

SUMMARY REPORT PACKAGE: Knowledge Sharing & Learning Tour



June 21-23, 2023

Co-hosted by: City of Trail and Teck Trail Operations



The City of Trail and Teck Trail Operations co-hosted a knowledge sharing & learning tour June 21-23, 2023, with the purpose to develop a shared understanding of the people, organizations and portfolio of work (regulated and non-regulated) taking place in Trail to support human health and well-being in a community influenced by smelter air emissions (see appendix 1).

Participants joined from the Ministry of Environment and Climate Change Strategy, Ministry of Health, Interior Health, Teck Trail Operations, the City of Trail and respective consultants (see appendix 2).

The tour began with a focus on culture, people and place. The group viewed the documentary Trophy Town, which shares Trail's sports history, linkage with the smelter, and community pride. The group then headed to the Teck Interpretive Centre for networking and dinner with local community members that volunteer on the Trail Area Health & Environment Committee (THEC).

Together, the group walked the community, visiting key sites noting the geography and landscape of Trail, Trail Area Health & Environment Program's (thep.ca) community program office, Butler Park air quality monitoring station, KIRO wellness center, soil management examples including a community boulevard and pilot block initiative. This was an opportunity to learn together, with community, on the ground.

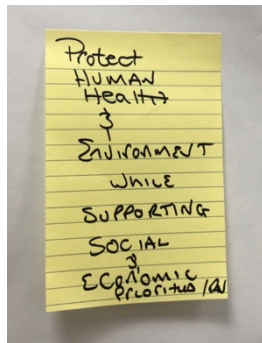
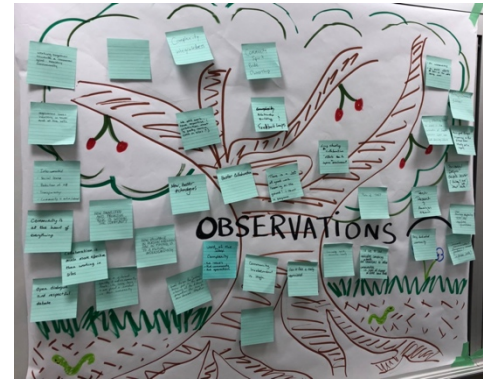


Day two brought everyone to Teck Trail Operations by bus. The group received several presentations on current operations and the global context, sustainability and environmental initiatives. The focus of this day was on learning what Teck Trail Operations is doing at the smelter in terms of air emissions controls and monitoring, and in the community with respect to air monitoring. The group also visited a property in West Trail to learn about Trail Area Health & Environment Program (THEP) initiatives around lead (Pb) paint screening and soil management at difficult to access properties (see appendix 3).



The day ended with a group dinner at Teck's guest house in Tadanac.

The third day focused on articulating a shared understanding of the wider purpose of everyone’s work and how the various pieces fit together. The morning began with observations from the previous days. A common theme was, “Trail is a vibrant, healthy and active community. People like living here and are proud and interested in their community”.



Discussion on purpose varied from broad to specific with acknowledgement that the group is interested in protecting human health and the environment while supporting social and economic community priorities.

Determining the roles of each organization and how they fit together led to a discussion on the need for more clarity on the relevant legislations, government structures and also non-legislated work taking place. There was acknowledgement of the importance to continue the conversation and valuable exchange between everyone participating. Furthermore, there was a commitment and desire by everyone at the table to act in a timely way. Several participants shared that these conversations have been happening and stalling for 20+ years. A sense of urgency was expressed.



During the tour, two side meetings of the Human Health Risk Assessment (HHRA) for Lead Working Group were held with a subset of participants.

Questions and actions for follow-up include:

- Confirmation on if the group is aligned to focus on lead (Pb) for now and revisit sulphur dioxide (SO₂) in one year.
 - There is a need for updated information on managing periodic elevated SO₂ in the community based on implementation of the new feed dryer technology. There is an existing communications plan for SO₂ that will continue to be implemented.
- In advance of the next meeting, the Wide Area Remediation Plan (WARP) and HHRA working groups will meet separately to discuss and prepare relevant information for the wider group (July/August).
- A follow-up meeting in September is needed and should support bigger picture understanding of the regulatory environment and how various regulations support or are constrained by each other in the context of Trail (virtual meeting confirmed for September 15th).
 - understand the full picture of what is being assessed in the HHRA (exposure model);
 - understand how different areas are addressed by regulations as well as additional measures taken (on their own and in relation to each other, break down silos);
 - understand the various timelines for regulations / legislations
- An update on the knowledge sharing & learning group will be provided at the next THEC meeting, September 27th, 2023.

Appendix 1 – Tour Agenda

Appendix 2 – Participants list

Appendix 3 – Teck Trail Operations tour agenda (June 22)

AGENGA PACKAGE: Knowledge Sharing & Learning Tour



June 21-23, 2023

Co-hosted by: City of Trail and Teck Trail Operations



Purpose of the tour

To develop a shared understanding of the people, organizations and portfolio of work (regulated and non-regulated) taking place in Trail to support human health and well-being in a community influenced by smelter air emissions.

Objectives

1. Understand the lay of the land including Trail's landscape, community layout, community projects, smelter and people.
2. Know who is working in Trail (and on what) as well as relationship building across these people from Provincial Ministries, Interior Health, Teck, Local Government and the community.
3. Learn what Teck Trail Operations is doing at the smelter in terms of air emissions controls and in the community with respect to air monitoring and soil management.
4. Learn about several initiatives and projects taking place (or on the horizon) related to human health and the environment:
 - a. Human Health Risk Assessment for metals
 - b. Wide Area Remediation Plan/Environmental Management Area
 - c. Trail Area Health & Environment Program (and Committee)
5. Articulate and make visible the road map for supporting human health in the community as related to smelter air emissions.



Desired Outcomes

1. Participants refer to Trail as a community (not a file): people, culture, and place.
2. Participants have time and space to build relationships (and knowledge).
3. Participants know who is working in Trail in the regulated and non-regulated areas related to human health and smelter air emissions, connect with each other, and have time and space to build relationships.
4. Participants increase their understanding of the smelter complex in terms of sources and controls in place.
5. Knowledge built on key projects happening in the community, and the people involved, to monitor, protect, as well as empower people to play a role in their health.
6. Clarity on how the various pieces of work being undertaken fit together toward a shared goal of supporting a healthy community.
 - a. Everyone working on the different pieces sees how they contribute to the whole.
 - b. Understanding of the role of being part of the community and building trust in the success of the program.
7. People who work in Trail (or on issues in Trail) feel part of a larger 'team' of expertise committed to the journey of community health.



Logistical Information

- Clare North from Teck has sent an email requesting information for preparing the onsite tour. **Please reply by Monday, June 19th.**
- Knowing the people on the tour and working in Trail is a stated objective. We are developing an internal ‘yellow pages’ to support this. **Please fill out the [form](#) including your brief bio and photo by Monday, June 19th.**
- Attendance is expected at all events. Please let us know if you are not able to join for portions.

Recommended clothing

- June 21 involves a 1-hr walk (approx. 2 kms) in the community, mostly flat ground. Comfortable walking shoes recommended.
- June 22 involves a bus tour, some walking, indoor and outdoor meetings. On the Teck site you will be wearing coveralls over your clothing (no dresses/skirts).
- June 23 is mainly indoors; an optional early morning adventure (walk/bike) is being considered if people are keen.

Meals Provided

- June 21 dinner
- June 22 morning muffin/scones/coffee, lunch, and dinner
- June 23 mid-morning snack/coffee

AGENDA DAY BY DAY

June 21 Trail culture, people and place

Welcome to Trail! Learn about our culture, people and place together.

4:30pm Meet at Royal Theatre, 1597 Bay Ave

4:45 Official Welcome from Colleen Jones, Mayor of the City of Trail

Private showing of “Trophy Town”, a documentary film helping to ground us in Trail’s rich history, culture and connection to the smelter.

Walk to Teck Interpretive Center (1199 Bay Ave #201)

6:15-7:15 Group dinner and participant and community “meet and greet”

7:15-8:45 Walk the city with [THEP](#)’s program team and [THEC community members](#) to see the landscape, projects in the community, and people. Closing at Gyro Park.

June 22 Smelter sources, controls onsite and offsite

We all have different touchpoints in this complex picture. Building on yesterday's walk, today is intended to see (together) the areas where everyone is contributing.

7:45am **Bus departs** from Cominco Arena Parking Lot (1051 Victoria St, **load bus 7:35**)

7:45-12:15 Teck Trail Operations onsite tour of sources and controls
Light breakfast provided

12:15-1:00 Group lunch hosted onsite

1:00-2:00 Transport and visit to Haley Park Air Quality Monitoring Station

2:00-3:30 Soil management visit: challenges and opportunities, exterior paint testing

3:30-4:30 Review of day one and two / synthesis
(Committee Room, Trail City Hall, 1394 Pine Ave)

- Review the two days; who is working in each area
- Prepare ground work for day 3 sense-making

Break/Rest (except for HHRA working group who will meet early)

6:00-8:30 Hosted dinner at Teck Trail Operations' Guest House (410 Ritchie Ave)
Arrival @6:00pm
Dinner @6:30pm

Evening fireside chat:

- Introduction to the Human Health Risk Assessment for Lead (Pb)
 - o What is it?
 - o Why are we doing it?
 - o What are we learning so far?

June 23 Putting the pieces together; visualizing the road ahead

How are we working together in this complex landscape? How can we support each other to achieve the best outcomes for all that call Trail home? What is the road map?

7:00-8:30 *Optional early morning hike/ activity in community*

9:30-12:30 Seeing the bigger picture: where are we integrated and where are we separate?
How can we support each other for the benefit of the community, and to achieve our purpose? What's the road map ahead?

12:30-1:00 Closing reflections round table.
Lunch Offsite / Working Lunch for HHRA Working Group

APPENDIX 2 - Participant List (listed by organization in no particular order)

Trail Knowledge Sharing and Learning Tour (June 21-23, 2023)

1	Maryna Korchagina	Assistant Deputy Minister, Population and Public Health, Ministry of Health
2	Anders Erikson	Senior Human Health Risk Assessment Specialist, Health Protection Branch, Ministry of Health
3	Geneen Russo	Executive Director, Population and Public Health, Ministry of Health
4	Laurel Nash	Assistant Deputy Minister, Environmental Protection Division (EPD), Ministry of Environment and Climate Change Strategy
5	Kevin Jardine	Deputy Minister, Ministry of Environment and Climate Change Strategy
6	Natalia Kukleva	Manager Investigation and Remediation, Land Remediation Section, Ministry of Environment and Climate Change Strategy
7	Lavinia Zanini	Technical Lead, LRS, EELR, EPD, Land Remediation Section, Ministry of Environment and Climate Change Strategy
8	Jasen Nelson	Senior Risk Assessment Officer, Land Remediation Section, Ministry of Environment and Climate Change Strategy
9	Kevin Butterworth	Executive Director, Environmental Emergencies and Land Remediation Branch, Ministry of Environment and Climate Change Strategy
10	Adriana Almeida-Rodriguez	A/Smelters, Pipelines, Pulp Mills Section Head, Ministry of Environment and Climate Change Strategy
11	Linden Terry	Environmental Protection Officer, Ministry of Environment and Climate Change Strategy
12	Dr. Karin Goodison	Medical Health Officer, Interior Health
13	Dr. Ray Copes	Consultant for Interior Health
14	Leanne Cusack	Public Health Epidemiologist, Epidemiology & Surveillance Unit, Interior Health
15	Clare North	Superintendent Environmental Remediation, Teck Trail Operations
16	Dan Bouillon	Manager of Environment, Teck Trail Operations
17	Dave Bell	Senior Environmental Specialist, Teck Trail Operations
18	Andrea McCormick	Director, Site Assessment and Remediation West, THEP Project Specialist, SNC Lavalin, (Teck Consultant)
19	Tara Kennedy	Senior Risk Assessor, SNC Lavalin (Teck Consultant)
20	Colleen Jones	Mayor, City of Trail
21	Nelson Ames	Technical Support, City of Trail
22	Michelle Laurie	Trail Area Health & Environment Committee Lead Facilitator, City of Trail



Teck Metals Ltd.
 Trail Operations
 P.O. Box 1000, 25 Aldridge Avenue Trail, B.C. Canada V1R 4L8 +1 250 364 4222 Tel
 www.teck.com

Tour Itinerary

Tour Host: **Clare North, Supt. Environmental Remediation**
 Work: 250-364-4392, Cell: 250-512-1571

Subject: Learn what Teck Trail Operations is doing at the smelter in terms of air emissions controls and in the community with respect to air monitoring and soil management

Date of Visit: June 22, 2023

VISITORS

Ministry of Environment and Climate Change Strategy:

Kevin Jardine
 Laurel Nash
 Natalia Kukleva
 Lavinia Zanini
 Jasen Nelson
 Kevin Butterworth
 Adriana Almeida-Rodriguez
 Linden Terry

SNC-Lavalin

Tara Siemens-Kennedy
 Andrea McCormick

Ministry of Health:

Maryna Korchagina
 Anders Erikson
 Geneen Russo

Interior Health

Karin Goodison
 Ray Copes
 Leanne Cusack

City of Trail:

Colleen Jones
 Nelson Ames
 Michelle Laurie
 Colin McClure

Thursday, June 22, 2023

Time	Item
7:30	Meet at Trail Memorial Centre Parking Lot (1051 Victoria St, Trail) and board the bus
8:00	Arrive at Trail Operations and check in at Main Gate
8:15	Stop 1: TOB Blaylock Room, PPE distribution and respirator fit testing
9:00	Introduction to Teck Trail Operations and Tour Overview
9:45	Stop 2: Feed Plant Area (Two groups: Group 1 Feed Dryer Plant and Group 2 Baghouse, then switch)
10:15	Load bus
10:20	Stop 3: No1 & No2 Acid Plants

Time	Item
10:25	Stop 4: Roaster Feed Pad Wind Fence
10:30	Stop 5: Property Services Stop 6: Fire Hall (Two groups: Group 1 at Property Services and Group 2 at Fire Hall, then switch)
11:05	Load bus
11:10	Stop 7: Smelter Recycle Building
11:15	Stop 8: Technical Services Trail (Two groups: Group 1 Env Initiatives and Group 2 SEM, then switch)
12:00	Load bus
12:15	Return to TOB Blaylock Room, PPE removal and prepare for lunch
12:30	Lunch
1:30	Load bus and depart offsite
1:45	Stop 9: Haley Park Air Monitoring Station
2:30	Stop 10: West Trail - Soil Program Component - Built Environment Program Component
3:30	Bus to drop participants at Trail City Hall (1399 Bay Ave, Trail)
4:30	HHRA working group for Pb at Guest House in Tadanac, 410 Ritchie Avenue, Trail (<i>Participants to make their own way</i>)
6:00	Dinner at Guest House in Tadanac, 410 Ritchie Avenue, Trail (<i>Participants to make their own way</i>)

VISTOR POLICY

- Teck Trail Operations supports a smoke-free environment. The possession and/or use of tobacco and cannabis products, including E-cigarettes and vaporizers, throughout Teck Trail Operations is strictly prohibited. This includes carrying these products in backpacks, purses, etc. and on any tour vehicles.
- Individuals with facial hair (beards, sideburns, goatees, handlebar mustaches, etc.) that interferes with the seal between the respirator and the skin will not be permitted to tour respirator-required areas. Exceptions require the selection of appropriate respiratory protection equipment and must be approved in advance by the Safety Department.
- Visitors will be provided with personal protective equipment for tours.
- Cameras and video equipment are not permitted. This includes using wireless communication devices and media players equipped with cameras for imaging purposes.
- Use of wireless devices and media players for communication purposes, such as phone calls, emails, messaging, etc., is permissible only in locations deemed appropriate by the Teck Trail Operations escort.

Today's Tour Overview



7

5

6

4

3

8

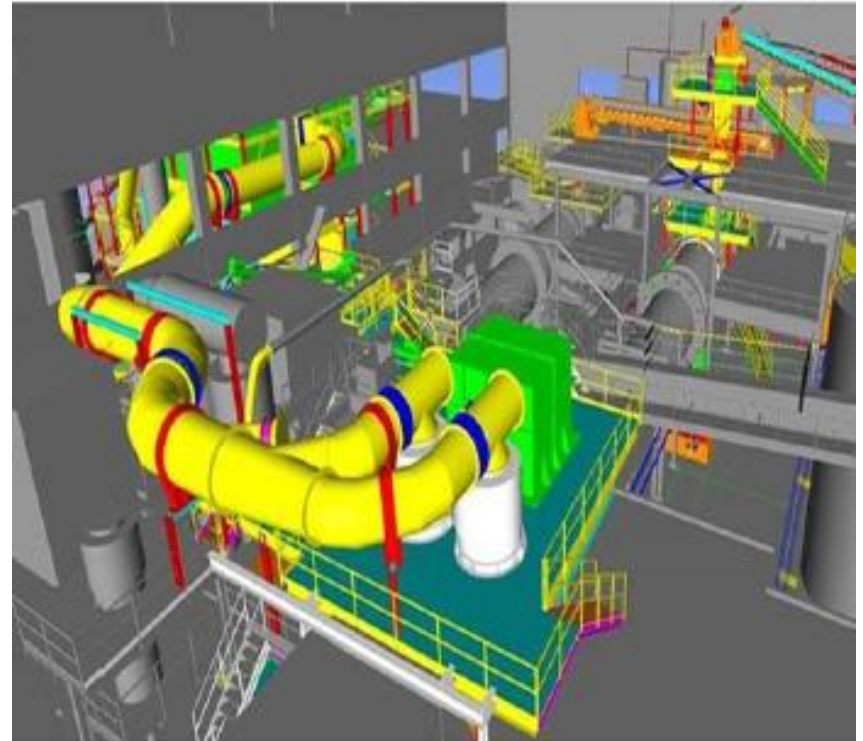
1

2

Stop 2: KIVCET Feed Dryer Project

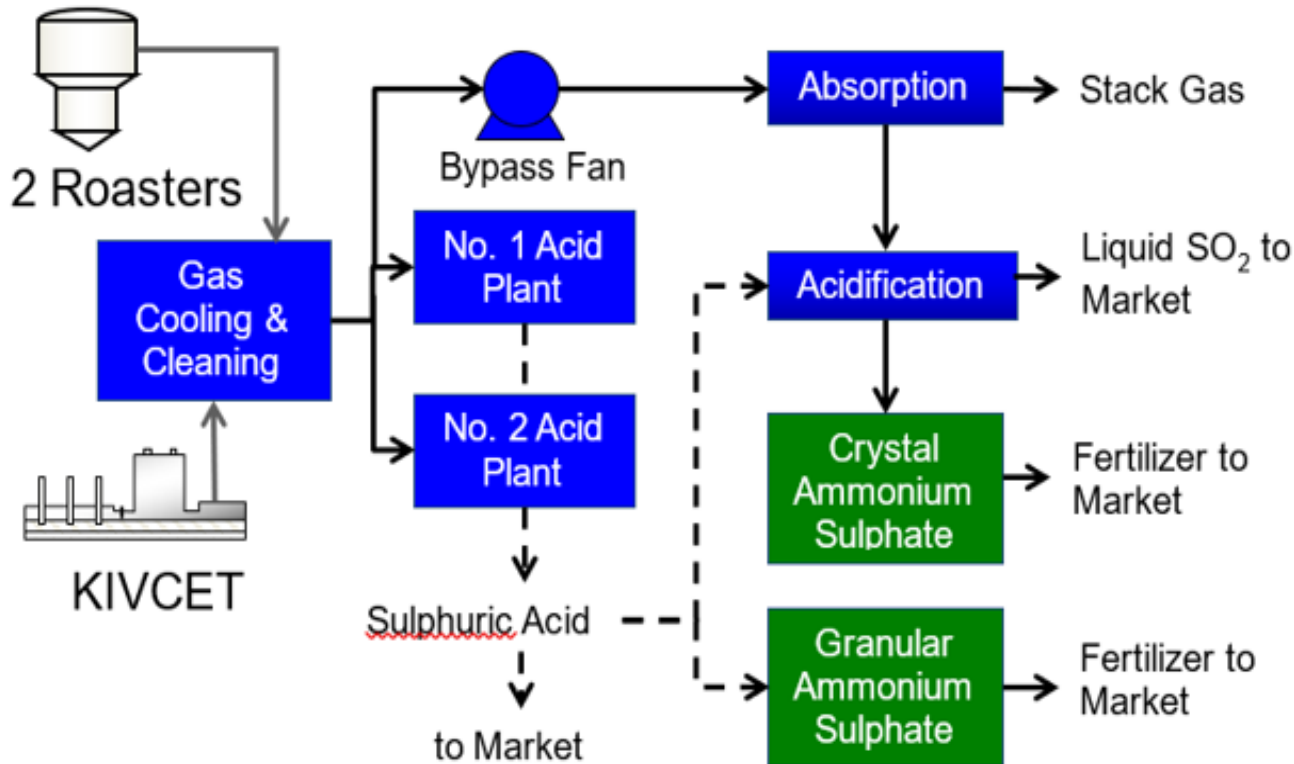
SO₂ removal

- SO₂ Emission Reduction of ~ 33%
- ~ 140 kg/hr SO₂ reduction
- Provide capability to modulate emissions based on mid-morning peak level
- \$65M Investment
- Start up July – September 2023



Stop 3: No1 & No2 Acid Plants

SO₂ removal



Stop 4: Roaster Feed Pad Wind Fence Zinc Operations – material handling



Stop 5: Property Services

Controls for dust; road dust monitoring



Stop 6: Firehall

Real time SO₂ & metals monitoring and response

Wind Speed 6.72
0.27

GreenHouse 0.27 Km/h
6 hr.Avg. 0.49 Km/h
60 Min.Avg. 1.57 Km/h

Ambient SO₂
Warfield 0.0319 PPM
Birchbank 0.0000 PPM
Butler Park 0.0192 PPM

Stage 1 SO₂
Manual/Wind

SO₂ Control

Manual ON
Wind

Stage 2 SO₂
MET/AMB

SO₂ Control

MET
AMB

Ambient Air Trace Metals

Trends

Butler Park Ambient Air Trace Metals

Element	Value	Alarm Setting	Status
Lead (Pb)	0.0133 ug/M3	1.0 ug/M3	OK
Arsenic (As)	0.0029 ug/M3	0.15 ug/M3	OK
Cadmium (Cd)	0.0126 ug/M3	0.10 ug/M3	OK
Zinc (Zn)	0.0306 ug/M3	2.5 ug/M3	OK
Copper (Cu)	0.0025 ug/M3	Not Set	N/A

153 Analyzer Comp Cnt
 Reset CTR
 Enabled
NORMAL
 Analyzer Status
 In the event of analyzer failure call environmental group 250-231-0104

In the event of any FAN OUT firehall control operator is to request plants affected by the FAN OUT to complete check sheets and fax to Env dept at 4384 then verbally report to firehall non-emergency at 4901

Note: Lag times between the event and detection means that the dusting event took place between 1.5 to 2 hours ago. Please inform plant of this fact.

Butler Park Fan Out

Kivcet	NO	4509
Pb North	NO	4542
Roasters	NO	4621
Leaching	NO	4641
E&M	NO	4483
Property Services	NO	

Duncan Flats Ambient Air Trace Metals

Element	Value	Alarm Setting	Status
Lead (Pb)	0.1947 ug/M3	1.0 ug/M3	OK
Arsenic (As)	0.0143 ug/M3	0.15 ug/M3	OK
Cadmium (Cd)	0.0079 ug/M3	0.10 ug/M3	OK
Zinc (Zn)	0.8235 ug/M3	2.5 ug/M3	OK
Copper (Cu)	0.0027 ug/M3	Not Set	N/A

153 Analyzer Comp Cnt
 Reset CTR
 Enabled
NORMAL
 Analyzer Status
 In the event of analyzer failure call environmental group 250-231-0104

Duncan Flats Fan Out

Kivcet	NO	4509
Pb North	NO	4542
Roasters	NO	4621
Leaching	NO	4641
E&M	NO	4483
Property Services	NO	

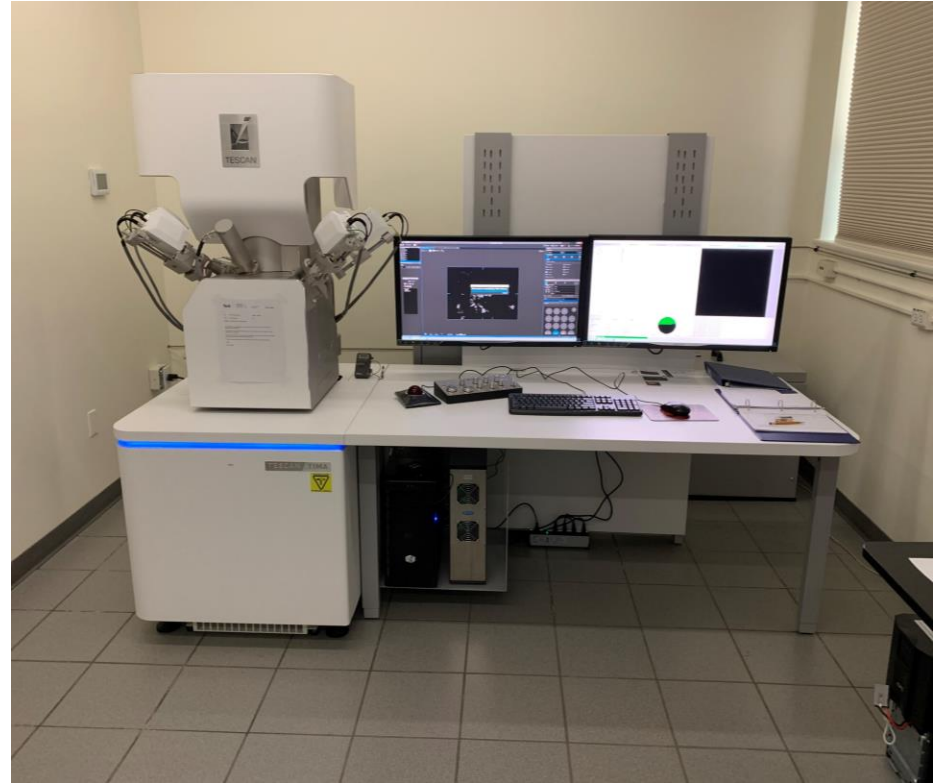
Stop 7: Smelter Recycling Building

Material handling

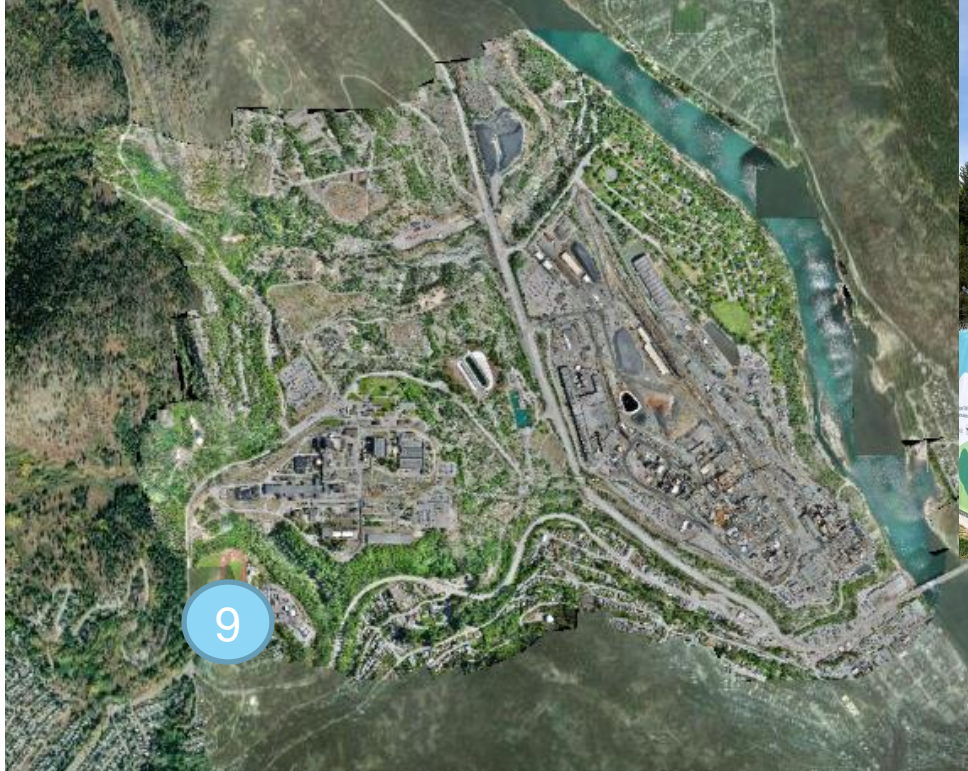


Stop 8: Technical Services Trail

Environmental initiatives and SEM



Stop 9: Haley Park Air Monitoring Station



Stop 10: West Trail

THEP Soil Management & Paint Screening

