRC.
- c. Creston Landfill Hydrogeological Study: Draft is expected any day; subject to consultant turn around time with edits final report will be brought to the JRRC in December/January or the January ERRC budget meeting.
- d. Landfill Gas Assessments: Under review and will be brought to JRRC in December.
- e. Systems Efficiency Review/Tipping Fee Assessment: May be done in draft by end of the year and possibly ready for discussion at January/February JRRC meetings; however, end of March is the contract timeline for the final report.
- f. Ootischenia Landfill Archaeological Study: The archeological study is underway and to be completed before staff can proceed on the crown lands application and procurement for the landfill Design, Operations & Closure Plan.
- g. FOI Requests and Permit Abandonment Applications: Have been submitted to start off the legacy landfill projects.
- h. Request for Proposals for Hydrogeological Studies: Being developed for the hydrogeological studies for the other landfills, which will be brought to the JRRC for authorization to award early in 2024.

**7. PUBLIC TIME**

The Chair called for questions from the public and members of the media at 3:26 pm PST / 4:26 pm MST.

**8. ADJOURNMENT**

**Moved** and seconded,  
And resolved:

The Joint Resource Recovery Committee meeting adjourn at 3:26 pm PST / 4:26 pm MST.

**Carried**

CERTIFIED CORRECT



Director G. Jackman  
Chair, November 15, 2023 Joint Resource Recovery Committee meeting



**BOARD RESOLUTIONS AS ADOPTED AT THE NOVEMBER 15, 2023 JOINT RESOURCE RECOVERY COMMITTEE MEETING**

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**RECOMMENDATION #1**

That the Board direct staff to advance to detailed design and tendering with Sperling Hansen Associates for the Rosebery Transfer Station Upgrade Option 1 (add compactor and Y&G bin), Slocan Transfer Station Upgrade Option 1 (new bin wall), and Nakusp Transfer Station Upgrade Option 2 (SE of weigh scale).

**RECOMMENDATION #2**

That the Defined Areas F and H Curbside Collection Service Establishment Bylaw No. 2933, 2023 be read a FIRST, SECOND, AND THIRD time by content.

**RECOMMENDATION #3**

That the Defined Area J Curbside Collection Service Establishment Bylaw No. 2934, 2023 be read a FIRST, SECOND, AND THIRD time by content.

**RECOMMENDATION #4**

The Board formally respond to the November 13, 2019 letter from the City of Nelson regarding Refuse Disposal Service S187 – Curbside Recycling Collection and include the October 10, 2023 Committee Report from Akane Norimatsu and Travis Barrington, Resource Recovery Technicians;

AND FURTHER that the letter and report be sent to the Village of Kaslo.

AND FURTHER that any additional staff time for further action on this item be approved by the Board.



# Committee Report

**Date of Report:** November 15, 2023  
**Date & Type of Meeting:** December 13, 2023 Joint Resource Recovery Committee  
**Author:** Todd Johnston, Environmental Coordinator  
**Subject:** RESOURCE RECOVERY BYLAW NO. 2937, 2023 – AMENDING  
RESOURCE RECOVERY BYLAW NO. 2905, 2023  
**File:** 08-3200-10  
**Electoral Area/Municipality** Entire RDCK

## SECTION 1: EXECUTIVE SUMMARY

The purpose of this report is to present the proposed Resource Recovery Amendment Bylaw No. 2937, 2023 (the Bylaw), to amend Resource Recovery Facilities Regulatory Bylaw No. 2905, 2023 (2905). Changes in the Bylaw include a 10% price increase to all tipping fees for the Joint Resource Recovery Committee's (JRRRC) review. Staff recommend that the Bylaw be brought to the December 14, 2023 Board Meeting for first, second and third readings and adoption.

## SECTION 2: BACKGROUND/ANALYSIS

### TIPPING FEES

Staff have presented draft 2024 Financial Plans for all Resource Recovery services, with a proposed 10 % increase to all of the material tipping fees detailed in User Fee Schedules A-1 to A-3 in Resource Recovery Facilities Regulatory Bylaw No. 2905, 2023 (2905).

The proposed 10% increases (rounded to the nearest \$0.25) are the same in each User Fee schedule, excepting for the unit rate for a Container of Mixed Waste in the East and West Sub-Regions, which has increased from \$3.25 to \$3.50; the unit rate for a Container of Mixed Waste in the Central Sub-Region has increased from \$3.75 to \$4.00.

The proposed price change is driven by significant increases to operating costs in recent years including fuel, labour, insurance, supplies, more stringent regulatory requirements, and increased borrowing repayment costs.

In addition, sufficient reserve funds will be required to minimize borrowing costs and fund a number of long-term projects such as landfill upgrades and closure costs, and infrastructure replacement.

The shortfall in funds required to address the costs described above can be made up through increases in taxation, increases to tipping fees or a combination thereof, however the RDCK is committed towards operating "user pay" facilities, i.e., those who generate waste pay for its disposal. Ideally, tipping fees should cover 100% of the costs to manage the waste in a fully sustainable user pay system. A Tipping Fee Assessment / System Efficiency Study is expected to be completed in early 2024, with detailed data for better understanding the full costs of managing materials disposed at Resource Recovery Facilities. Additionally, a Waste Composition Study

will be shared for information at the January JRRC meeting; both documents should prove valuable in guiding future tipping fee adjustments with more certainty of cost recovery of specific waste types.

See Attachment 01 to review the proposed changes to Schedules A-1 to A-3.

#### **DISCUSSION: POTENTIAL RDCK RESOURCE RECOVERY FACILITIES REGULATORY BYLAW CHANGES IN 2024**

The following items are presented for information to the Committee. Staff will be further assessing the materials and options for management with consideration of feedback received from the Committee. Staff will return to the committee early in 2024 for direction on operational changes and bylaw amendment.

##### **Batteries**

Each Transfer Station/Landfill in the RDCK accepts used Lead-acid Batteries from the public with no additional charge. Canadian Battery Associations (CBA) is the Extended Producer Responsibility (EPR) program that is responsible for the collection and recycling of Lead-acid Batteries. The RDCK receives \$8/unit from CBA, but this may be reduced to \$6.50/unit in 2024.

Other batteries such as Liquid NiCad Batteries (NiCad) are occasionally disposed in the battery collection containers at RDCK Facilities. NiCads are not included in CBA's program and are highly corrosive; therefore RDCK is charged \$1.90/lb for the handling and disposal costs by the contracted service provider. The disposal costs to the RDCK average around \$60-\$70 each; in 2022 Battery Doctor processed 412 lbs of NiCads (\$783) and 336 lbs in 2023 (\$638).

Staff are investigating NiCad disposal fee options for offsetting high disposal costs and will present options for full cost recovery, partial subsidization, or full subsidization tipping fees for NiCads in early 2024. While full cost recovery would be ideal, Staff are concerned that a high disposal fee may encourage illegal dumping, sneaking NiCads in to the free battery bins; or worse, sneaking NiCads in with Mixed Waste loads where the threat of fire, groundwater contamination, and/or corrosion damage to infrastructure are serious.

##### **Tire Stewardship Program**

RDCK Resource Recovery sites continue to experience challenges with limited storage space for stockpiled tires, due to infrequent pickups, and frequent inability to meet quality criteria (and subsequent rejected materials), as determined by the Tire Stewardship of BC (TSBC) contractor (Liberty Tires).

Liberty Tires requires tires to be neatly sorted by the categories, and placed in an area where the truck can directly back in to the piles. Tires must be clean, free of contamination, gravel and /or debris.

Tire storage locations are not equipped with barricades or shelters to protect Tires from the elements and preventing contamination and disruption from snow removal contractors. Further, consistently maintaining the tire piles (e.g., re-stacking when knocked over, removing debris and water, and protecting from snow ploughs and traffic), particularly in the winter, has proven very challenging for Site Staff and Contracted Operators; improving this to meet the TSBC standards may prove expensive.

Given the challenges with storage space and meeting TSBC quality requirements, RDCK Staff intend to investigate options for fully or partially opting out of participating in this service. This would require consultation with local retailers to identify concerns, capacity (and willingness) to accept more tires, and further to ensure that TSBC is prepared to sufficiently support such a shift. There are 22 tire retailers participating in TSBC currently (See Attachment 03): Staff will need to also consider their locations and where potential service gaps may exist,

should RDCK fully opt out of this service. RDCK is aware of at least one other Regional District that has opted out of tire acceptance; feedback from their experience will also be considered.

If opting out of TSBC is not an option, RDCK may need to allocate more resources for increasing Tire maintenance, and building better storage infrastructure.

### **Fire Extinguishers**

Household Fire Extinguishers have been included in the accepted material lists for the annual Household Hazardous Waste (HHW) Round-Up Events and Nelson Leafs Eco Depot for free disposal.

GFL Environmental (GFL) and Environmental 360 Solutions (360) are the HHW hauling contractors servicing Nelson Leafs Eco Depot and HHW Round-Up Events, and the costs for disposal are \$35 and \$30 per unit respectively.

Currently all RDCK Transfer Stations and Landfills accept used propane tanks for free, which are collected for recycling by Propane Busters (PB), at a cost of \$1.50 each; PB also provide the services to collect fire extinguishers with a much more competitive price of \$6 each.

In 2021, the Ministry of Environment and Climate Change Strategy identified their intention to include compressed canisters (e.g., camping fuels) and fire extinguishers in EPR programs as part of their Five Year Action Plan, possibly as early as 2025.

As a potential collector for these items, Staff recommend including fire extinguishers in the Resource Recovery Facility Regulatory Bylaw, and establish a tipping fee to recover costs for collection services, in addition to a monitoring system in preparation for the coming EPR program.

In the interim, RDCK will realize some savings for disposal costs for fire extinguishers by actively accepting them at each site and contracting Propane Busters to collect them.

### **Polyurethane Foam Sealant Cylinders**

Polyurethane Foam Sealant Cylinders (Foam Sealant) are a popular household repair product, effective for quick, cheap and easy insulating, sealing cracks and creating moisture barriers. This product however is not included in any of the EPR programs, or accepted by propane tank or scrap metal collectors. Foam Sealant is not appropriate for landfilling as the polyurethane is classified as Class 6.1 –Toxic/Infectious HHW that is explosive when the canister is not de-compressed.

As Foam Sealant cylinders resemble those 10-20lbs propane tanks accepted at RDCK sites, there is the risk of residents unwittingly dropping them off in the propane tank collection areas; as propane tanks are accepted free of charge, these areas are not tightly monitored.

Staff will need to investigate frequency of accidental Foam Sealant disposals at RDCK sites, and also communicate with other Regional Districts regarding strategies in place.

Propane Busters and other HHW hauling contractors estimate that Foam Sealant cylinders will cost \$125 for a 25lb cylinder. With a prohibitive disposal cost, Staff intend to investigate options for offsetting some of the disposal costs, and screening and monitoring processes for Site Staff to minimize disposals of Foam Sealant tanks as propane tanks.

### **Propane Tanks**

Old 100 lb/ non re-certifiable propane tanks, large auto propane tanks, and small green camping stove propane bottles that are not part of the EPR Program cost the RDCK \$45, \$65, and \$1.05 each, respectively, for recycling by the contractor. Staff will investigate tipping fee options for full and partial subsidization of this product in 2024 for consideration of the Joint Resource Recovery Committee.

## **SECTION 3: DETAILED ANALYSIS**

### **3.1 Financial Considerations – Cost and Resource Allocations:**

<b>Included in Financial Plan:</b>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<b>Financial Plan Amendment:</b>	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
<b>Debt Bylaw Required:</b>	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<b>Public/Gov't Approvals Required:</b>	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

The recommended 10% increase to tipping fees at RDCK Resource Recovery Facilities is in line with the direction given by the RDCK Board of Directors, based on the 2024 budgeting process. Further assessment of taxation versus tipping fee increases will occur in 2024. In order to ensure that the projected revenues identified in the budget planning process are realized, the Bylaw needs to become effective January 1<sup>st</sup>. In 2022, the price increase was delayed by three months, which had measurable negative impact on revenues.

### **3.2 Legislative Considerations (Applicable Policies and/or Bylaws):**

None at this time.

### **3.3 Environmental Considerations**

A primary goal of the Resource Recovery Bylaw is to reduce the environmental impact of waste management activities. Several of the proposed changes are designed to improve recycling diversion and decrease air space consumed at landfills, both of which serve to extend landfill lifespans.

### **3.4 Social Considerations:**

None at this time.

### **3.5 Economic Considerations:**

The recommended 10% to existing tipping fees will increase costs to RDCK municipalities with curbside pickup services for both Mixed Waste and Organic Waste; further it may create a financial burden to households on tight budgets. If sufficient revenues are not realized through tipping fee increases, further taxation to safeguard against deficits would be necessary in all subregions.

### **3.6 Communication Considerations:**

A letter was issued in October to all account holders and municipal partners to warn of a likely 10% increase in tipping fees for January 2024. Training regarding changes to the Bylaw will be given to Landfill Attendants and Waste Educators. The RDCK website and site signage will be modified as required. Staff can create some educational materials for residents on strategies for increasing disposal cost efficiencies through diversion opportunities and maximizing the allowable Container sizes.

### **3.7 Staffing/Departmental Workplace Considerations:**

A number of other Resource Recovery staff are involved in the development of bylaws and the associated communications.

### **3.8 Board Strategic Plan/Priorities Considerations:**

To Manage our Assets and Operations in a Fiscally Responsible Manner.

## **SECTION 4: OPTIONS & PROS / CONS**

### **Option 1:**

- a. That the Resource Recovery Facilities Regulatory Amendment Bylaw No. 2937, 2023 be read a first, second and third time by content to Amend Regional District of Central Kootenay Resource Recovery Facilities Regulatory Bylaw No. 2905, 2023.
- b. That the Regional District of Central Kootenay Resource Recovery Facilities Regulatory Bylaw No. 2937, 2023 be ADOPTED and the Chair and Corporate Officer be authorized to sign the same.

### **PROS:**

- The 10% increase to all tipping fees will help to build reserves required for major capital projects planned over the next ten years, minimize borrowing costs, and support a “User Pay System”.
- Increased tipping fees will help RDCK Resource Recovery Operations to keep up with inflation.
- Increased revenues from tipping fees will ease the tax burden for all residents in the region by reducing tax increases.
- Proposed changes to definitions and schedules are intended to improve operational efficiencies.

### **CONS:**

- Higher tipping fees will be met with resistance from some residents and businesses.
- Higher tipping fees may create a financial burden for some residents and businesses.

**Option 2:** Do not approve all of the changes as shown in Attachment A and direct Staff on appropriate changes to bring back to the Joint Resource Recovery Committee in January.

### **PROS:**

- Allows the Committee to provide additional input into the Bylaw update.

### **CONS:**

- Not increasing tipping fees as reflected in the Draft 2024 Financial Plan will impact expected revenues and either require an increase in taxation or cost and/or service cuts
- Not increasing tipping fees by January 1, 2024 will impact the projected revenues for 2024.

## SECTION 5: RECOMMENDATIONS

### RECOMMENDATION #1

That the Resource Recovery Facilities Regulatory Bylaw No. 2937, 2023, be read a first, second and third time by content to amend Regional District of Central Kootenay Resource Recovery Facilities Regulatory Bylaw No. 2905, 2023.

### RECOMMENDATION #2

That the Regional District of Central Kootenay Resource Recovery Facilities Regulatory Amendment Bylaw No. 2937, 2023 be ADOPTED and the Chair and Corporate Officer be authorized to sign the same.

Respectfully submitted,



Todd Johnston – Environmental Coordinator

## CONCURRENCE

Resource Recovery Manager – Amy Wilson

General Manager of Environmental Services – Uli Wolf

General Manager of Finance, IT, E.D. – Yev Malloff

### ATTACHMENTS:

**Attachment 01:** Redline Version – Proposed *Resource Recovery Facilities Regulatory Amendment Bylaw No. 2937, 2023*

**Attachment 02:** Clean Version – Proposed *Resource Recovery Facilities Regulatory Amendment Bylaw No. 2937, 2023*

**Attachment 03:** Tire Stewardship Program of BC List of Participating Central Kootenay Retailers

REGIONAL DISTRICT OF CENTRAL KOOTENAY

Bylaw No. 2937

A Bylaw to amend Regional District of Central Kootenay Resource Recovery Facilities  
Regulatory Bylaw No. 2905, 2023

WHEREAS the Board of the Regional District of Central Kootenay has enacted Bylaw No. 2905, being the "Regional District of Central Kootenay Resource Recovery Facilities Regulatory Bylaw No. 2905, 2023" for the purpose of adopting regulations and to establish fees and charges for the use of Regional District Resource Recovery Facilities.

AND WHEREAS it is deemed appropriate to amend Bylaw No. 2905 to increase the fees in Schedule A-1, A-2, and A-3 by 10%;

NOW THEREFORE the Board of the Regional District of Central Kootenay, in open meeting assembled, HEREBY ENACTS as follows:

SCHEDULES

- 1 That Schedules A-1, A-2, and A-3 attached to Bylaw No. 2905 be deleted in its entirety and the attached Schedules A-1, A-2 and A-3 to Amendment Bylaw No. 2937 - "Resource Recovery Facilities Regulatory Bylaw" be substituted therefore.

EFFECTIVE DATE

- 2 This bylaw shall take effect January 1, 2024.

CITATION

- 3 This Bylaw may be cited as “Regional District of Central Kootenay Resource Recovery Facilities Regulatory Amendment Bylaw No. 2937, 2023.”

READ A FIRST TIME this 14<sup>th</sup> day of December, 2023.

READ A SECOND TIME this 14<sup>th</sup> day of December, 2023.

READ A THIRD TIME this 14<sup>th</sup> day of December, 2023.

ADOPTED this 14<sup>th</sup> day of December, 2023.

Aimee Watson, Board Chair

Mike Morrison, Corporate Officer



**SCHEDULE A-1 OF AMENDMENT BYLAW NO. 2937: USER FEES: CENTRAL SUB-REGION**

Schedule A-1: User Fees: Central Sub-Region	(1)Weight-based fee	(2)Volume based fee
<b>Municipal Solid Waste</b>		
Mixed Waste: Per Container (applies to first 3 Containers)	<del>\$3.75</del> <u>4.00</u> ea	<del>\$3.75</del> <u>4.00</u> ea
Mixed Waste: Minimum charge for all weighed loads larger than three Containers.	<del>\$13.75</del> <u>15.00</u>	<del>\$15.00</del> <u>\$13.75</u>
Mixed Waste	<del>\$137.50</del> <u>\$151.25</u> /tonne	<del>\$33.00</del> <u>\$36.25</u> /m <sup>3</sup>
Mixed Waste (compacted)	<del>\$151.25</del> <u>\$137.50</u> /tonne	<del>\$44.00</del> <u>\$48.50</u> /m <sup>3</sup>
Construction, Demolition and Renovation Waste	<del>\$220.00</del> <u>\$242.00</u> /tonne	<del>\$55.00</del> <u>\$60.50</u> /m <sup>3</sup>
Organic Waste: Per Container (applies to first 4 Containers)	<del>\$2.25</del> <u>\$2.50</u> ea	<del>\$2.25</del> <u>\$2.50</u> ea
Organic Waste	<del>\$88.00</del> <u>\$96.75</u> /tonne	<del>\$22.00</del> <u>\$24.25</u> /m <sup>3</sup>
Rejected Organic Waste	<del>\$275.00</del> <u>\$302.50</u> /tonne	Not Accepted
Dehydrated Kitchen Waste	<del>\$151.25</del> <u>\$137.50</u> /tonne	<del>\$36.25</del> <u>\$33.00</u> /m <sup>3</sup>
Out-Of-Area Kitchen Waste	<del>\$129</del> <u>\$142.00</u> /tonne	<del>\$32.25</del> <u>\$35.50</u> /m <sup>3</sup>
<b>Controlled Waste (See Bylaw Schedule C)</b>		
Controlled Waste specified in Schedule C that is not otherwise specified in this Schedule A-1	<del>\$151.25</del> <u>\$137.50</u> /tonne	(3) <del>\$36.25</del> <u>\$33.00</u> /m <sup>3</sup>
Noxious Weeds (Source Separated)	No Charge	No Charge
Noxious Weeds (not Source Separated)	<del>\$137.50</del> <u>151.25</u> /tonne	<del>\$36.25</del> <u>\$33.00</u> /m <sup>3</sup>
Rubble	<del>\$48.50</del> <u>\$53.25</u> /tonne	<del>\$72.50</del> <u>\$79.75</u> /m <sup>3</sup>
Uncontaminated Soil	<del>\$19.75</del> <u>\$21.75</u> /tonne	<del>\$29.75</del> <u>\$32.73</u> /m <sup>3</sup>
<b>Recyclable Materials</b>		
Excluded ODS-Containing Products	<del>\$16.50</del> <u>\$18.25</u> ea	<del>\$16.50</del> <u>\$18.25</u> ea
ODS-Containing Products	No Charge	No Charge
Non-ODS Containing Products	No Charge	No Charge
Propane Tanks	No Charge	No Charge
Heavy Duty Industrial, Commercial or Institutional (ICI) Air Conditioning Unit	<del>\$65</del> <u>\$71.50</u> ea	<del>\$65</del> <u>\$71.50</u> ea
Reusable Products	<del>\$151.25</del> <u>\$137.50</u> /tonne	<del>\$30.00</del> <u>\$36.25</u> /m <sup>3</sup>
Scrap Metal	<del>\$44.00</del> <u>\$48.50</u> /tonne	<del>\$22.00</del> <u>\$24.25</u> /m <sup>3</sup>
Wood Waste	<del>\$71.50</del> <u>\$78.75</u> /tonne	<del>\$28.50</del> <u>\$31.25</u> /m <sup>3</sup>
Clean Wood Waste	<del>\$71.50</del> <u>\$78.75</u> /tonne	<del>\$28.50</del> <u>\$31.25</u> /m <sup>3</sup>
Yard and Garden Waste: Per Container (applies to first 2 containers)	<del>\$2.75</del> <u>\$3.00</u> ea	<del>\$2.75</del> <u>\$3.00</u> ea
Yard and Garden Waste: Loads ≤ 2.5 m <sup>3</sup>	(4) <del>\$5.50</del> <u>\$6.00</u> /load	(4) <del>\$5.50</del> <u>\$6.00</u> /load
Yard and Garden Waste: Loads > 2.5 m <sup>3</sup>	(4) <del>\$60.50</del> <u>\$55.00</u> /tonne	(4) <del>\$11.00</del> <u>\$12.00</u> /m <sup>3</sup>

Schedule A-1: User Fees: Central Sub-Region	(1)Weight-based fee	(2)Volume based fee
Chipped Yard and Garden Waste: Loads >2.5 m <sup>3</sup>	(4) (5) <del>\$60.50</del> <del>\$55.00</del> /tonne	(4) (5) <del>\$11.00</del> <del>\$12.00</del> /m <sup>3</sup>
Tires off rim	<del>\$3.25</del> <del>\$3.50</del> ea	<del>\$3.25</del> <del>\$3.50</del> ea
Tires on rim (inner diameter of 20” or smaller or marked P, LT or T)	<del>\$16.50</del> <del>\$18.25</del> ea	<del>\$16.50</del> <del>\$18.25</del> ea
Tires on rim (inner diameter larger than 20” or not marked P, LT or T)	<del>\$60.50</del> <del>\$66.50</del> ea	<del>\$60.50</del> <del>\$66.50</del> ea
Tires on rim marked LS	<del>\$132.00</del> <del>\$145.25</del> ea	<del>\$132.00</del> <del>\$145.25</del>
Rejected Tires off rim	<del>\$15.00</del> <del>\$16.50</del>	<del>\$15.00</del> <del>\$16.50</del>
Bicycle Tire Bundle	<del>\$3.25</del> <del>\$3.50</del>	<del>\$3.25</del> <del>\$3.50</del>
Other Fees	Fee	
Charge to weigh a Vehicle for a person not Disposing of or Depositing Municipal Solid Waste	<del>\$5.50</del> <del>\$6.00</del>	
Application fee for Waste Soil	<del>\$110.00</del> <del>\$121.00</del>	
Questionnaire fee for Waste Soil	<del>\$60.50</del> <del>\$55.00</del>	
Special handling fees (subject to Schedule C) for Asbestos – Friable, Asbestos – Non Friable, Bulky Waste, Condemned Foods, Dead Animals and Parts, Food Processing Waste, Rejected Organic Waste	Rate for quantities less than 1.5 m <sup>3</sup> = <del>\$27.50</del> <del>\$30.25</del> Rates for all other quantities will be estimated in advance by the Manager and will reflect actual labour and equipment costs expected to be incurred by the RDCK plus a 20% administration fee	
Charge for Mixed Waste loads containing more than 10% Recyclable Materials which are not otherwise considered Prohibited Waste	Double applicable user fee (subject to Section 6 (2) of this bylaw)	
Charge for Unsecured Loads	Double applicable user fee (subject to Section 6 (2) of this bylaw)	
Charge for Loads of Source Separated Waste that are Contaminated	Double applicable user fee (subject to Section 6 (2) of this bylaw)	
Charge for a container larger than the maximum size	Double applicable user fee (subject to Section 6 (3) of this bylaw)	
(1) Applicable at Resource Recovery Facilities equipped with a weigh scale. (2) Applicable at Resource Recovery Facilities not equipped with a weigh scale. (3) Fee applies only to categories of Controlled Waste that are accepted at Transfer Stations. Refer to Schedule C for Controlled Waste acceptance at Transfer Stations. (4) Fee to dispose of up to a single Load per day of Yard & Garden Waste is waived during the months of May and October. (5) Fee to dispose of Chipped Yard & Garden Waste is reduced to <del>\$22.00</del> <del>\$24.25</del> /tonne year round at the Central Transfer Station.		
Minimum Charge for any material with a weight-based fee.	The equivalent of 100kg of material to be applied at both scaled and volume-based facilities, with a minimum charge of <del>\$5.50</del> <del>\$6.00</del> and maximum charge of <del>\$13.75</del> <del>\$15.00</del> .	

**SCHEDULE A-2 OF AMENDMENT BYLAW NO. 2937: USER FEES: WEST SUB-REGION**

Schedule A-2: User Fees: West Sub-Region	<sup>(1)</sup> Weight-based fee	<sup>(2)</sup> Volume based fee
<b>Municipal Solid Waste</b>		
Mixed Waste: Per Container (applies to first 4 Containers)	<del>\$3.25</del> <u>\$3.50</u> ea	<del>\$3.25</del> <u>\$3.50</u> ea
Mixed Waste: Minimum charge for all weighed loads larger than 4 Containers.	<del>\$13.75</del> <u>\$15.00</u>	<del>\$13.75</del> <u>\$15.00</u>
Mixed Waste	<del>\$151.25</del> <u>\$137.50</u> /tonne	<del>\$36.25</del> <u>\$33.00</u> /m <sup>3</sup>
Mixed Waste (compacted)	<del>\$151.25</del> <u>\$137.50</u> /tonne	<del>\$48.50</del> <u>\$44.00</u> /m <sup>3</sup>
Construction, Demolition and Renovation Waste	<del>\$242.00</del> <u>\$220.00</u> /tonne	<del>\$60.50</del> <u>\$55.00</u> /m <sup>3</sup>
Land Clearing Debris including tree stumps	<del>\$242.00</del> <u>\$220.00</u> /tonne	<del>\$60.50</del> <u>\$55.00</u> /m <sup>3</sup>
Organic Waste: Per Container (applies to first 4 Containers)	<del>\$2.25</del> <u>\$2.50</u> ea	<sup>(5)</sup> <del>\$2.25</del> <u>\$2.50</u> ea
Organic Waste	<del>96.75</del> <u>\$88</u> /tonne	<del>\$22.00</del> <u>\$24.25</u> /m <sup>3</sup>
Rejected Organic Waste	<del>\$275</del> <u>\$302.50</u> /tonne	Not Accepted
Dehydrated Kitchen Waste	<del>\$151.25</del> <u>\$137.50</u> /tonne	<del>\$36.25</del> <u>\$33.00</u> /m <sup>3</sup>
<b>Controlled Waste (See Bylaw Schedule C)</b>		
Controlled Waste specified in Schedule C that is not otherwise specified in this Schedule A-2	<del>\$151.25</del> <u>\$137.50</u> /tonne	<sup>(3)</sup> <del>\$36.25</del> <u>\$33.00</u> /m <sup>3</sup>
Asbestos	<del>\$275.00</del> <u>\$302.50</u> /tonne	Not Accepted
Bulky Waste	<del>\$242.00</del> <u>266.25</u> /tonne	Not Accepted
Municipal Wastewater Biosolids	<del>\$60.50</del> <u>\$55.00</u> /tonne	Not Accepted
Noxious Weeds (Source Separated)	No Charge	No Charge
Noxious Weeds (not Source Separated)	<del>\$151.25</del> <u>\$137.50</u> /tonne	<del>\$36.25</del> <u>\$33.00</u> /m <sup>3</sup>
Rubble	<del>\$48.50</del> <u>\$53.25</u> /tonne	<del>\$72.50</del> <u>\$79.75</u> /m <sup>3</sup>
Waste Soil	<del>\$44.00</del> <u>\$48.50</u> /tonne	<del>\$66.00</del> <u>72.50</u> /m <sup>3</sup>
Uncontaminated Soil	<del>\$19.75</del> <u>\$21.75</u> /tonne	<del>\$29.75</del> <u>\$32.73</u> /m <sup>3</sup>
<b>Recyclable Materials</b>		
Excluded ODS-Containing Products	<del>\$16.50</del> <u>\$18.25</u> ea	<del>\$16.50</del> <u>\$18.25</u> ea
ODS-Containing Products	No Charge	No Charge
Non-ODS Containing Products	No Charge	No Charge
Propane Tanks	No Charge	No Charge
Heavy Duty Industrial, Commercial or Institutional (ICI) Air Conditioning Unit	<del>\$65</del> <u>\$71.50</u> ea	<del>\$65</del> <u>\$71.50</u> ea
Reusable Products	<del>\$151.25</del> <u>\$137.50</u> /tonne	<del>\$36.25</del> <u>\$33.00</u> /m <sup>3</sup>
Scrap Metal	<del>\$44.00</del> <u>\$48.50</u> /tonne	<del>\$22.00</del> <u>\$24.25</u> /m <sup>3</sup>

Schedule A-2: User Fees: West Sub-Region	(1)Weight-based fee	(2)Volume based fee
Wood Waste	<del>\$71.50</del> <u>\$78.75</u> /tonne	<del>\$28.50</del> <u>\$31.25</u> /m <sup>3</sup>
Clean Wood Waste	<del>\$71.50</del> <u>\$78.75</u> /tonne	<del>\$28.50</del> <u>\$31.25</u> /m <sup>3</sup>
Yard & Garden Waste: Per container (applies to first two containers)	<del>\$2.75</del> <u>\$3.00</u> ea	<del>\$2.75</del> <u>\$3.00</u> ea
Yard & Garden Waste: Loads ≤ 2.5 m <sup>3</sup>	(4) <del>\$5.50</del> <u>\$6.00</u> /load	(4) <del>\$5.50</del> <u>\$6.00</u> /load
Yard & Garden Waste: Loads > 2.5 m <sup>3</sup>	(4) <del>\$60.50</del> <u>\$55.00</u> /tonne	(4) <del>\$11.00</del> <u>\$12.00</u> /m <sup>3</sup>
Chipped Yard & Garden Waste: Loads > 2.5 m <sup>3</sup>	(4) <del>\$60.50</del> <u>\$55.00</u> /tonne	(4) <del>\$11.00</del> <u>\$12.00</u> /m <sup>3</sup>
Tires off rim	<del>\$3.25</del> <u>\$3.50</u> ea	<del>\$3.25</del> <u>\$3.50</u> ea
Tires on rim (inner diameter of 20” or smaller or marked P, LT or T)	<del>\$16.50</del> <u>\$18.25</u> ea	<del>\$16.50</del> <u>\$18.25</u> ea
Tires on rim (inner diameter larger than 20” or not marked P, LT or T)	<del>\$60.50</del> <u>\$66.50</u> ea	<del>\$60.50</del> <u>\$66.50</u> ea
Tires on rim marked LS	<del>\$132.00</del> <u>\$145.25</u> ea	<del>\$132.00</del> <u>\$145.25</u> ea
Rejected Tires off rim	<del>\$15.00</del> <u>\$16.50</u>	<del>\$15.00</del> <u>\$16.50</u>
Bicycle Tire Bundle	<del>\$3.25</del> <u>\$3.50</u>	<del>\$3.25</del> <u>\$3.50</u>
Other Fees	Fee	
Charge to weigh a Vehicle for a person not Disposing of or Depositing Municipal Solid Waste	<del>\$5.50</del> <u>\$6.00</u>	
Application fee for Waste Soil	<del>\$110.00</del> <u>\$121.00</u>	
Questionnaire fee for Waste Soil	<del>\$60.50</del> <u>\$55.00</u>	
Special handling fees (subject to Schedule C) for Asbestos – Friable, Asbestos – Non Friable, Bulky Waste, Condemned Foods, Dead Animals and Parts, Food Processing Waste, Rejected Organic Waste	Rate for quantities less than 1.5 m <sup>3</sup> = <del>\$27.50</del> <u>\$30.25</u> Rates for all other quantities will be estimated in advance by the Manager and will reflect actual labour and equipment costs expected to be incurred by the RDCK plus a 20% administration fee	
Charge for Mixed Waste loads containing more than 10% Recyclable Materials which are not otherwise considered Prohibited Waste	Double applicable user fee (subject to Section 6 (2) of this bylaw)	
Charge for Unsecured Loads	Double applicable user fee (subject to Section 6 (2) of this bylaw)	
Charge for Loads of Source Separated Waste that are Contaminated	Double applicable user fee (subject to Section 6 (2) of this bylaw)	
Charge for a container larger than the maximum size	Double applicable user fee (subject to Section 6 (3) of this bylaw)	
Asbestos Disposal Cancellation Fee for less than 12 hours notice	<del>\$60.50</del> <u>\$55</u>	
(1) Applicable at Resource Recovery Facilities equipped with a weigh scale. (2) Applicable at Resource Recovery Facilities not equipped with a weigh scale. (3) Fee applies only to categories of Controlled Waste that are accepted at Transfer Stations. Refer to Schedule C for Controlled Waste acceptance at Transfer Stations. (4) Fee to dispose of up to a single Load per day Yard & Garden Waste is waived during the months of May and October.		
Minimum Charge for any material with a weight-based fee.	The equivalent of 100kg of material to be applied at both scaled and volume-based facilities, with a minimum charge of <del>\$5.50</del> <u>\$6.00</u> and maximum charge of <del>\$13.75</del> <u>\$15.00</u> .	

**SCHEDULE A-3 OF AMENDMENT BYLAW NO. 2937: USER FEES: EAST SUB-REGION**

Schedule A-3: User Fees: East Sub-Region	<sup>(1)</sup> Weight-based fee	<sup>(2)</sup> Volume based fee
<b>Municipal Solid Waste</b>		
Mixed Waste: Per Container (applies to first four containers)	<del>\$3.25</del> <u>\$3.50</u> ea	<del>\$3.25</del> <u>\$3.50</u> ea
Mixed Waste: Minimum charge for all weighed loads larger than four Containers.	<del>\$13.75</del> <u>\$15.00</u>	<del>\$13.75</del> <u>\$15.00</u>
Mixed Waste	<del>\$151.25</del> <u>\$137.50</u> /tonne	<del>\$36.25</del> <u>\$33.00</u> /m <sup>3</sup>
Mixed Waste (compacted)	<del>\$151.25</del> <u>\$137.50</u> /tonne	<del>\$48.50</del> <u>\$44.00</u> /m <sup>3</sup>
Construction, Demolition and Renovation Waste	<del>\$242.00</del> <u>\$220.00</u> /tonne	<del>\$60.50</del> <u>\$55.00</u> /m <sup>3</sup>
Land Clearing Debris including tree stumps	<del>\$242.00</del> <u>\$220.00</u> /tonne	<del>\$60.50</del> <u>\$55.00</u> /m <sup>3</sup>
Organic Waste: Per Container (applies to first four Containers)	<del>\$2.25</del> <u>\$2.50</u> ea	Not Accepted
Organic Waste	<del>\$88.00</del> <u>\$96.75</u> /tonne	Not Accepted
Rejected Organic Waste	<del>\$275.00</del> <u>\$302.50</u> /tonne	Not Accepted
Dehydrated Kitchen Waste	<del>\$151.25</del> <u>\$137.50</u> /tonne	Not Accepted
<b>Controlled Waste (See Bylaw Schedule C)</b>		
Controlled Waste specified in Schedule C that is not otherwise specified in this Schedule A-3	<del>\$151.25</del> <u>\$137.50</u> /tonne	<sup>(3)</sup> <del>\$36.25</del> <u>\$33.00</u> /m <sup>3</sup>
Asbestos	<del>\$275.00</del> <u>\$302.50</u> /tonne	Not Accepted
Bulky Waste	<del>\$266.25</del> <u>\$242.00</u> /tonne	Not Accepted
Municipal Wastewater Biosolids	<del>\$60.50</del> <u>\$55.00</u> /tonne	Not Accepted
Noxious Weeds (Source Separated)	No Charge	No Charge
Noxious Weeds (not Source Separated)	<del>\$151.25</del> <u>\$137.50</u> /tonne	<del>\$36.25</del> <u>\$33.00</u> /m <sup>3</sup>
Rubble	<del>\$48.50</del> <u>\$53.25</u> /tonne	<del>\$72.50</del> <u>\$79.75</u> /m <sup>3</sup>
Waste Soil	<del>\$44.00</del> <u>\$48.50</u> /tonne	<del>\$66.00</del> <u>\$72.50</u> /m <sup>3</sup>
Uncontaminated Soil	<del>\$49.75</del> <u>\$21.75</u> /tonne	<del>\$29.75</del> <u>\$32.73</u> /m <sup>3</sup>
<b>Recyclable Materials</b>		
Excluded ODS-Containing Products	<del>\$16.50</del> <u>\$18.25</u> ea	<del>\$16.50</del> <u>\$18.25</u> ea
ODS-Containing Products	No Charge	No Charge
Non-ODS Containing Products	No Charge	No Charge
Propane Tanks	No Charge	No Charge
Heavy Duty Industrial, Commercial or Institutional (ICI) Air Conditioning Unit	<del>\$65</del> <u>\$71.50</u> ea	<del>\$65</del> <u>\$71.50</u> ea
Reusable Products	<del>\$151.25</del> <u>\$137.50</u> /tonne	<del>\$36.25</del> <u>\$33.00</u> /m <sup>3</sup>
Scrap Metal	<del>\$44.00</del> <u>\$48.50</u> /tonne	<del>\$22.00</del> <u>\$24.25</u> /m <sup>3</sup>

Schedule A-3: User Fees: East Sub-Region	<sup>(1)</sup> Weight-based fee	<sup>(2)</sup> Volume based fee
Wood Waste	<del>\$71.50</del> \$78.75/tonne	<del>\$28.50</del> \$31.25/m <sup>3</sup>
Clean Wood Waste	<del>\$71.50</del> \$78.75/tonne	<del>\$28.50</del> \$31.25/m <sup>3</sup>
Yard & Garden Waste: Per container (applies to first two containers)	<del>\$2.75</del> \$3.00 ea	<del>\$2.75</del> \$3.00 ea
Yard & Garden Waste: Loads ≤ 2.5 m <sup>3</sup>	<sup>(4)</sup> <del>\$5.50</del> \$6.00/load	<sup>(4)</sup> <del>\$5.50</del> \$6.00/load
Yard & Garden Waste: Loads > 2.5 m <sup>3</sup>	<sup>(4)</sup> <del>\$60.50</del> \$55.00/tonne	<sup>(4)</sup> <del>\$11.00</del> \$12.00/m <sup>3</sup>
Chipped Yard & Garden Waste: Loads > 2.5 m <sup>3</sup>	<sup>(4) (5)</sup> <del>\$60.50</del> \$55.00/tonne	<sup>(4) (5)</sup> <del>\$11.00</del> \$12.00/m <sup>3</sup>
Tires off rim	<del>\$3.25</del> \$3.50 ea	<del>\$3.25</del> \$3.50 ea
Tires on rim (inner diameter of 20” or smaller or marked P, LT or T)	<del>\$16.50</del> \$18.25 ea	<del>\$16.50</del> \$18.25 ea
Tires on rim (inner diameter larger than 20” or not marked P, LT or T)	<del>\$60.50</del> \$66.50 ea	<del>\$60.50</del> \$66.50ea
Tires on rim marked LS	<del>\$132.00</del> \$145.25 ea	<del>\$132.00</del> \$145.25 ea
Rejected Tires off rim	<del>\$15.00</del> \$16.50	<del>\$15.00</del> \$16.50
Bicycle Tire Bundle	<del>\$3.25</del> \$3.50	<del>\$3.25</del> \$3.50
Other Fees	Fee	
Charge to weigh a Vehicle for a person not Disposing of or Depositing Municipal Solid Waste	<del>\$5.50</del> \$6.00	
Application fee for Waste Soil	<del>\$110.00</del> \$121.00	
Questionnaire fee for Waste Soil	<del>\$60.50</del> \$55.00	
Special handling fees (subject to Schedule C) for Asbestos – Friable, Asbestos – Non Friable, Bulky Waste, Condemned Foods, Dead Animals and Parts, Food Processing Waste, Rejected Organic Waste	Rate for quantities less than 1.5 m <sup>3</sup> = <del>\$27.50</del> \$30.25 Rates for all other quantities will be estimated in advance by the Manager and will reflect actual labour and equipment costs expected to be incurred by the RDCK plus a 20% administration fee	
Charge for Mixed Waste loads containing more than 10% Recyclable Materials which are not otherwise considered Prohibited Waste	Double applicable user fee (subject to Section 6 (2) of this bylaw)	
Charge for Unsecured Loads	Double applicable user fee (subject to Section 6 (2) of this bylaw)	
Charge for Loads of Source Separated Waste that are Contaminated	Double applicable user fee (subject to Section 6 (2) of this bylaw)	
Charge for a container larger than the maximum size	Double applicable user fee (subject to Section 6 (3) of this bylaw)	
Asbestos Disposal Cancellation Fee for less than 12 hours notice	<del>\$60.50</del> \$55	
<sup>(1)</sup> Applicable at Resource Recovery Facilities equipped with a weigh scale. <sup>(2)</sup> Applicable at Resource Recovery Facilities not equipped with a weigh scale. <sup>(3)</sup> Fee applies only to categories of Controlled Waste that are accepted at Transfer Stations. Refer to Schedule C for Controlled Waste acceptance at Transfer Stations. <sup>(4)</sup> Fee to dispose of up to a single Load per day of Yard & Garden Waste is waived during the months of April and October. <sup>(5)</sup> Fee to dispose of Chipped Yard & Garden Waste is reduced to <del>\$22.00</del> \$24.25 /tonne year round at the Creston Landfill.		
Minimum Charge for any material with a weight-based fee.	The equivalent of 100kg of material to be applied at both scaled and volume-based facilities, with a minimum charge of <del>\$5.50</del> \$6.00 and maximum charge of <del>\$13.75</del> \$15.00.	

REGIONAL DISTRICT OF CENTRAL KOOTENAY

Bylaw No. 2937

A Bylaw to amend Regional District of Central Kootenay Resource Recovery Facilities  
Regulatory Bylaw No. 2905, 2023

WHEREAS the Board of the Regional District of Central Kootenay has enacted Bylaw No. 2905, being the "Regional District of Central Kootenay Resource Recovery Facilities Regulatory Bylaw No. 2905, 2023" for the purpose of adopting regulations and to establish fees and charges for the use of Regional District Resource Recovery Facilities.

AND WHEREAS it is deemed appropriate to amend Bylaw No. 2905 to increase the fees in Schedule A-1, A-2, and A-3 by 10%;

NOW THEREFORE the Board of the Regional District of Central Kootenay, in open meeting assembled, HEREBY ENACTS as follows:

SCHEDULES

- 1 That Schedules A-1, A-2, and A-3 attached to Bylaw No. 2905 be deleted in its entirety and the attached Schedules A-1, A-2 and A-3 to Amendment Bylaw No. 2937 - "Resource Recovery Facilities Regulatory Bylaw" be substituted therefore.

EFFECTIVE DATE

- 2 This bylaw shall take effect January 1, 2024.

CITATION

- 3 This Bylaw may be cited as "Regional District of Central Kootenay Resource Recovery Facilities Regulatory Amendment Bylaw No. 2937, 2023."

READ A FIRST TIME this 14<sup>th</sup> day of December, 2023.

READ A SECOND TIME this 14<sup>th</sup> day of December, 2023.

READ A THIRD TIME this 14<sup>th</sup> day of December, 2023.

ADOPTED this 14<sup>th</sup> day of December, 2023.

Aimee Watson, Board Chair

Mike Morrison, Corporate Officer

**SCHEDULE A-1 OF AMENDMENT BYLAW NO. 2937: USER FEES: CENTRAL SUB-REGION**

<b>Schedule A-1: User Fees: Central Sub-Region</b>	<b><sup>(1)</sup>Weight-based fee</b>	<b><sup>(2)</sup>Volume based fee</b>
<b>Municipal Solid Waste</b>		
Mixed Waste: Per Container (applies to first 3 Containers)	\$4.00 ea	\$4.00 ea
Mixed Waste: Minimum charge for all weighed loads larger than three Containers.	\$15.00	\$15.00
Mixed Waste	\$151.25/tonne	\$36.25/m <sup>3</sup>
Mixed Waste (compacted)	\$151.25/tonne	\$48.50/m <sup>3</sup>
Construction, Demolition and Renovation Waste	\$242.00/tonne	\$60.50/m <sup>3</sup>
Organic Waste: Per Container (applies to first 4 Containers)	\$2.50 ea	\$2.50 ea
Organic Waste	\$96.75/tonne	\$24.25 /m <sup>3</sup>
Rejected Organic Waste	\$302.50 /tonne	Not Accepted
Dehydrated Kitchen Waste	\$151.25/tonne	\$36.25/m <sup>3</sup>
Out-Of-Area Kitchen Waste	\$142.00 /tonne	\$35.50 /m <sup>3</sup>
<b>Controlled Waste (See Bylaw Schedule C)</b>		
Controlled Waste specified in Schedule C that is not otherwise specified in this Schedule A-1	\$151.25/tonne	<sup>(3)</sup> \$36.25/m <sup>3</sup>
Noxious Weeds (Source Separated)	No Charge	No Charge
Noxious Weeds (not Source Separated)	\$151.25/tonne	\$36.25/m <sup>3</sup>
Rubble	\$53.25/tonne	\$79.75/m <sup>3</sup>
Uncontaminated Soil	\$21.75/tonne	\$32.73/m <sup>3</sup>
<b>Recyclable Materials</b>		
Excluded ODS-Containing Products	\$18.25 ea	\$18.25 ea
ODS-Containing Products	No Charge	No Charge
Non-ODS Containing Products	No Charge	No Charge
Propane Tanks	No Charge	No Charge
Heavy Duty Industrial, Commercial or Institutional (ICI) Air Conditioning Unit	\$71.50 ea	\$71.50 ea
Reusable Products	\$151.25/tonne	\$36.25/m <sup>3</sup>
Scrap Metal	\$48.50/tonne	\$24.25 /m <sup>3</sup>
Wood Waste	\$78.75/tonne	\$31.25/m <sup>3</sup>
Clean Wood Waste	\$78.75/tonne	\$31.25/m <sup>3</sup>
Yard and Garden Waste: Per Container (applies to first 2 containers)	\$3.00 ea	\$3.00 ea
Yard and Garden Waste: Loads ≤ 2.5 m <sup>3</sup>	<sup>(4)</sup> \$6.00/load	<sup>(4)</sup> \$6.00/load
Yard and Garden Waste: Loads > 2.5 m <sup>3</sup>	<sup>(4)</sup> \$60.50/tonne	<sup>(4)</sup> \$12.00/m <sup>3</sup>



Schedule A-1: User Fees: Central Sub-Region	(1)Weight-based fee	(2)Volume based fee
Chipped Yard and Garden Waste: Loads >2.5 m <sup>3</sup>	(4) (5)\$60.50/tonne	(4) (5)\$12.00/m <sup>3</sup>
Tires off rim	\$3.50 ea	\$3.50 ea
Tires on rim (inner diameter of 20” or smaller or marked P, LT or T)	\$18.25 ea	\$18.25 ea
Tires on rim (inner diameter larger than 20” or not marked P, LT or T)	\$66.50 ea	\$66.50 ea
Tires on rim marked LS	\$145.25 ea	\$145.25 ea
Rejected Tires off rim	\$16.50	\$16.50
Bicycle Tire Bundle	\$3.50	\$3.50
Other Fees	Fee	
Charge to weigh a Vehicle for a person not Disposing of or Depositing Municipal Solid Waste	\$6.00	
Application fee for Waste Soil	\$121.00	
Questionnaire fee for Waste Soil	\$60.50	
Special handling fees (subject to Schedule C) for Asbestos – Friable, Asbestos – Non Friable, Bulky Waste, Condemned Foods, Dead Animals and Parts, Food Processing Waste, Rejected Organic Waste	Rate for quantities less than 1.5 m <sup>3</sup> = \$30.25 Rates for all other quantities will be estimated in advance by the Manager and will reflect actual labour and equipment costs expected to be incurred by the RDCK plus a 20% administration fee	
Charge for Mixed Waste loads containing more than 10% Recyclable Materials which are not otherwise considered Prohibited Waste	Double applicable user fee (subject to Section 6 (2) of this bylaw)	
Charge for Unsecured Loads	Double applicable user fee (subject to Section 6 (2) of this bylaw)	
Charge for Loads of Source Separated Waste that are Contaminated	Double applicable user fee (subject to Section 6 (2) of this bylaw)	
Charge for a container larger than the maximum size	Double applicable user fee (subject to Section 6 (3) of this bylaw)	
(1) Applicable at Resource Recovery Facilities equipped with a weigh scale. (2) Applicable at Resource Recovery Facilities not equipped with a weigh scale. (3) Fee applies only to categories of Controlled Waste that are accepted at Transfer Stations. Refer to Schedule C for Controlled Waste acceptance at Transfer Stations. (4) Fee to dispose of up to a single Load per day of Yard & Garden Waste is waived during the months of May and October. (5) Fee to dispose of Chipped Yard & Garden Waste is reduced to \$24.25 /tonne year round at the Central Transfer Station.		
Minimum Charge for any material with a weight-based fee.	The equivalent of 100kg of material to be applied at both scaled and volume-based facilities, with a minimum charge of \$6.00 and maximum charge of \$15.00.	

**SCHEDULE A-2 OF AMENDMENT BYLAW NO. 2937: USER FEES: WEST SUB-REGION**

<b>Schedule A-2: User Fees: West Sub-Region</b>	<b><sup>(1)</sup>Weight-based fee</b>	<b><sup>(2)</sup>Volume based fee</b>
<b>Municipal Solid Waste</b>		
Mixed Waste: Per Container (applies to first 4 Containers)	\$3.50 ea	\$3.50 ea
Mixed Waste: Minimum charge for all weighed loads larger than 4 Containers.	\$15.00	\$15.00
Mixed Waste	\$151.25/tonne	\$36.25/m <sup>3</sup>
Mixed Waste (compacted)	\$151.25/tonne	\$48.50/m <sup>3</sup>
Construction, Demolition and Renovation Waste	\$242.00.00/tonne	\$60.50/m <sup>3</sup>
Land Clearing Debris including tree stumps	\$242.00/tonne	\$60.50/m <sup>3</sup>
Organic Waste: Per Container (applies to first 4 Containers)	\$2.50 ea	<sup>(5)</sup> \$2.50 ea
Organic Waste	\$96.75/tonne	\$24.25/m <sup>3</sup>
Rejected Organic Waste	\$302.50/tonne	Not Accepted
Dehydrated Kitchen Waste	\$151.25/tonne	\$36.25/m <sup>3</sup>
<b>Controlled Waste (See Bylaw Schedule C)</b>		
Controlled Waste specified in Schedule C that is not otherwise specified in this Schedule A-2	\$151.25/tonne	<sup>(3)</sup> \$36.25/m <sup>3</sup>
Asbestos	\$302.50 /tonne	Not Accepted
Bulky Waste	\$266.25/tonne	Not Accepted
Municipal Wastewater Biosolids	\$60.50/tonne	Not Accepted
Noxious Weeds (Source Separated)	No Charge	No Charge
Noxious Weeds (not Source Separated)	\$151.25/tonne	\$36.25/m <sup>3</sup>
Rubble	\$53.25/tonne	\$79.75/m <sup>3</sup>
Waste Soil	\$48.50/tonne	\$72.50/m <sup>3</sup>
Uncontaminated Soil	\$21.75/tonne	\$32.73/m <sup>3</sup>
<b>Recyclable Materials</b>		
Excluded ODS-Containing Products	\$18.25 ea	\$18.25 ea
ODS-Containing Products	No Charge	No Charge
Non-ODS Containing Products	No Charge	No Charge
Propane Tanks	No Charge	No Charge
Heavy Duty Industrial, Commercial or Institutional (ICI) Air Conditioning Unit	\$71.50 ea	\$71.50 ea
Reusable Products	\$151.25/tonne	\$36.25/m <sup>3</sup>
Scrap Metal	\$48.50/tonne	\$24.25 /m <sup>3</sup>

Schedule A-2: User Fees: West Sub-Region	<sup>(1)</sup> Weight-based fee	<sup>(2)</sup> Volume based fee
Wood Waste	\$78.75/tonne	\$31.25/m <sup>3</sup>
Clean Wood Waste	\$78.75/tonne	\$31.25/m <sup>3</sup>
Yard & Garden Waste: Per container (applies to first two containers)	\$3.00 ea	\$3.00 ea
Yard & Garden Waste: Loads ≤ 2.5 m <sup>3</sup>	<sup>(4)</sup> \$6.00/load	<sup>(4)</sup> \$6.00/load
Yard & Garden Waste: Loads > 2.5 m <sup>3</sup>	<sup>(4)</sup> \$60.50/tonne	<sup>(4)</sup> \$12.00/m <sup>3</sup>
Chipped Yard & Garden Waste: Loads > 2.5 m <sup>3</sup>	<sup>(4)</sup> \$60.50/tonne	<sup>(4)</sup> \$12.00/m <sup>3</sup>
Tires off rim	\$3.50 ea	\$3.50 ea
Tires on rim (inner diameter of 20” or smaller or marked P, LT or T)	\$18.25 ea	\$18.25 ea
Tires on rim (inner diameter larger than 20” or not marked P, LT or T)	\$66.50 ea	\$66.50 ea
Tires on rim marked LS	\$145.25 ea	\$145.25 ea
Rejected Tires off rim	\$16.50	\$16.50
Bicycle Tire Bundle	\$3.50	\$3.50
Other Fees	Fee	
Charge to weigh a Vehicle for a person not Disposing of or Depositing Municipal Solid Waste	\$6.00	
Application fee for Waste Soil	\$121.00	
Questionnaire fee for Waste Soil	\$60.50	
Special handling fees (subject to Schedule C) for Asbestos – Friable, Asbestos – Non Friable, Bulky Waste, Condemned Foods, Dead Animals and Parts, Food Processing Waste, Rejected Organic Waste	Rate for quantities less than 1.5 m <sup>3</sup> = \$30.25 Rates for all other quantities will be estimated in advance by the Manager and will reflect actual labour and equipment costs expected to be incurred by the RDCK plus a 20% administration fee	
Charge for Mixed Waste loads containing more than 10% Recyclable Materials which are not otherwise considered Prohibited Waste	Double applicable user fee (subject to Section 6 (2) of this bylaw)	
Charge for Unsecured Loads	Double applicable user fee (subject to Section 6 (2) of this bylaw)	
Charge for Loads of Source Separated Waste that are Contaminated	Double applicable user fee (subject to Section 6 (2) of this bylaw)	
Charge for a container larger than the maximum size	Double applicable user fee (subject to Section 6 (3) of this bylaw)	
Asbestos Disposal Cancellation Fee for less than 12 hours notice	\$60.50	
(1) Applicable at Resource Recovery Facilities equipped with a weigh scale. (2) Applicable at Resource Recovery Facilities not equipped with a weigh scale. (3) Fee applies only to categories of Controlled Waste that are accepted at Transfer Stations. Refer to Schedule C for Controlled Waste acceptance at Transfer Stations. (4) Fee to dispose of up to a single Load per day Yard & Garden Waste is waived during the months of May and October.		
Minimum Charge for any material with a weight-based fee.	The equivalent of 100kg of material to be applied at both scaled and volume-based facilities, with a minimum charge of \$6.00 and maximum charge of \$15.00.	

**SCHEDULE A-3 OF AMENDMENT BYLAW NO. 2937: USER FEES: EAST SUB-REGION**

<b>Schedule A-3: User Fees: East Sub-Region</b>	<b><sup>(1)</sup>Weight-based fee</b>	<b><sup>(2)</sup>Volume based fee</b>
<b>Municipal Solid Waste</b>		
Mixed Waste: Per Container (applies to first four containers)	\$3.50 ea	\$3.50 ea
Mixed Waste: Minimum charge for all weighed loads larger than four Containers.	\$15.00	\$15.00
Mixed Waste	\$151.25/tonne	\$36.25/m <sup>3</sup>
Mixed Waste (compacted)	\$151.25/tonne	\$48.50/m <sup>3</sup>
Construction, Demolition and Renovation Waste	\$242.00/tonne	\$60.50/m <sup>3</sup>
Land Clearing Debris including tree stumps	\$242.00/tonne	\$60.50/m <sup>3</sup>
Organic Waste: Per Container (applies to first four Containers)	\$2.50 ea	Not Accepted
Organic Waste	\$96.75/tonne	Not Accepted
Rejected Organic Waste	\$302.50 /tonne	Not Accepted
Dehydrated Kitchen Waste	\$151.25/tonne	Not Accepted
<b>Controlled Waste (See Bylaw Schedule C)</b>		
Controlled Waste specified in Schedule C that is not otherwise specified in this Schedule A-3	\$151.25/tonne	<sup>(3)</sup> \$36.25/m <sup>3</sup>
Asbestos	\$302.50 /tonne	Not Accepted
Bulky Waste	\$266.25/tonne	Not Accepted
Municipal Wastewater Biosolids	\$60.50/tonne	Not Accepted
Noxious Weeds (Source Separated)	No Charge	No Charge
Noxious Weeds (not Source Separated)	\$151.25/tonne	\$36.25/m <sup>3</sup>
Rubble	\$53.25/tonne	\$79.75/m <sup>3</sup>
Waste Soil	\$48.50/tonne	\$72.50/m <sup>3</sup>
Uncontaminated Soil	\$21.75/tonne	\$32.73/m <sup>3</sup>
<b>Recyclable Materials</b>		
Excluded ODS-Containing Products	\$18.25 ea	\$18.25 ea
ODS-Containing Products	No Charge	No Charge
Non-ODS Containing Products	No Charge	No Charge
Propane Tanks	No Charge	No Charge
Heavy Duty Industrial, Commercial or Institutional (ICI) Air Conditioning Unit	\$71.50 ea	\$71.50 ea
Reusable Products	\$151.25/tonne	\$36.25/m <sup>3</sup>
Scrap Metal	\$48.50/tonne	\$24.25/m <sup>3</sup>

Schedule A-3: User Fees: East Sub-Region	<sup>(1)</sup> Weight-based fee	<sup>(2)</sup> Volume based fee
Wood Waste	\$78.75/tonne	\$31.25/m <sup>3</sup>
Clean Wood Waste	\$78.75/tonne	\$31.25/m <sup>3</sup>
Yard & Garden Waste: Per container (applies to first two containers)	\$3.00 ea	\$3.00 ea
Yard & Garden Waste: Loads ≤ 2.5 m <sup>3</sup>	<sup>(4)</sup> \$6.00/load	<sup>(4)</sup> \$6.00/load
Yard & Garden Waste: Loads > 2.5 m <sup>3</sup>	<sup>(4)</sup> \$60.50/tonne	<sup>(4)</sup> \$12.00/m <sup>3</sup>
Chipped Yard & Garden Waste: Loads > 2.5 m <sup>3</sup>	<sup>(4)</sup> <sup>(5)</sup> \$60.50/tonne	<sup>(4)</sup> <sup>(5)</sup> \$12.00/m <sup>3</sup>
Tires off rim	\$3.50 ea	\$3.50 ea
Tires on rim (inner diameter of 20” or smaller or marked P, LT or T)	\$18.25 ea	\$18.25 ea
Tires on rim (inner diameter larger than 20” or not marked P, LT or T)	\$66.50 ea	\$66.50 ea
Tires on rim marked LS	\$145.25 ea	\$145.25 ea
Rejected Tires off rim	\$16.50	\$16.50
Bicycle Tire Bundle	\$3.50	\$3.50
Other Fees	Fee	
Charge to weigh a Vehicle for a person not Disposing of or Depositing Municipal Solid Waste	\$6.00	
Application fee for Waste Soil	\$121.00	
Questionnaire fee for Waste Soil	\$60.50	
Special handling fees (subject to Schedule C) for Asbestos – Friable, Asbestos – Non Friable, Bulky Waste, Condemned Foods, Dead Animals and Parts, Food Processing Waste, Rejected Organic Waste	Rate for quantities less than 1.5 m <sup>3</sup> = \$30.25 Rates for all other quantities will be estimated in advance by the Manager and will reflect actual labour and equipment costs expected to be incurred by the RDCK plus a 20% administration fee	
Charge for Mixed Waste loads containing more than 10% Recyclable Materials which are not otherwise considered Prohibited Waste	Double applicable user fee (subject to Section 6 (2) of this bylaw)	
Charge for Unsecured Loads	Double applicable user fee (subject to Section 6 (2) of this bylaw)	
Charge for Loads of Source Separated Waste that are Contaminated	Double applicable user fee (subject to Section 6 (2) of this bylaw)	
Charge for a container larger than the maximum size	Double applicable user fee (subject to Section 6 (3) of this bylaw)	
Asbestos Disposal Cancellation Fee for less than 12 hours notice	\$60.50	
<sup>(1)</sup> Applicable at Resource Recovery Facilities equipped with a weigh scale. <sup>(2)</sup> Applicable at Resource Recovery Facilities not equipped with a weigh scale. <sup>(3)</sup> Fee applies only to categories of Controlled Waste that are accepted at Transfer Stations. Refer to Schedule C for Controlled Waste acceptance at Transfer Stations. <sup>(4)</sup> Fee to dispose of up to a single Load per day of Yard & Garden Waste is waived during the months of April and October. <sup>(5)</sup> Fee to dispose of Chipped Yard & Garden Waste is reduced to \$24.25 /tonne year round at the Creston Landfill.		
Minimum Charge for any material with a weight-based fee.	The equivalent of 100kg of material to be applied at both scaled and volume-based facilities, with a minimum charge of \$6.00 and maximum charge of \$15.00.	

## Attachment 03

Reg. No.	Business Name	Physical Address	City	Postal Code	Phone
12329	Caribou Service	5549 Frontage Road   PO Box 18	Burton	VOG 1E0	+1 250 265 3191
14859	Canadian Tire - Castlegar #492 (01/21)	2000 Columbia Ave	Castlegar	V1N 2W7	+1 250 365 7737
10638	Castlegar Toyota	1530 Columbia Avenue	Castlegar	V1N 1H9	+1 250 365 7241
4091	Columbia Auto Service (4091)	1050 Columbia Avenue	Castlegar	V1N 1H2	+1 250 365 5422
11765	Glacier Honda	1602 Columbia Avenue	Castlegar	V1N 1H9	+1 778 460 5149
10993	Kal Tire - Cas #050	4280 Minto Road	Castlegar	V1N 4C1	+1 250 365 3311
10148	Creston Valley Tire	918 Pine Street   P.O. Box 430	Creston	V0B 1G0	+1 250 428 2000
12598	Jack Carter Northstar Creston	1330 Northwest Blvd	Creston	V0B 1G0	+1 250 48 94711
10182	Kal Tire - Cre #069	1816 Canyon Street	Creston	V0B 1G0	+1 250 428 5396
12461	Kokanee Ford Sales Ltd	1241 Northwest Blvd	Creston	V0B 1G6	+1 250 428 2206
10263	Mister Tire Sales - Creston	1226 Cook Street	Creston	V0B 1G0	+1 250 426 5208
13983	Hartech Ind. Inc.	8845 Highway 31	Kaslo	VOG 1M0	+1 250 353 2800
10455	Greenwood Saw To Truck Repairs	325 4 St	Midway	V0H 1M0	+1 250 445 9909
10422	Kal Tire - Nak #032	95- 6th Avenue North West	Nakusp	VOG 1R0	+1 250 265 4155
10839	Glendale Tire	524 Front Street	Nelson	V1L 4B5	+1 250 352 3591
10602	Kal Tire - Nel #058	76 Baker Street	Nelson	V1L 4G9	+1 250 354 4494
14867	Midas Auto Nelson	618 Lake St	Nelson	V1L 4C8	+1 250 354 4866
13210	Nelson Auto Repair	677 Highway 3A	Nelson	V1L 6M6	+1 250 352 7299
11524	OK Tire Store - Nel	801 Front Street	Nelson	V1L 4B8	+1 250 505 5115
13012	Smokey Creek Salvage Ltd.	Box 96   3445 Yeatman Road	Slocan	VOG 2G0	+1 250 359 7815
15236	Organic Mechanix Auto and Sled Repair	4737 Passmore upper Road	Winlaw	VOG 2J0	+1 250 777 4017
13560	Valley Performance	7322 Hyw 6   RR#1 S-8, C-21	Winlaw	VOG 2J0	+1 250 355 2860



## Committee Report

**Date of Report:** November 27, 2023  
**Date & Type of Meeting:** December 13, 2023 Joint Resource Recovery Committee  
**Author:** Alayne Hamilton, Environmental Projects Lead  
**Subject:** HB TAILINGS FACILITY 2024 SCOPES OF WORK  
**File:** 12-6300-HBD-01  
**Electoral Area/Municipality** Central Sub-Region

### SECTION 1: EXECUTIVE SUMMARY

The purpose of this report is to outline HB Tailings Storage Facility (Facility) scopes of work for 2024, including requesting approval for new scopes of work that will need to commence before the 2024-2028 Financial Plan has been adopted, and a Scope Change Letter for SRK Consulting (Canada) Inc. 2024 Scope of Work.

### SECTION 2: BACKGROUND/ANALYSIS

The HB Remediation and Closure project was completed in September, 2022. Since that time, increased monitoring and facility oversight has been ongoing in order to meet *Mines Act* permit requirements, and confirm the effectiveness of the closure design, as part of the active-care phase of the project. The active-care phase requires increased geotechnical, geochemical and environmental monitoring to confirm the facility is stable and has achieved passive-closure. Once passive-closure has been achieved, the RDCK can apply to the Ministry of Energy, Mines, and Low Carbon Innovation (EMLI) to update the *Mines Act* permit for the Facility to reduce monitoring frequencies.

In April, 2023, some ditching around the site and the lower part of the spillway were damaged in an extreme weather event. The damage was worsened by the lack of established vegetation on the site due to seeding in the fall of 2022. Repair works were undertaken in April, May, and August, 2023, and recent inspections have indicated that the repairs were successful. Additional seed was applied to areas with poor vegetation establishment in May and August. Although the April extreme weather event was not anticipated, the RDCK was able to complete the repair works and do so within the existing 2023 budgets, and a Financial Plan amendment was not required.

Site monitoring and assessment work completed in 2023 included two wildlife monitoring events, one revegetation survey, four groundwater and surface water monitoring events, downstream channel and flume line inspections, a dam safety inspection, weather driven event monitoring, weekly dam inspections, and an inspection by one of the Facility's Independent Tailings Review Board (ITBR) members. Additionally, nine test plots were installed to assess various seed mixes and surface treatments, as required as part of a Reclamation Research Program.

Increased monitoring, as part of the active-care phase of closure, is also required throughout 2024. The 2024 scopes of work at the Facility are broken down in sub-sections for each consultant below. Explanations for each task, whether it is driven by permit requirements, legislation or regulation, and/or recommendations from the Engineer-of-Record (EOR) or Independent Tailings Review Board (ITRB), are also listed.

### **Independent Tailings Review Board Members**

Under the *Mines Act* and the Health, Safety, and Reclamation Code for Mines in British Columbia (Code), which governs activities at mines, all tailings facilities must have an ITRB in place, with the size and make-up of the ITRB based on complexity of the tailings system, in terms of risk, consequence, and disciplines of substance.

The purpose of an ITRB is to provide independent non-binding advice and guidance on the Facility operations, maintenance, and management. As the HB Facility has just undergone a complex closure project, the ITRB currently consists of three members from three separate consulting firms – two senior geotechnical and tailings engineers, and one senior environmental engineer.

For the three ITRB members, the following scopes of work are anticipated in 2024:

1. Review of Annual ITRB Activities Summary Report and the 2024 Dam Safety Inspection Report
2. Participating in meetings, including internal ITRB meetings, or meetings with the RDCK
3. Providing inspection memos and/or responses to questions or comments from the RDCK, EOR, or environmental consultants.

The individual 2022 ITRB Consulting Services Agreements include the full 2024 scope of work and annual costs for each member, at up to \$18,000 per year per consultant. All costs associated with the ITRB activities in 2024 were included in the 2023-2027 Financial Plan, and are included in the draft 2024 budget for Service S187 Central Sub-Region Resource Recovery.

### **Tetra Tech (Canada) Inc**

Tetra Tech (Canada) Inc. was awarded the contract to complete the next Dam Safety Review (DSR) at the Facility.

DSR's are required under the Code. For a dam of this Very High consequence classification, a DSR is required every 5 years, with the last one being completed at the site in 2014. Staff have been requesting variances for delaying the completion of the next DSR through the Ministry due to the additional engineering oversight at the Facility associated with the closure project during the design and construction process. The Ministry has accepted these variance requests, and has allowed for delay of completion for the next DSR final report submission to March 31, 2025.

The DSR process is expected to take approximately 15 months, starting with a kick-off meeting in early December, with the majority of the work being completed in 2024.

All costs associated with the DSR were included in the 2023-2027 Financial Plan; however, at the time of development of the 2023 budgets, staff we're working towards completing \$70,000 of the DSR work in 2023, with an additional \$30,000 assigned to 2024 for completion of the project.

The overall project cost has been reduced by \$44,000 after procurement. Only minor works will be completed in November and December 2023, so much of the original project cost from 2023 has been rolled over to 2024. The revised (reduced) costs are included in the draft 2024 budget for Service S187 Central Sub-Region Resource Recovery.

### **Masse Environmental Consultants Ltd. and ALS Canada Ltd.**

Masse Environmental Consultants Ltd. (Masse) has a 2023 Consulting Services Agreement to complete the routine surface and groundwater quality (4 events) monitoring and reporting, which is required under the Facility's *Mines Act* permit. ALS Canada Ltd. (ALS) has the laboratory analysis contract associated with the sampling that Masse



completes at the Facility. All costs associated with Masse's work at the Facility and ALS's analytics through 2024 were included in the 2023-2027 Financial Plan, and are included in the draft 2024 budget for Service S187 Central Sub-Region Resource Recovery.

### **SLR Consulting (Canada) Ltd.**

SLR Consulting (Canada) Inc. (SLR) acts as the Facility's environmental monitor and qualified environmental professional, and completes all of the *Mines Act* permit and Code related monitoring that is required at the site, with the exception of the routine water quality monitoring (not event driven) which falls under Masse's contract.

The 2024 Scope of Work for SLR includes the following:

#### **Mines Act Permit Associated Tasks**

1. Event driven site inspections and water quality monitoring
  - Required after the site receives 20 mm of precipitation within a 24-hour period.
  - If the site performs well through the 2024 freshet period, staff will look at getting a Qualified Professional recommendation to increase the precipitation amount tied to this inspection requirement.
2. Revegetation monitoring (1 event) in 26, 1x1 m test plots
3. Wildlife monitoring (2 events)
4. Vegetation metals uptake study
  - This study will look at heavy metal bioaccumulation in vegetation that is establishing on the tailings surface. Results of this study will guide future vegetation management on site, as it will outline if deep rooting, woody vegetation is allowed to establish, or if ongoing removal of woody vegetation will be required.
5. Updates to Water Quality Monitoring and Management Plan, and the Environmental Management System
  - Must be completed annually by a Qualified Professional

#### **RDCK Staff Assistance Associated Tasks**

6. General support for regulator, legal, and other stakeholder (non-ITRB) meetings
7. As needed, assistance with required annual reporting or permit amendments
8. Annual flume line and downstream channel inspections
  - Operations, Maintenance, and Surveillance Manual requirement
  - The 2023 inspection did not note any areas of concern. If the 2024 inspection has the same findings, staff will look at getting a Qualified Professional recommendation to remove this inspection requirement.

#### **Code Associated Tasks**

9. Annual Operations, Maintenance, and Surveillance Manual updates for environmental components of the plan
10. Participation in ITRB meetings to discuss environmental items
11. Participation in the DSR process, if required
  - Although the DSR is being completed by Tetra Tech, the guidance for DSR's includes discussion of environmental impacts and failure modes that are non-structural in nature, and are related to meeting the environmental objectives of its design, so this task allows for the Facility's Qualified Environmental Professional to be involved, as needed, in review of those components.
12. Participation in Emergency Preparedness and Response Plan annual test
13. Metal Leaching and Acid Rock Drainage (ML/ARD) monitoring

- Required under the Code and the Policy for Metal Leaching and Acid Rock Drainage at Mine Sites in British Columbia.
- This new scope is the result of a ML/ARD assessment that was completed in Q1 2023 which identified some potentially acid generating rock that had been exposed in the sand and gravel borrow, so a small spring and fall monitoring program has been developed.
- This item is not included in SLR's existing agreement, so it will be captured under a Scope Change Letter, at a total cost of \$7,900, which will be executed in early 2024 once the 2024-2028 Financial Plan has been adopted.

With the exception Task 13 above, all scopes of work and costs were also included in the 2023-2027 Financial Plan, and the March 10, 2023 Consulting Services Agreement. The 2024 scopes of work and all associated costs for SLR were included in the draft 2024 budget for Service S187 Central Sub-Region Resource Recovery.

#### **SRK Consulting (Canada) Inc.**

SRK Consulting (Canada) Inc. (SRK) currently has a contract in place to provide EOR and engineering services for the Facility. SRK has been the engineering lead for the Facility since 2016.

SRK's 2021 Consulting Services Agreement included a total contract value of up to \$200,000 for engineering works associated with closure construction and EOR tasks for facility oversight.

The scope of work for the agreement with SRK was developed in 2021 prior to receipt of the amendment *Mines Act* permit for the Facility, which included a number of new tasks and projects that were not anticipated previously. The original 2021 scope of work in the agreement included EOR tasks, and engineering services (construction oversight) associated with the closure project.

A Scope Change Letter has typically been provided for SRK each year to accommodate the new permit tasks, additional costs, and any new items that were identified in the previous year. SRK has prepared a 2024 Scope of Work and Cost Estimate proposal which is included in Attachment A.

The proposal is broken down into nine tasks with associated sub-tasks. Costs for each task associated with the proposed Scope Change Letter are included in Section 3, with costs for each sub-task detailed in Attachment A. Asterisks on sub-tasks below delineate which items were included in the original 2021 agreement.

The 2024 Scope of Work for SRK includes the following items:

#### **Task 100 – Completion of 2023 In-Progress Tasks**

1. Completion of 2023 Dam Safety Inspection (DSI) Report by March 31, 2024\*
  - Code requirement
2. Completion of Tailings Geochemistry and Monitoring Assessment Report by March 31, 2024
  - *Mines Act* permit requirement

#### **Task 200 - Meetings**

3. Participation in ITRB and Stakeholder Meetings\*
  - ITRB works are required under the Code, and the EOR participates in all formal ITRB meetings.
  - Other stakeholder meetings are required throughout 2024, including with EMLI and Ministry of Environment around permitting items, or with Teck on legal items.

#### Task 300 – EOR Tasks

4. 2024 DSI on-site inspection and issues memo\*
  - Code requirement
5. Ongoing facility monitoring and inspection oversight\*
  - Weekly inspections of the Facility by RDCK staff are reported back to the EOR. This task provides contingency for support to the RDCK's Tailings Storage Facility Qualified Professional and Mine Manager on issues noted during inspections, or responses to requests for adjustments to inspection frequencies based on site conditions.
6. Operations, Maintenance, and Surveillance Manual annual updates\*
  - Code requirement.
  - The majority of the work on this annual update is completed by RDCK staff, but some components require EOR review or input.
7. Risk Register Review
  - Code requirement.
  - This document is reviewed as part of DSI process, and will be updated once the Risk Assessment (Task 700) is completed.
8. DSR Support\*
  - This DSR project is being lead by Tetra Tech; however, EOR interviews are required as part of the DSR process.

#### Task 400 – Permit Support

9. *Mines Act* permit amendment support
  - RDCK staff have submitted an application to EMLI to have the *Mines Act* permit associated areas that cover much of the landfill borrow areas and site roads removed. This task is to provide engineering support for this permit removal process if EMLI requires additional information.
10. Review of ML/ARD report prepared by SLR

#### Task 500 – Piezometer Installations

11. Piezometer installations engineering oversight
  - The ITRB and the EOR have recommended the installation of additional piezometers (instruments within the dam structure that measure water pressures within specific layers of material).
  - The ITRB's recommendation was that additional piezometers should be required to monitor the overall performance of the dam. Previous concerns regarding the dam and the closure plan were driven by the knowledge that there is uncertainty as to the dam cross-sections and location of defects. After closure, the risks are now reduced as low as practicable; however, presuming that things are ok is not the same as knowing.
  - This work is estimated to take 6 days and covers SRK's costs to provide engineering oversight for the project, and final as-constructed reporting.
  - A separate estimate has been included in the draft 2024 budgets for a drilling contractor to complete the piezometer installation. RDCK staff will complete an Invitation to Quote process to secure a drilling contract.

#### Task 600 – Seepage and Stability Analysis Update

12. Seepage analysis update
  - The ITRB and EOR have recommended that a seepage analysis update be completed in 2023 or 2024.
  - Results of the analysis of seepage and slope stability for the revised dam geometry will be used to generate updated trigger elevations (a warning level for instrumentation within the dam) for

incorporation into revisions of the Operations, Maintenance and Surveillance Manual and the Trigger Action Response Plans (TARPs).

- Including revised quantitative performance objectives and TARPs in the Operations, Maintenance and Surveillance Manual is a Code and *Mines Act* permit requirement

#### Task 700 – Risk Assessment

##### 13. Risk Assessment\*

- Risk assessments are a Code requirement to ensure that the quantifiable performance objectives and operating controls are current and manage the facility risks.
- A risk-based approach to dam management is recommended in the Canadian Dam Association guidelines.
- The last risk assessment (Failure Modes and Effects Analysis) was completed in 2018. The ITRB and the EOR have both recommended that a revised risk assessment is completed. Given that site conditions and therefore the risks have change substantially due to closure work, a new risk assessment is required.
- Completion of the Risk Assessment in Q1 will also support the DSR process.

#### Task 800 – As-Needed Support

##### 14. As needed engineering or EOR support

- This task allows for a small contingency for additional support on an as-needed or as-requested basis, which may include but is not limited to unanticipated technical meetings, or freshet repair recommendations.

#### Task 900 – Project Management

##### 15. Budget and cost control, progress updates, as well as non-technical, task-related client meetings\*

*\*Scope of work was included in the original 2021 agreement, but needs to be included in the proposed 2024 Scope Change Letter due to insufficient funding remaining from the original contract value.*

Staff are requesting approval of SRK's full 2024 Scope of Work. Individual costs for each task, as well as costs that need to proceed prior to adoption of the 2024-2028 Financial Plan are discussed in Section 3.

## **SECTION 3: DETAILED ANALYSIS**

### **3.1 Financial Considerations – Cost and Resource Allocations:**

<b>Included in Financial Plan:</b>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<b>Financial Plan Amendment:</b>	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
<b>Debt Bylaw Required:</b>	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<b>Public/Gov't Approvals Required:</b>	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

The total estimated cost for SLR, SRK, Masse, ALS, the ITRB consultants, and a drilling contractor to complete the HB tasks in 2024 is \$530,615.

Although the total costs for all consultants and contractors in 2024 are higher than anticipated, much of it is due to the piezometer installation and risk assessment for \$186,832 which are newly identified tasks; all other tasks are required under the Facility's *Mines Act* permit or the Code.

Scopes of work and costs for Masse, ALS, and the three ITRB members are included in their existing Consulting Services Agreements, the 2023-2027 Financial Plan, and the draft 2024-2028 Financial Plan for Service S187 Central Sub-Region Resource Recovery. For SLR, with the exception of the ML/ARD assessment (\$7,900 not including GST), all scopes of work and costs were also included in the 2023-2027 Financial Plan, and their existing Consulting

Services Agreement. The 2024 scopes of work and all associated costs for SLR were included in the draft 2024 budget for Service S187 Central Sub-Region Resource Recovery, and a minor scope change letter will be drafted to account for the additional \$7,900 associated with the ML/ARD assessment. Additional discussion on costs for these consultants is not provided.

SRK's 2021 Consulting Services Agreement included a total contract value of up to \$200,000. Due to contracting complexities with the closure project, and the project running an extra 5 months longer than anticipated at the time of contract execution, the original budget in the agreement has been exceeded and a scope change letter must be approved for future works. The 2021 agreement with SRK expires on November 16<sup>th</sup>, 2024, so all costs in the Scope of Work are to be completed prior to the expiry date.

The total estimated cost for SRK's 2024 Scope of Work is \$228,117. The cost breakdown of the 2024 tasks for SRK are outlined in Table 1 below, with the detailed costs of each sub-task included in Attachment A:

Task	Description	Total 2024 Costs
100	2023 In-Progress Tasks	\$7,245
200	Client/Regulatory Meetings	\$21,884
300	EOR Routine Tasks	\$32,636
400	Mines Act Permit Support	\$7,035
500	Piezometer Installation	\$66,789**
600	Seepage and Stability Analysis Update	\$28,161**
700	Risk Assessment	\$42,546**
800	As-Needed Support	\$5,000
900	Project Management	\$19,425
	<b>Total</b>	<b>\$228,117</b>

**\*\* New 2024 tasks/costs that were not identified previously in 2023-2027 Financial Plan.**

In the 2023-2027 Financial Plan, \$91,500 was identified for SRK tasks in 2024. As detailed in Section 2, the piezometer installation engineering oversight, seepage and stability analysis update, and the risk assessment, are required new 2024 scopes based on recommendations from the EOR, ITRB, and other stakeholders, or Code requirements tied to scheduling that became apparent after 2023 budget development.

Staff are requesting approval of SRK's full 2024 Scope of Work at a total cost of up to \$228,117 not including GST. Staff are also requesting approval to proceed with the Risk Assessment, and seepage and stability analysis, at a total cost of up to \$70,707 not including GST, prior to adoption of the 2024-2028 Financial Plan, as these tasks were not captured in the 2023-2027 Financial Plan. All costs identified in Table 1 have been included in the draft 2024-2028 Financial Plan for Service S187 Central Sub-Region Resource Recovery. Staff will seek options to reduce the overall cost of all 2024 Scopes of Work, when possible.

If the Board does not wish to approve the full scope of work for SRK prior to the adoption of the 2024-2028 Financial Plan, Staff would request approval now of the risk assessment, and seepage and stability analysis, at a total cost of up to \$70,707 not including GST. These tasks should be started in the first quarter of 2024, and were not captured previously in the 2023-27 Financial Plan. Staff would like to note that all 2024 tasks for SRK should be considered as essential, and that the remaining portions of the 2024 Scope of Work would need to be considered once the 2024-2028 Financial Plan has been adopted. This option would not reduce the overall costs for 2024 for SRK, and instead would require multiple Scope Change Letters, a second Committee meeting to approve the remaining scope, and would likely cause delays to SRK's ability to start additional tasks if they have the capacity to do so.

### **3.2 Legislative Considerations (Applicable Policies and/or Bylaws):**

None at this time.

### **3.3 Environmental Considerations**

None at this time.

### **3.4 Social Considerations:**

None at this time.

### **3.5 Economic Considerations:**

None at this time.

### **3.6 Communication Considerations:**

None at this time.

### **3.7 Staffing/Departmental Workplace Considerations:**

The HB Remediation and Closure Project will continue to be the focus of the Environmental Projects Lead (HB Tailings Storage Facility Qualified Professional) with support from the Resource Recovery Manager (HB Mine Manager and Environmental Site Manager).

### **3.8 Board Strategic Plan/Priorities Considerations:**

None at this time.

## **SECTION 4: OPTIONS & PROS / CONS**

### **FOR SRK CONSULTING (CANADA) INC.**

**Option 1:** That the Board accept the proposed 2024 Scope of Work submitted by SRK Consulting (Canada) Inc. for Engineer-of-Record tasks and engineering support at the HB Mine Tailings Facility in the amount of up to \$228,117 not including GST; AND FURTHER that the Board Chair and Corporate Officer be authorized to sign the necessary documents; AND FURTHER that the Board direct staff to include the funds in the 2024-2028 Financial Plan for Service S187.

#### **PROS:**

- Allows HB active-care phase assessments to proceed under current timelines, as outlined in the Facility's *Mines Act* permit.
- All works are required based on recommendations from the EOR and ITRB, or are permit or Code requirements.

#### **CONS:**

- Provides large Scope Changes to consultant prior to adoption of 2024-2028 Financial Plan.

**Option 2:** That the Board approve the risk assessment and seepage and stability analysis tasks of the proposed 2024 Scope of Work submitted by SRK Consulting (Canada) Inc. at a total cost of up to \$70,707 not including GST; AND FURTHER that the Board direct staff to include the funds in the 2024-2028 Financial Plan for Service S187; AND FURTHER That the remaining portions of the 2024 Scope of Work will be considered once the 2024-2028 Financial Plan has been adopted.

**PROS:**

- Allows HB works that were not captured in the 2023-2027 Financial Plan to proceed under current timelines.
- Provides the Risk Assessment information in a timely manner to be used in the Dam Safety Review.

**CONS:**

- Requires multiple Scope Change Letters and multiple Committee meetings.
- All SRK tasks in 2024 are considered to be essential, so splitting the approved works may delay starting some components, if SRK has capacity to do so.

**Option 3: That the Board does not approve the 2024 Scopes of Work and cost estimates for SRK Consulting (Canada) Inc. at this time.**

**PROS:**

- None noted.

**CONS:**

- Would delay monitoring and assessment work that needs to commence now, which could jeopardize the the RDCK's ability to meet permit timelines around final submission of all monitoring documentation to EMLI.
- Would put the Facility out of compliance, which carries additional risk.

## SECTION 5: RECOMMENDATIONS

That the Board accept the proposed 2024 Scope of Work submitted by SRK Consulting (Canada) Inc. for Engineer-of-Record tasks and engineering support at the HB Mine Tailings Facility in the amount of up to \$228,117 not including GST;

AND FURTHER that the Board Chair and Corporate Officer be authorized to sign the necessary documents;

AND FURTHER that the Board direct staff to include the funds in the 2024-2028 Financial Plan for Service S187.

Respectfully submitted,



Alayne Hamilton – Environmental Projects Lead

## CONCURRENCE

Resource Recovery Manager – Amy Wilson

General Manager of Environmental Services – Uli Wolf

GM Finance, IT and Economic Development – Yev Malloff

Chief Administrative Officer – Stuart Horn

**ATTACHMENTS:**

**Attachment A – SRK Consulting (Canada) Inc. Draft 2024 Scope of Work and Cost Estimate**



December 4, 2023

HB Mine Tailings Facility Technologist  
Regional District of Central Kootenay  
Box 590, 202 Lakeside Drive  
Nelson, BC, V1L 5R4

**Attention** Alayne Hamilton  
**Subject** **HB Mine Tailings Facility – 2024 Scope of Work – EOR Services – REV02**  
**Project** CAPR002500

SRK Consulting (Canada) Inc. is pleased to submit this proposal outlining the 2024 scope of work to provide Engineer of Record (EOR) services for the HB Mine Tailings Facility under a Consulting Services Agreement dated September 3, 2021. This letter presents SRK's scope of work plan, team, schedule, and cost estimate.

## 1 Statement of Work

Individual tasks are listed below and described in the following sections.

- Task 100 – Completion of 2023 In-Progress Tasks
- Task 200 – ITRB and Regulatory Meetings
- Task 300 – Engineer-of-Record Tasks
- Task 400 – Mines Act Permit Support
- Task 500 – Piezometer Installations
- Task 600 – Risk Assessment
- Task 700 – Project Management

### 1.1 Task 100 – Completion 2023 In-progress Tasks

This task provides an allowance for the following reports that may not be completed by the end of 2023:

- 2023 Dam Safety Inspection Report
- Tailings Geochemistry Monitoring and Assessment Report.



For this draft, the cost estimate assumes a nominal budget for completion of these tasks assuming that they are mostly completed by the end of the year. The budget amounts will be updated in the final scope of work proposal.

## 1.2 Task 200 – ITRB and Regulatory Meetings

This task allows for SRK to participate in technical and non-technical meetings with the Internal Tailings Review Board (ITRB) and other potential meetings with the regulatory agencies. Costs for this task assume:

- One ITRB meeting (4-hrs) is held via web-conference call and includes time to prepare PowerPoint Presentations that assume:
  - 8 hours of Christina James's time to prepare and present on water quality data assuming that the water quality predictions are updated as part of the Reclamation and Closure Plan (RCP) update.
  - 6 hours of Cesar Oboni's time to prepare and present on the semi-quantitative risk assessment.
- Two regulatory meetings to discuss various site issues. One meeting is assumed to take place on-site (8 hours) and the other by web-conference call (2 hours). The web-conference call includes 30 hours of Peter Mikes' time to prepare a PowerPoint Presentations and to respond to regulatory inquiries.

## 1.3 Task 300 – Engineer-of-Record Tasks

The EOR tasks include the 2024 DSI, an allowance for ongoing facility oversight and monitoring, updates to the OMS Manual and risk register, and support for the 2024 Dam Safety Review.

### 1.3.1 Subtask 301 – 2024 Dam Safety Inspection

This allows for the following:

- Review of the routine dam inspection forms, climatic data, and monitoring data.
- Site inspection of the dam by the EOR and interviews with RDCK staff to flag performance issues or observations since the last inspection. The inspection is to be completed following completion of the construction works.
- Preparation of the DSI report.

The DSI report will conform to Canadian Dam Association and EMLI guidelines for annual DSI reports. The RDCK will be contacted immediately following the investigation should any geotechnical concerns be noted during the site inspection. The draft report will be submitted for review following collection and review of 2024 monitoring data. The report will be finalized following receipt of RDCK comments.

### **1.3.2 Subtask 302 – On-going Facility Monitoring and Inspection Oversight**

This task allows for general facility over-site, consultation, and any additional monitoring or inspections that may arise throughout the year. This task assumes an average of 4 hours per month is needed for the EOR.

As part of this task, SRK will review the annual survey hub readings at the dam. Costs to complete the survey are excluded from the scope of work and assumed to be contracted directly to the RDCK.

### **1.3.3 Subtask 303 – OMS Manual Update**

This task allows for general support for the 2024 review of the OMS Manual and recommended updates.

### **1.3.4 Subtask 304 – Risk Register Review**

A Failure Modes and Effects Analysis (FMEA) workshop was completed in 2017 on the preliminary closure design. The results of the FMEA were adapted into a risk register that was updated based the final remediation and closure design. This task allows for a review and update to the risk register based on the constructed works.

Task 700 allows for the completion of a screening-level quantitative risk assessment (QRA) of the tailings facility. As part of that work, the risk register will be updated to incorporate the results of the QRA.

### **1.3.5 Subtask 305 – DSR Support**

This task allows for SRK to support a Dam Safety Review (DSR) to be completed by an independent engineer contracted directly to the RDCK. This task assumes a total of 8 hours is required, with the support expected to consist of an interview and compilation of design documents.

## **1.4 Task 400 – Mines Act Permit Support**

Task 400 allows for support related to the M-218 permit.

### **1.4.1 Subtask 401 – Permit Amendment for Removal of Borrows**

The RDCK is currently in discussions with EMLI on the potential removal of the borrow area and landfill roads from the M-218 Permit. This task allows for SRK to support the permit amendment and assumes a total of 16 hours is required that is spread amongst the EOR (12 hours) and drafting (4 hours).

### 1.4.2 Subtask 402 – ML/ARD Report Review

This task allows for SRK to review the ML/ARD report that is to be prepared by SLR Consulting and assumes 2 hours is required of the EOR, and 6 hours by senior-level geochemist.

## 1.5 Task 500 – Piezometer Installation

Additional piezometers have been recommended to be installed to monitor the performance of the dam at the following locations:

1. Two piezometers installed in a single borehole located on the dam crest west of the existing piezometers along a cross-section that passes through existing piezometer P3. (Estimated drilling depth = 25 m).
2. A single piezometer installed in the tailings pond backfill area along a cross-section that passes through existing piezometers P1, P2, P5 and P6. The purpose of this piezometer is to measure the water level in the tailings upstream of the dam. (Estimated drilling depth = 10 m)
3. Three piezometers installed in two boreholes located along a cross-section at the east end of the toe berm. One borehole will be located at the dam crest with two piezometers and one borehole with a single piezometer at the dam toe. (Estimated drilling depth = 30 m each)

The piezometers are to consist of vibrating wire piezometers that will be connected to data loggers. Additional piezometers will be procured to be installed in the existing stand-pipe piezometers. SRK will co-ordinate the instrumentation design with RST and will work with the RDCK to modify the instrumentation design to fit within RDCK budget constraints.

Given that drilling is required to install the instrumentation, geotechnical data is recommended to be collected to improve the understanding of the dam and foundation materials. The field investigation is recommended to be completed with a sonic drill rig with Standard Penetration Testing (SPT) capabilities. The drilling contractor and material costs will be incurred directly by the RDCK while fees for engineering support, reporting and laboratory costs will be invoiced by SRK.

Disturbed soil samples will be collected for geotechnical testing. At this time, the laboratory program is assumed to consist of basic soil index tests to confirm the interpretation of the soils in the borehole logs developed by the SRK field engineer. The sample analysis requirements will depend on field/site conditions and adjustments will be made to the laboratory program following drilling.

For budgeting purposes, the drilling program assumes:

- Six days of drilling (12 hours/day)
- A total of 12 hours of travel time for a SRK junior-level engineer based in Vancouver
- One day site visit by the EOR during the drilling kick-off
- Estimated laboratory testing costs are based on recent quotes for up to the following:
  - 12 particle size distributions and moisture contents
  - 8 Atterberg limits.

A site investigation factual report will be prepared that summarizes the field investigation activities, presents the laboratory testing results, drillhole logs.

## **1.6 Task 600 – Seepage and Stability Analysis Update**

This task allows SRK to update the seepage and stability analyses and to develop updated trigger criteria for all the dam piezometers as part of the Trigger Action Response Plan (TARP).

### **1.6.1 Subtask 1: Dam Cross Sections**

Dam cross-sections along the piezometer instrumentation will be reviewed and updated based on the borehole logs from the new piezometer installations (Task 500).

### **1.6.2 Subtask 2: Seepage Analysis**

A two-dimension (2D) finite element seepage model will be developed at each of the three instrumented dam cross sections that will be calibrated with the piezometer instrumentation results and used as an input for the stability analyses update.

### **1.6.3 Subtask 3: Stability and Pore Pressure Trigger Analysis**

An update to the 2019 2D limit equilibrium stability analyses will be completed using the as-built surface and updated dam geometries determined from Subtask 1.

TARP triggers for the piezometers will be determined based on the 2D stability modelling and based on historic performance of the facility. A sensitivity analyses will be completed with the stability model that varies the pore pressures in the embankment and foundation to achieve various target Factors of Safety (FOS). For each target FOS, the resulting pore pressures at each piezometer will then form the trigger criteria.

### **1.6.4 Subtask 4: Reporting**

A stand-alone report will be prepared that presents the work completed and outlines the TARP for each instrument, as well as the roles and responsibilities of SRK and the RDCK related to surveillance. The resulting TARP will then be updated in the OMS Manual.

## **1.7 Task 700 – Screening-Level Quantifiable Risk Assessment**

The objective of the proposed work is to assess the risk of the HBTF Dam in order to:

- Benchmark TSF risks relative to global standards,
- Understand how current risks compare to the RDCK risk tolerance, and
- Identify where further studies or risk reduction measures may be required.

To meet these objectives, SRK will combine our local expertise and knowledge of the site with the risk screening tools developed by Riskope ([www.riskope.com](http://www.riskope.com)). SRK and Riskope have been working together on tailings risk assessments for five years and the two companies merged earlier this year.

This work will be undertaken as a desktop exercise. Our analysis will focus on the following three dam segments in their current state, i.e., “as-is” without incorporating any further remediation or risk reduction measures:

- West Abutment Segment (2012 Dam Repair area)
- Central Valley Segment (Toe Berm area)
- East Abutment Segment (area east of the Toe Berm)

Should the RDCK express interest in evaluating the effectiveness of further risk reduction measures depending on the initial results, we can explore these possibilities under a separate or extended scope.

The tasks required to complete the work are described in the following subsections.

### 1.7.1 Subtask 1: Review of Available Information

The risk assessment will require information on the following to reflect what we consider the ten components of safe TSFs:

1. Design Inputs
2. Geotechnical
3. Hydrotechnical
4. Environmental
5. Operational history (past incidents) and Controls
6. Design for Closure
7. Emergency Preparedness
8. Prior Risk Assessment
9. Governance
10. Documentation

As this time, SRK believes that we have all the pertinent information required for the risk assessment. If gaps are identified during the QRA (Subtask 3), information requests will be submitted.

### 1.7.2 Subtask 2: Development of Tolerance Thresholds

SRK will assist the RDCK with the development of tolerance thresholds, assuming none are available. A two-hour conference call is assumed to be required where SRK will guide the RDCK through the process of developing a risk tolerance curve (see Figure 2) allowing risks to be categorized as ‘tolerable’ or ‘intolerable’.

### 1.7.3 Subtask 3: Screening-Level QRA

The screening level QRA for each dam segment (3) will be implemented using ‘ORE2\_Tailings<sup>(tm)</sup>’ methodology which uses over 30 Key Performance Indicators (KPIs). The KPIs will be defined based on review and interpretation of the available data. Key considerations include quality of the following:

- Investigation and testing
- Design and analysis
- Construction, and
- Operations, monitoring and maintenance

These qualitative KPIs will then be combined with the results of engineering analyses also extracted from the available data which can include, but is not limited to:

- Factor of safety results from static, pseudo-static, and post-seismic stability analyses
- Definitions of seismic and hydrologic hazard events
- Water balance predictions and
- Liquefaction assessments

The results of the analysis will include estimated probabilities of failure and how they compare to the TSFs global database historic performance. It will also identify key ‘causalities’, i.e., the most influential factors affecting the probability of failure to highlight where additional information or risk reduction measures may be required. The probabilities of failure can be plotted together with consequences extracted from the available data and compared to societal (a selection of published and well-known societal thresholds will be proposed) and the newly developed tolerance thresholds.

The results from each screening-level QRA will be compiled to facilitate comparisons and prioritizations. Key results from the portfolio review and benchmarking will include:

- Summaries of key patterns and findings from the screening-level QRAs
- Plots showing comparisons of where the TSF’s three dam segments risks rank relative to each other and compared to the global database
- Recommendations on how to reduce uncertainties through additional investigations (if required)
- Recommended priority areas for risk reduction (if required)

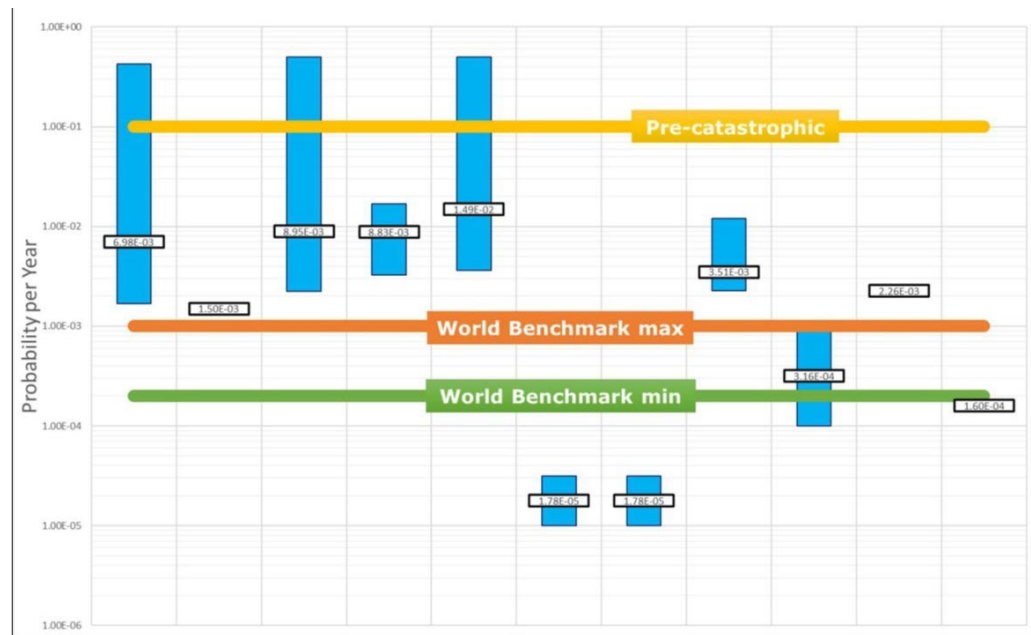
The figures below provide an example of outputs that can be expected from the analysis with additional information provided in Attachment 1.

Figure 1 shows the probability of failure of each dam in a portfolio compared to lines representing benchmarks from the global case history database. The length of the blue markers represents the range of uncertainty in the probability of failure estimates.

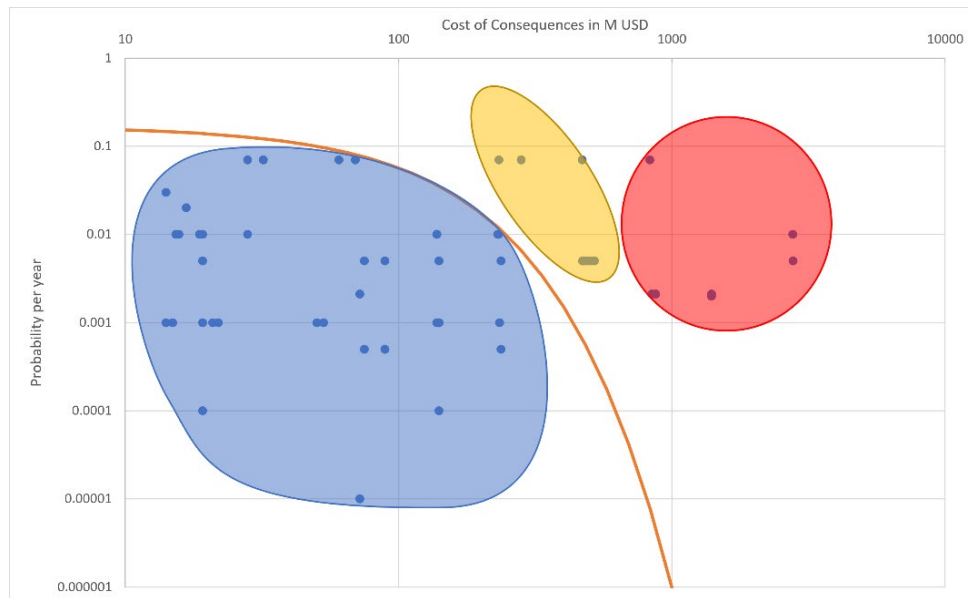
Figure 2 shows a probability-cost plot for a portfolio of dams with a tolerability line in orange. This type of plot shows which dams have risks that are within a company’s risk tolerance (blue zone), which

dams have risks that are above risk tolerance but could be mitigated with strong management (yellow zone), and which dams have intolerable risks.

**Figure 1: Example plot comparing annualized probability of failure for portfolio dams to the world-wide tailings dam benchmarks**



**Figure 2:** Example probability vs cost consequence plot with illustrative tolerability line (in orange) allowing risks to be categorized as ‘tolerable’ (blue bubble), ‘intolerable but requiring management’ (yellow bubble) or ‘intolerable’ (red bubble).



#### 1.7.4 Subtask 4: Presentation and Reporting

This task allows for the preparation of report and presentation deliverables. The expected deliverables will consist of the following:

1. A Screening-level QRA report that will include a summary of the key findings including benchmarking, comparison to the RDCKs risk tolerance, and identification of where future studies or risk reduction measures may be required.
2. A summary slide deck suitable for board-level discussions.

All deliverables will first be issued as drafts, and final reports and presentations following receipt and incorporation of feedback from the RDCK.

### 1.8 Task 800 – As-needed/As-requested Support

This task allows SRK to provide other engineering related support on an as-needed or as-requested basis. A budget of \$5,000 has been allocated to provide this support.

### 1.9 Task 900 – Project Management

This task allows for the day-to-day project management activities of the project. This includes budget and cost control, progress updates, as well as non-technical, task related client meetings.



## 2 Project Team, Deliverables, and Schedule

The Project Manager (PM) and client contact for the project will be Peter Mikes, PEng. He will be fully accountable for the entire project, including quality, schedule, and cost, and will be responsible for the execution of the project tasks. Peter will also act as the Project Principal and will ensure that the quality requirements are clearly defined and followed during the entire execution of the project.

Trevor Podaima, PEng, will be the Project Reviewer (PR) for all documents except for the Task 700 Risk Assessment, where Holly Williams will be project reviewer. Trevor will assist the PM in selecting the project team, assign personnel to review the project as it progresses, and review final deliverables.

The core team identified to complete this scope of work is shown in Table 2, while Table 3 provides a summary of the deliverables described in the statement of work, along with the expected authors and reviewers for each deliverable and expected deliverable schedule.

**Table 1: Proposed Core SRK Team Members**

Professional	Staff Category	Responsibility
Peter Mikes	Principal Consultant	Project Manager, Engineer-of-Record, and SRK lead for the RCP update including cost estimate and Closure Management Manual.
Trevor Podaima	Practice Leader	Project Reviewer (Geotechnical Engineer)
Franco Oboni	Corporate Consultant	Risk expert to provide project advice for the risk assessment
Cesar Oboni	Principal Consultant	Risk expert to oversee the risk assessment.
Christina James	Principal Consultant	Lead for the Water Quality Prediction Model Update
Stephen Day	Principal Consultant	Senior reviewer for tailings geochemistry.
Holly Williams	Senior Consultant	Overall Risk Assessment Reviewer
Rob Klein	Senior Consultant	Water Quality Prediction Model Update support
Jonathan Doherty	Senior Consultant	Tailings geochemistry lead.
Jeff Clarke	Senior Consultant	As-needed support for ML/ARD issues
Stuart McPhee	Senior Consultant	Geotechnical engineering and closure plan support

**Table 2: Project Deliverables and Milestone Schedule**

<b>Task No.</b>	<b>Deliverable</b>	<b>Lead and Contributing Authors</b>	<b>Reviewers</b>	<b>Schedule</b>
101	2023 DSI Report	Peter Mikes	Trevor Podaima	<ul style="list-style-type: none"> <li>■ Draft: February 1, 2024.</li> <li>■ Final: Must be submitted to EMLI by March 31, 2024.</li> </ul>
102	Tailings Geochemistry Monitoring and Assessment Report	Contributors: Jonathon Doherty, Peter Mikes	Steve Day	<ul style="list-style-type: none"> <li>■ Draft: February 1, 2024.</li> <li>■ Final: Must be submitted to EMLI by March 31, 2024.</li> </ul>
200	ITRB Presentation	Lead: Peter Mikes Contributors: Christina James, Cesar Oboni	Trevor Podaima	<ul style="list-style-type: none"> <li>■ Timing to be determined. Recommended to occur in the fall of 2024 after completion of the risk assessment, piezometer installation, and water quality prediction model update.</li> </ul>
300	2024 DSI Report	Peter Mikes	Trevor Podaima	<ul style="list-style-type: none"> <li>■ Draft: December 1, 2024.</li> <li>■ Final: Must be submitted to EMLI by March 31, 2025.</li> </ul>
501	Piezometer Instrumentation Design	To be determined.	Peter Mikes	<ul style="list-style-type: none"> <li>■ Draft: March 31, 2024.</li> </ul>
502	Piezometer Installation As-built Report	To be determined.	Peter Mikes	<ul style="list-style-type: none"> <li>■ Draft: 8 weeks after completion of drilling program.</li> </ul>
600	Seepage and Stability Analysis Update	To be determined based on availability: One of Bryce Marcotte, Adam Leik, or Ignacio Cueto	Trevor Podaima, Peter Mikes	<ul style="list-style-type: none"> <li>■ TBD: Work to start after completion of drilling program with an estimated two-month duration.</li> </ul>
704	Screening-level QRA Report	Lead: Cesar Oboni Contributors: Peter Mikes, Franco Oboni.	Holly Williams	<ul style="list-style-type: none"> <li>■ Draft: July 1, 2024.</li> <li>■ Final: Three weeks after receipt of review comments.</li> </ul>

### 3 Cost Estimate

Table 3 provides an estimate of the costs (including expenses) for completing the tasks as outlined in this scope of work. For Task 100 that is in progress, the costs estimated to reflect estimated remaining budgets as of December 31, 2023. A detailed breakdown of the estimate is included in Attachment 2. These costs are an estimate of the level of effort required; and only actual hours worked on the project will be invoiced.

**Table 3: Cost Estimate**

Task No.	Task Description	Task Totals
100	Completion of 2023 Tasks	\$7,245
200	ITRB/Teck Meetings	\$21,884
300	Engineer-of-Record Routine Tasks	\$32,636
400	Mines Act Permit Support	\$7,035
500	Piezometer Installation	\$66,789
600	Seepage and Stability Analysis Update	\$28,161
700	Screening-level QRA	
1	Review of available information	\$1,701
2	Development of Risk Tolerances	\$6,279
3	Screening-Level QRA	\$17,346
4	Reporting	\$17,220
800	As-needed/As-requested Support	\$5,000
900	Project Management	\$19,425
<b>Total</b>		<b>\$228,117</b>

Sources: [https://srk.sharepoint.com/sites/NACAPR002500/Internal/I010\\_Management/2024\\_Proposal/02\\_Cost%20Estimate/Budget\\_HBTF\\_2024\\_rev00.xlsx?web=1](https://srk.sharepoint.com/sites/NACAPR002500/Internal/I010_Management/2024_Proposal/02_Cost%20Estimate/Budget_HBTF_2024_rev00.xlsx?web=1)

Professional fees and expenses are invoiced monthly. Hourly rates will be billed as per the terms of the September 3, 2021, Consulting Services agreement extension. Field, office, and travel time is charged according to our standard hourly fee structure for actual hours engaged. Eligible expenses are billed at cost plus 10%. Miscellaneous office and administrative expenses are billed at 5% of professional fees. Document assembly, document shipping, and conference call expenses may be billed separately. Should the work scope change significantly, SRK will communicate associated fee and expense changes to RDCK and obtain written authorization before proceeding with any additional work.

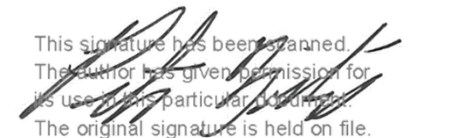
### 4 Contracting

The work will be conducted according to our Consulting Services Agreement executed on September 3, 2021.

## 5 Closure

We trust this scope of work meets with your approval. Please contact Peter Mikes at (604) 681.4196 if you have any questions or concerns.

Regards,  
SRK Consulting (Canada) Inc.

  
This signature has been scanned.  
The author has given permission for  
its use in this particular document.  
The original signature is held on file.

Peter Mikes  
Principal Consultant

### Attachments:

Attachment 1 – Quantitative Risk Assessment  
Attachment 2 - Detailed Cost Estimate

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**Canada**      Saskatoon 306 955 4778 // Sudbury 705 682 3270 // Toronto 416 601 1445 // Vancouver 604 681 4196 // Yellowknife 867 873 8670

**United States**      Anchorage 907 677 3520 // Clovis 559 452 0182 // Denver 303 985 1333 // Elko 775 753 4151 // Reno 775 828 6800 // Tucson 520 544 3688

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**AFRICA ■ ASIA ■ AUSTRALIA ■ EUROPE ■ NORTH AMERICA ■ SOUTH AMERICA**

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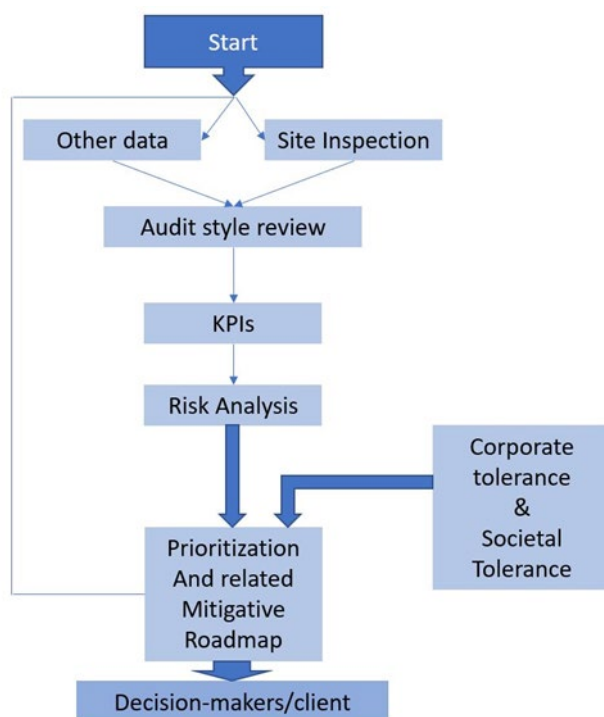
## **Attachment 1 – Quantitative Risk Assessment**

## Attachment 1: QRA Approach

The proposed QRA will be implemented combined SRK-RISKOPE deployment of the ORE methodology, which described in terms of diagnostic points, over 30 Key Performance Indicators (KPIs), failure definition and dam hazard characterization. The screening analysis will be based on the subject matter expert reviews, participation in the Phase 1 PFMA and FEMA (in lieu of site visits) and review of available data.

The analysis is an a priori endeavor in so far as it delivers estimates that require calibration and adaptation as data and assumptions are refined.

ORE2\_Tailings™ used diagnostic “points” in the history of the dam from inception to the day of the evaluation as well as data and information related to ancillary water management, pipelines, water balance and other KPIs (to be determined based on Core team consensus). The diagnostic “points”, which become KPIs (Key Performance Indicators)/or KRIs (Key Risk Indicators), will be combined with the results of engineering analyses (Factor of Safety, settlements, liquefaction, etc.), as well as information drawn from the history of the structure and the results of the PFMA and FMEA workshopping.



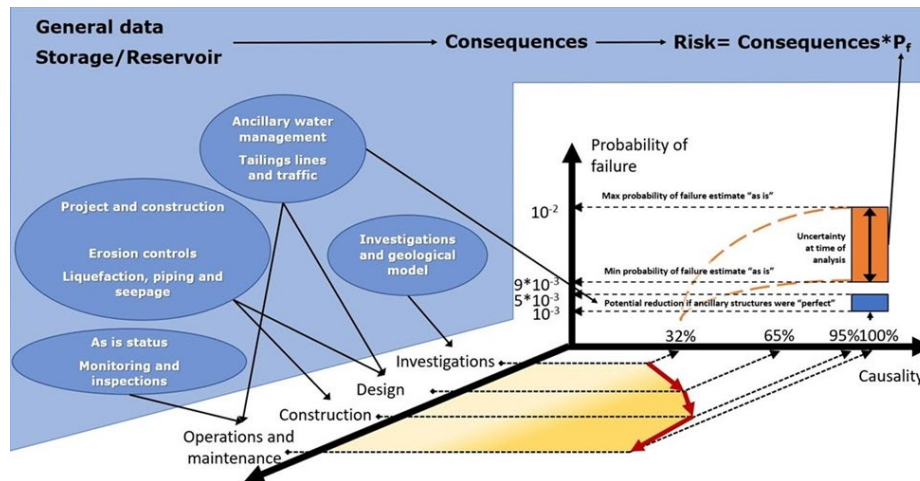
The evaluations of the KPIs/KRIs are mathematically combined in the risk analysis, where consequences of a failure and probabilities generate the risk evaluation, including related uncertainties. Explicit consideration of uncertainties is indeed a fundamental step towards reasonable and defensible risk assessments. ORE2\_Tailings™ always considers the dams and their respective (or common in some cases) ancillary water management systems.

The KPIs/KRIs cover the life of the dam system from inception and converge on “families” of causality:

- investigation and material testing;
- design;
- construction and finally;
- operations and maintenance (including monitoring).

Causality analysis can be paramount in guiding mitigative decision-making.

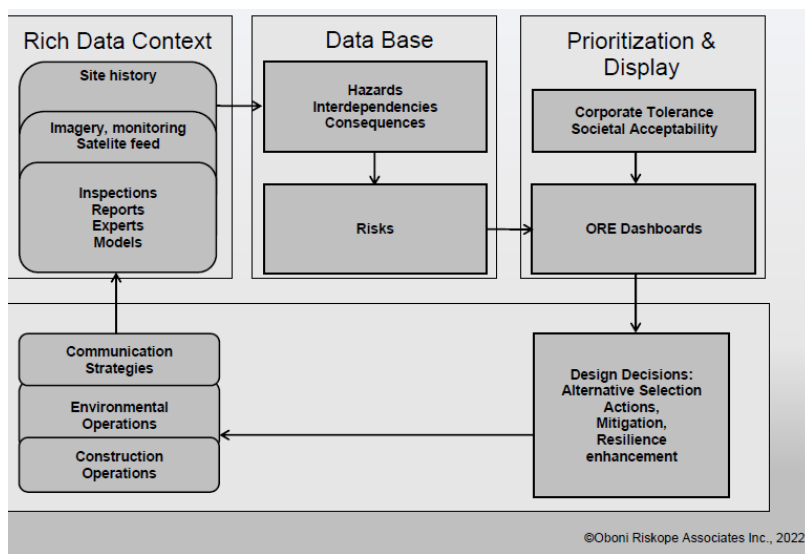
The figure below conceptually displays the combination of the KPIs in the four aggregated causality families, the probability of failure, consequences and hence risk.



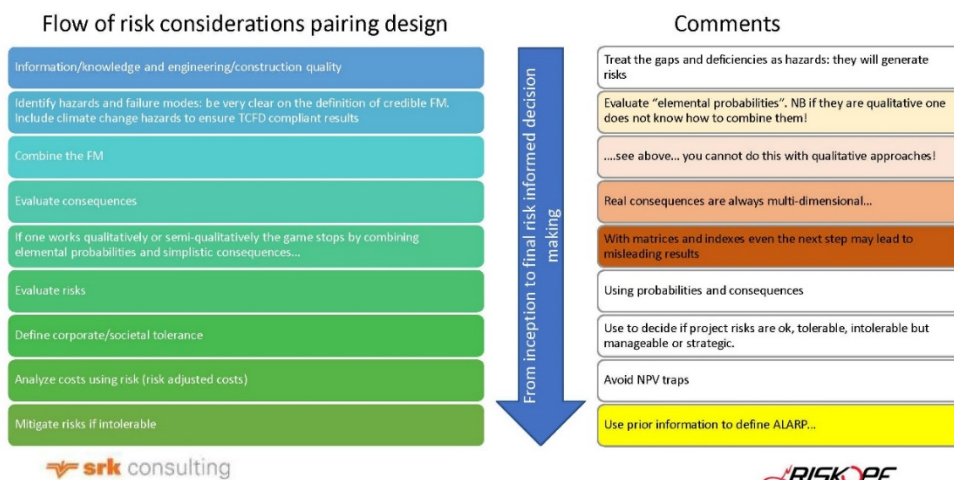
As it can be seen in the illustration above, the probability of failure resulting from the composition of the KPIs evolves all along the dam life while it maintains a certain level of uncertainties.

Evaluation of consequences, consequences metric and risk tolerance are either developed with the client or as or delivered/evaluated by client.

The dashboard and overall approach is presented graphically below:

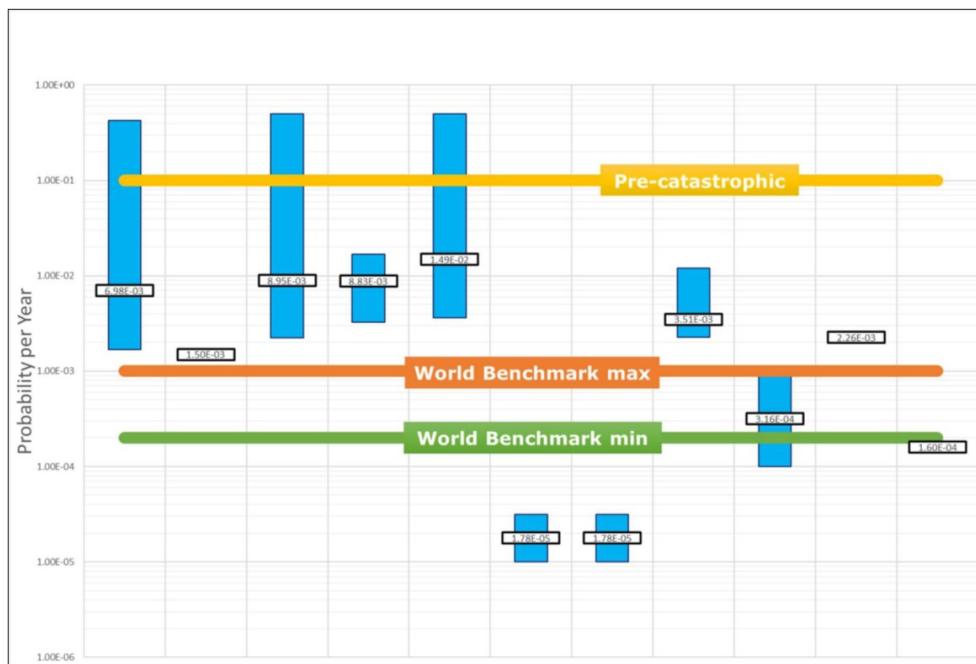
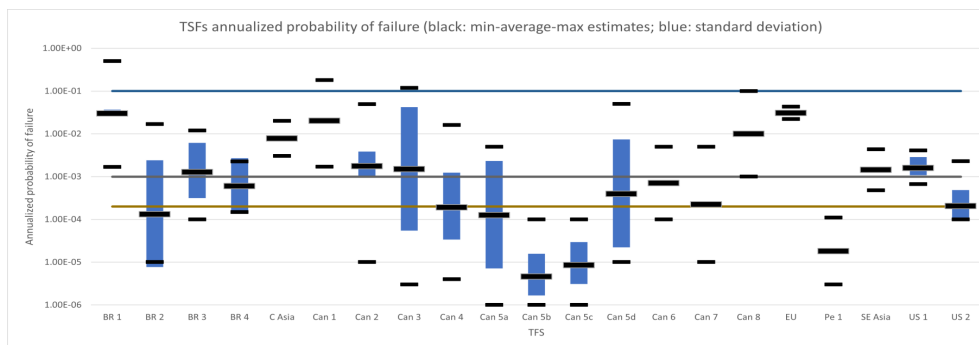


## Risk informed projects should pair design and risk since inception



The probabilities estimated using ORE2\_Tailings™ can be presented in a graphical format where the probability for each dam is plotted against the world-wide benchmarking minimum/maximum levels and pre-catastrophic conditions. The figures below show examples of Synthesis Reporting for a Portfolio of Dams and for a Single Dam, respectively, for a recent SRK/RISKOPE team project, where a similar combined Screening Level Approach was implemented.

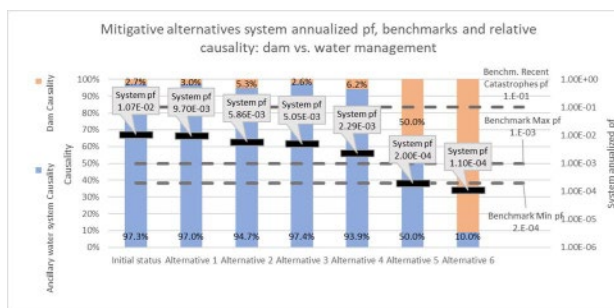




## Probabilities of failure, macro-causality of each alternative

Each alternative's causality is split between the Dam vs. Ancillary water system including the creek.

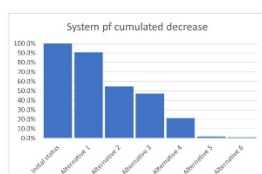
These jointly cause the annualized System pf.



For each dam a minimum/maximum estimated value of the ORE2\_Tailings™ probability and the central geometric mean value are plotted against the world-wide benchmark for catastrophic failures. Hazard benchmarking in this manner is based on the probability of failure, disregarding the consequences, hence significantly differs from a full risk prioritization that should include the analysis of all the possible dimensions of failures' consequences.

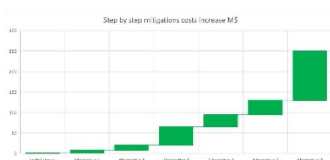
First step: mitigation influence on pf decrease and related implementation costs.

System pf cumulated decrease as a function of the mitigation alternative/stage.



Notice that after alternative 4 the probability of failure remain almost constant.

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In this example, the mitigation costs follow a steeper than linear evolution across the mitigative stages.

RISKOPE

RISKOPE's approach is in general accordance with the international standards of practice, including GISTM, and is compliant with ISO 310006.

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## **Attachment 2 - Detailed Cost Estimate**

srk consulting		HB Mine Tailings Facility - 2024 Engineer of Record Services																								
Task	ACTIVITY	Principal Consultant (Trevor Podaima)	Principal Consultant (Peter Mikes)	Principal Consultant (Steve Day)	Corporate Consultant (Franco Oboni)	Principal Consultant (Christina James)	Principal Consultant (Cesar Oboni)	Senior Consultant (Holly Williams)	Senior Consultant (Jeff Clark)	Senior Consultant (Jonathon Doherty)	Senior Consultant (Igancio Cuerto)	Senior Consultant (Stu MacPhee)	Consultant	Civil Designer/ Draftsperson	Project Coordinator	Professional Fees	Dispersements					Office Fees	Disb. & Office	Subtotal	Totals	
																	Air	Ground	Hotel/Meals	Lab Testing / Equipment	Total					
100	Completion of 2023 Tasks																									
1	2023 Dam Safety Inspection	4	8														\$3,000.00					\$0	\$150	\$150	\$3,150	\$7,245
2	Tailings Geochemistry Monitoring and Assessment Report		4	4						8							\$3,900.00					\$0	\$195	\$195	\$4,095	
200	Meetings																									
1	ITRB	2	24			8	6										\$9,760.00					\$0	\$488	\$488	\$10,248	\$15,248
2	Teck		18														\$4,500.00		\$250			\$250	\$225	\$500	\$5,000	
300	Engineer-of-Record Routine Tasks																									
1	2024 Dam Safety Inspection	4	42												2		\$11,740.00		\$250			\$250	\$587	\$862	\$12,602	\$32,027
2	On-going Facility Monitoring & Inspection Oversight		40														\$10,000.00					\$0	\$500	\$500	\$10,500	
3	OMS Review		10														\$2,500.00					\$0	\$125	\$125	\$2,625	
4	Risk Register Review	4	12														\$4,000.00					\$0	\$200	\$200	\$4,200	
5	DSR Support		8														\$2,000.00					\$0	\$100	\$100	\$2,100	
400	Mines Act Permit Support																									
1	Removal of Borrow Areas/Roads from Permit		12											4			\$3,560.00					\$0	\$178	\$178	\$3,738	\$7,035
2	ML/ARD Report Review		2						16								\$3,140.00					\$0	\$157	\$157	\$3,297	
500	Piezometer Installation																									
1	Instrumentation Design	2	8								16						\$5,060.00					\$0	\$253	\$253	\$5,313	\$71,430
2	Field Programing Planning and Coordination		4								8		24				\$5,760.00					\$0	\$288	\$288	\$6,048	
3	Field Program Execution												96				\$13,920.00	\$1,000	\$1,750	\$1,750	\$15,000	\$696	\$22,146	\$36,066		
4	As-built Reporting	4	24										100	8	2		\$22,860.00					\$0	\$1,143	\$1,143	\$24,003	
600	Seepage and Stability Analysis Update																									
1	Updated Dam Cross-sections		2								12			2			\$2,700.00					\$0	\$135	\$135	\$2,835	\$28,161
2	Seepage Analysis		4								32						\$6,120.00					\$0	\$306	\$306	\$6,426	
3	Stability Pore Pressure Trigger Analysis	2	4								40						\$7,900.00					\$0	\$395	\$395	\$8,295	
4	Reporting and TARP Recommendations	2	16								32				4		\$10,100.00					\$0	\$505	\$505	\$10,605	
700	Screening Level QRA																									
1	Review of Available Information		2		2		2										\$1,620.00					\$0	\$81	\$81	\$1,701	\$42,546
2	Development of Risk Tolerances		6		8		8										\$5,980.00					\$0	\$299	\$299	\$6,279	
3	Screening-Level QRA		24		16		16	8									\$16,520.00					\$0	\$826	\$826	\$17,346	
4	Reporting		28		12		16	8							1		\$16,400.00					\$0	\$820	\$820	\$17,220	
800	As-needed/As-requested Support																									
1	As-needed/As-requested Support																\$5,000.00								\$5,000	\$5,000
900	Project Management																									
	Meetings and Communication	4	12	2		4		4	2	2		4	8		4		\$9,320.00					\$0	\$466	\$466	\$9,786	\$19,425
	Project Management Tasks		30												14		\$9,180.00					\$0	\$459	\$459	\$9,639	
	TOTAL TIME (HOURS)	28	344	6	38	12	48	20	18	10	140	4	228	14	27											
	HOURLY RATE (CAD)	\$250.00	\$250.00	\$385.00	\$310.00	\$220.00	\$250.00	\$195.00	\$165.00	\$170.00	\$160.00	\$145.00	\$145.00	\$140.00	\$120.00											
	Subtotal (CAD)	\$7,000.00	\$86,000.00	\$2,310.00	\$11,780.00	\$2,640.00	\$12,000.00	\$3,900.00	\$2,970.00	\$1,700.00	\$22,400.00	\$580.00	\$33,060.00	\$1,960.00	\$3,240.00											
	TOTAL COST (CAD)																\$191,540.00							\$31,577.00		\$228,117