Meeting of the Community of Interest Advisory Panel
Post-Verification Review Report

April 5th, 2022

Hybrid Meeting

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1. Introduction

The purpose of this report is to present the summary of discussions of the Mining Association of Canada (MAC) Community of Interest Advisory (COI) Panel ("the Panel") post-verification review (PVR) for Teck Resources Limited (Teck) and Copper Mountain Mining Corporation (CMMC). These two member companies verifying their 2021 TSM results were selected to undergo a PVR in 2022. Meeting presentations and briefing materials were provided to the Panel and are not duplicated in the body of this report.

2. Towards Sustainable Mining Initiative

Established in 2004, TSM is the Canadian mining industry's commitment to responsible mining. TSM provides a set of tools and indicators that drive performance and ensures that key mining risks are managed responsibly at participating mining and metallurgical facilities. To translate commitments into action on the ground, TSM's eight performance protocols focus on three core areas: Communities and People, Environmental Stewardship and Energy Efficiency.

Participation in TSM is a condition of membership in MAC. It requires that members subscribe to a set of guiding principles that are supported by specific performance indicators against which member companies must report their results. In 2021, MAC members reported against indicators in the following performance measurement protocols:

- Aboriginal and Community Outreach
- Energy and Greenhouse Gas (GHG) Emissions Management
- Tailings Management
- Biodiversity Conservation Management
- Safety and Health
- Crisis Management and Communications Planning
- Preventing Child and Forced Labour
- Water Stewardship (public reporting to begin in 2021)

For more information on TSM implementation in Canada, including company scores, governance, and oversight by the Panel, visit http://mining.ca/towards-sustainable-mining

3. TSM External Verification System

TSM includes several elements to ensure that reported results present an accurate picture of each facility's management systems and performance. Figure 1 identifies the different layers of assurance.

This report is focused on the final layer: the COI Panel Post-Verification Review (PVR). Each year, the Panel chooses two companies that have undergone an external verification for the PVR.

More information on the TSM assurance process, including the terms of reference for verification service providers, can be found on MAC's website.

Figure 1: TSM assurance framework

4.   COI Panel Post-Verification Review

The purpose of the PVR is for the COI Panel to provide an additional layer of independent oversight to the TSM assurance framework by:

- Engaging in dialogue with companies to identify best practices and challenges related to environmental and social issues faced by mining companies and communities.
- Driving continued performance improvements by identifying both opportunities and impediments to reaching the highest level of TSM performance.
- Determining whether companies find the TSM verification process useful.
- Identifying opportunities to improve the TSM program, including the verification process.

The scope of the PVR includes: the verification process and results, lessons learned, and changes needed to improve identified performance issues. The PVR is not intended as a review of the external verification, which is undertaken by a qualified verifier. Rather, the PVR is an opportunity for both the Panel and the selected companies to engage in a rich dialogue on issues of importance. The Panel can gain a better understanding of successes and challenges regarding the key environmental and social issues in mining, and how the TSM indicators translate into real action. At the same time, the PVR allows companies to engage in a thoughtful conversation with the Panel on key issues and challenges of interest, and to seek their guidance. The PVR dialogue may take place in a community near one of the facilities undergoing the PVR process, but this is not a requirement.

Teck Resources and Copper Mountain were selected to undergo a post-verification review (PVR) in 2022.

As part of the process (outlined in Figure 2), companies undergoing PVR are asked to prepare background documents and give a virtual presentation to the Panel before engaging in an in-person dialogue.
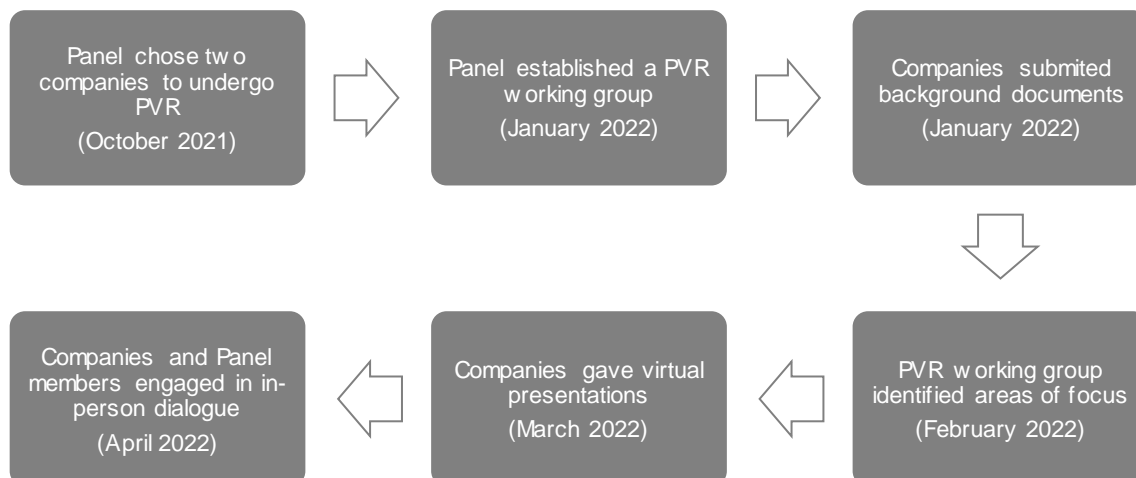

Figure 2: PVR process 2022

The specific areas of focus for the PVR dialogue are identified by a working group comprised of Panel members. This year, the working group included Dan Benoit, Tim Johnston, and Stephen Walker. Together, the working group selected the following areas of focus.

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Thematic areas focus (Teck):
- Site Expansion and Permitting Process
- Environment and Tailings
- Energy and GHG Targets
- Indigenous and Community Relations
- Managing Turnover and Retention

Thematic areas of focus (Copper Mountain):
- Site Expansion and Permitting Process
- Environment and Tailings
- Energy and GHG Targets
- Indigenous and Community Relations

This following report summarizes the information provided by the companies during their PVR dialogues and the ensuing Panel discussion. Discussions are summarized by thematic area of focus.

5. Results of the Post-Verification Review: Teck Resources

About Teck Resources Limited

Teck is a diversified resource company committed to responsible mining and mineral development with business units focused on copper, zinc, steelmaking coal, and energy. Headquartered in Vancouver, British Columbia (BC), Teck owns or has interests in 10 operating mines, a large metallurgical complex, and several major development projects in the Americas.

The following Teck team members attended the PVR discussions with the Panel:

- Amber Johnston-Billings, Vice President, Community, Government Affairs and HSEC Systems
- Robin Johnstone, General Manager, Community and Indigenous Affairs
- Chris Adachi, Director, Climate Change
- Chris Stroich, Manager, Environmental Performance
- Tracey Jacquemin, Manager, HSEC Management Systems
- Carly Bielecki, Superintendent, Community and Indigenous Affairs
- Neil Sandstrom, Superintendent Environment HVC

Additional information on Teck Resources can be found on its website:

5.1 Indigenous and Community Relations

During the dialogue, the Panel discussed relationships with communities, meaningful engagement, and archeological site management.

Relationships with Communities

The Panel's discussion on this topic is summarized below by theme.

- **Rebuilding relationships**
  - Teck decided to report a year early against the new Indigenous and Community Relations Protocol. This came at a time when Teck was reflecting on the state of relationships between Highland Valley Copper (HVC) and its' stakeholders and rightsholders.

- o A Reconciliation Action Plan had previously been developed and distributed to local First Nations for comment. However, it was not released because the company's understanding around reconciliation evolved. It is currently being rewritten and a draft will soon be ready for agreement-holding First Nations.
- **Support for communities**
  - o Local communities have had a difficult year, with the identification and unearthing of hundreds of unmarked graves at the former Kamloops Indian Residential School, the wildfires that devastated Lytton, and the flooding in the local area, among others. Teck shared that they were intentional in their support during this challenging time.
  - o A Panel member who lives in the region recognized Teck's important contributions to communities during emergency situations.
- **Getting out on the land**
  - o A Panel member commented that some of the senior staff at HVC, which had been hired more recently, did not yet have a good understanding of the lay of the land. In Indigenous cultures, getting out on the land is an important step to take before making decisions about how to manage it.
  - o Teck noted that it had been particularly difficult for their management staff to get out on the land in the past year because of COVID, wildfires, and floods that affected the region.

Meaningful Engagement

The Panel's discussion on this topic is summarized below by theme.

- **Defining meaningful engagement**
  - o Panel members advised Teck that indicators of meaningful engagement include: a participatory process, actions taken on specific concerns identified through engagement, and overall satisfaction from all parties at the end of the process.
  - o A Panel member noted that it can be difficult for the Panel to know whether a company's engagement has been meaningful without speaking with communities.
  - o Teck shared that communities felt that many aspects of engagements were meaningful (i.e., dialogue between companies and communities, and progress on actions). However, they were dissatisfied with the length of it time it took for actions to be implemented.
  - o Although TSM protocols are usually designed with clearly defined criteria and indicators, MAC acknowledged that the new Indigenous and Community Relationships Protocol intentionally maintains some degree of interpretation to prompt companies to reflect on the specific needs of their COI.
- **Managing multiple assurance frameworks**
  - o Teck reports against several performance standards, each with their own verification and assurance program. To reduce the auditing burden on their team, Teck rewrote their internal standards to incorporate all external requirements. This means that if a site complies with the Teck standards, then they are compliant with the other relevant standards as well. As a result, the company can do one large audit of the site every three years, versus 8-10 smaller audits, and can spend more time engaging with communities.
  - o As more standards incorporate a need for assurance providers to engage with communities, integrating multiple assurance requirements into a single effort also

reduces the burden placed on communities. In their verification of HVC, Teck used the TSM Responsible Sourcing Alignment Supplement to integrate the requirements for the Copper Mark and the International Council on Mining and Metals Performance Expectations (ICMM PE) into the TSM verification.

Archeological Site Management

The Panel's discussion on this topic is summarized below by theme.

- **Archeological heritage sites**
  - o Teck has a rapidly growing heritage program, totaling approximately 4 million dollars of work on site, and is working closely with Indigenous partners to determine next steps for the archeological heritage site discovered near their tailings dam. The company wants to ensure that they handle archeological heritage sites in a respectful way.
  - o A Panel member suggested that this might be an opportunity to assess whether engagement efforts are meaningful. While a large dollar value being contributed to archeological studies might seem meaningful, there is a difference between seeking support from First Nations and involving First Nation leaders in the decision-making processes.
  - o Following the events at the Rio Tinto Juukan Gorge site, Teck studied its sites to ensure it has the right governance in place to mitigate this risk. It is also drafting a new procedure with explicit requirements regarding the management of new archeological findings.
  - o Teck views the rapidly growing archeological heritage site program at HVC as an opportunity to work closely with partners. The company is building its' internal capacity to support this program — for example, by hiring a cultural heritage specialist.

5.2 Environment and Tailings

During the dialogue, the Panel discussed water and methane management.

Water Management

The Panel's discussion on this topic is summarized below.

- Teck has a robust water management plan that helped them to mitigate the impacts of the severe rain events that occurred in the past year. The site manages for both abundance and shortages of water at a site and operational level.
- Teck has target levels for water in its' tailings storage pond, which the company manages carefully to stay within range. It has also developed mechanisms to escalate management if risks become elevated.
- Teck hires a separate company to audit the tailings facility against the TSM Protocol, based on their in-depth technical experience and knowledge in tailings and water retaining structures. This feedback is then shared with their global tailings team.

Methane Management

The Panel's discussion on this topic is summarized below.

- Teck shared that methane becomes a risk for underground metallurgical coal mines where methane is concentrated and highly flammable. Teck's sites in British Columbia

(BC) do not have a high methane load because of the geographical formation in the Elk Valley.

- Teck is working with the province of BC to understand the new methane measurement requirements for open pit mines, which is part of the province's Climate Action Plan.

5.3 Site Permitting and Expansion Process

During the dialogue, the Panel discussed the new provincial EA process, reducing risk in permitting, and benefits to communities.

New Provincial EA Process

The Panel's discussion on this topic is summarized below by theme.

- **Adoption of DRIPA**
  - Teck highlighted BC's adoption of the Declaration of the Rights of Indigenous Peoples Act (DRIPA) in 2018 to implement the United Nations Declaration of Indigenous Peoples (UNDRIP). Following the adoption of DRIPA, the province worked to align the EA process. This allows for a more extended permitting period to account for broader engagement.
  - Teck shared that, in comparison to the previous legislation, DRIPA enables any First Nation being affected by the project to participate in the EA process. At HVC, four First Nations will be involved in permitting for Highland Valley Copper 2040 Project (HVC 2040) and each one will do their own EA process.
  - Because of Teck's relationships with local First Nations, the company was aware of which First Nations would have an interest in this expansion. However, other companies have had up to 22 First Nations come forward for the EA process. Teck anticipates that a greater number of First Nations will start coming forward for some of their sites as well.
- **Communicating with stakeholders and shareholders**
  - Teck shared that the lack of a set timeframe makes it challenging to explain the EA process to their corporate office and shareholders. Whereas permitting used to take 12 months, it is now an open-ended process.
  - Teck believes that the global movement around environmental, social, governance has created a level of understanding among Board members around the need for this new EA process. However, ultimately, their fiduciary duty is to allocate capital projects that get approval and produce returns.
- **Links to the TSM Indigenous and Community Relationships Protocol**
  - MAC shared that, from their perspective, regulatory requirements (i.e., DRIPA) are focused on permitting approvals and getting new projects up and running. TSM focuses on the operational phase and ensures that the spirit of shared decision-making persists throughout the project lifecycle.
  - Teck agreed that DRIPA and the new TSM Indigenous and Community Relationships Protocol are different but complementary. While DRIPA is very high-level, the Protocol is more detailed and provides guidance around what a company should be doing on the ground to work towards implementing UNDRIP.

Engaging with Affected Communities

The Panel's discussion on this topic is summarized below by theme.

- **Scope of engagement**

- o A Panel member reflected on the challenges of broadening the scope of engagement. They have observed tensions in cases where a mine engaged with directly affected communities as well as those identified by the Crown. There is a risk that increasing the number of communities with whom companies are engaging will negatively impact relationships with local partners and dilute resources for engagement.
    - o Teck shared that the provincial government does not necessarily have clear direction for engagement and is looking to companies for support in identifying a path forward.
    - o A Panel member acknowledged that the right path forward is not clear for government but that it should not necessarily be handed off to industry to figure out.
    - o Teck has been grappling with how to embed free, prior, and informed consent into the permitting process, while also putting in place governance structures and rough timelines that can be communicated with shareholders and other stakeholders. The company is working with communities and providing them with the support they need to advance the process.

- **Unburdening communities**
    - o There is a lot of work to be done ahead of the HVC 2040 project and Teck acknowledges that this must be overwhelming for communities, as it is for the company. The company worries about burdening communities who have limited capacity and other obligations.
    - o A Panel member shared that a good relationship throughout this process begins with the company recognizing the limited capacity of communities, without being prompted.
    - o MAC agreed that companies need to find the right balance between meaningful engagement and respecting a community's time and resources
    - o A Panel member asked whether MAC thought TSM should apply at early stages of the project lifecycle (e.g., permitting). MAC shared that the Finnish mining association has developed an abridged version of TSM targeted to these earlier stages, and that perhaps this approach could be considered in other jurisdictions.

Risks of the Permitting Process

The Panel's discussion on this topic is summarized below by theme.

- **Causes of risk**
    - o MAC noted that the federal government's budget for 2022 is expected to include a significant envelope for developing critical minerals in Canada; however, mining companies will not invest in Canadian projects if they do not have some degree of certainty around the project approval process. There is a risk that Canada will not be able to supply the minerals and metals required for electrification and will have to import them from Russia and China. With the new Federal Impact Assessment Act (IAA) process, evidence shows that timelines are getting longer and becoming more burdensome.
    - o A Panel member asked for clarification around the perceived cause of project approval delays – and whether the frustration was linked to requirements for increased engagement with Indigenous governments. An industry Panel member was quick to clarify that that was not the case.
    - o Teck reflected on the Frontier Oilsands Mine Project that undertook a 10-year permitting project that was ultimately unsuccessful. Although it is possible the

process would have been more expedient had First Nations governments been more engaged and supportive of the project, this would not have resolved the government inefficiencies throughout the process (e.g., having to provide the same information on multiple occasions).

- **Mitigating risk**
  - o A Panel member wondered about MAC's role in supporting other national mining associations to implement TSM to mitigate the risk of companies shifting investments to countries where standards are lower than in Canada. The goal is to raise the standards across the world and ensure that Canada does not lose out on future mining projects.
  - o An industry Panel member shared that, although Canada's long approval processes are a risk, mining projects in other countries face challenges too (e.g., one mining project had its permits revoked suddenly in Serbia). They suggested that perhaps the industry should be looking to the Finnish mining association, which incorporates TSM requirements earlier in the project lifecycle, to expedite approvals and build public trust.
  - o It was also suggested by an industry Panel member that a risk-based approach to permitting might help to reduce the length of approvals. For example, a company pursuing a project that will have no acid rock drainage may be considered lower risk and undergo a more expedient process.
  - o An industry Panel member shared that they would like to see the adoption of TSM become a requirement for all members of the Prospectors and Developers Association of Canada. MAC had offered to support the PDAC should it decide to develop an exploration standard consistent with TSM.
  - o A Panel member mused that it would be interesting to pilot Indigenous-led impact assessments to see if the process would be streamlined and create greater alignment with provincial and federal governments.

Benefits to Communities

The Panel's discussion on this topic is summarized below.

- One Panel member shared that there is not one solution that fits all. In order to move forward, there is a need to work with First Nations' governments to determine what their needs are. Unfortunately, these discussions tend to look to minimize the benefits for First Nations as opposed to maximize them. It is concerning that in BC the government will refund some of the mineral tax by completing reclamation at the end of the mine life. From a company perspective, it seems they want to minimize the financial impact rather than being more inventive and innovative.
- An industry Panel member with experience in BC when revenue sharing was first introduced shared the perspective that the industry can be agnostic about who it pays royalties or taxes to (e.g., whether to provincial or Indigenous governments). What matters to industry is the tax level and whether it is competitive. When resource revenue sharing was introduced, some in the industry thought this would remove the obligation to negotiate Impact Benefit Agreements (IBA), or at least the financial components of IBAs. Most, however, recognized that IBAs would continue to be a feature of new mine developments, with revenue sharing a separate government-to-government negotiation. This is how it has turned out.
- Tensions have also emerged due to process delays and the shift in responsibility to proponents during reviews. The federal IAA was supposed to rebalance that with the federal government playing a more active role. Unfortunately, that has not been the case

with early implementation. It was suggested that the Cree territory in Northern Quebec has one of the most straight forward permitting processes for mining projects in Canada because the Cree run it on a one government, one process basis. Although projects still require federal government authorization, there is greater clarity and predictability around who to engage with and how the process will go.

5.4 Energy and GHGs

During the dialogue, the Panel discussed research and development, and emissions reductions targets.

Research and Development

The Panel's discussion on this topic is summarized below by theme.

- **Disruptive innovation**
  - A Panel member shared that disruptive innovation is needed. Energy efficiency alone is not sufficient. Currently, it seems that companies are relying on suppliers for disruptive innovation. Perhaps it is time for the industry to be investing in this themselves.
  - Teck is investing $12 million in research and development projects. Through this research, the company is modelling disruptive technologies (e.g., technologies to eliminate the need for tailings). However, many of these technologies will not be commercially available in the next five years, making it challenging to make short-term capital decisions.
- **Accelerating technology adoption**
  - When looking at global operations, the electrification of HVC is not a top priority because it already has access to low-carbon power. There are other sites within Teck's portfolio that still rely on coal or diesel-based power, and the company believes it can achieve the most emissions reduction through investment in research and development at these sites.
  - Teck is investigating options for haul trucks, which include electric battery and hydrogen fuel cell vehicles. Although these are five to ten years from commercially availability, the company is working with equipment manufacturers to accelerate the timeline. For example, Teck has a partnership with Caterpillar to pilot zero-emission vehicles on-site within the next two years. The biggest challenge the company is facing is bridging from diesel equipment to equipment that is more intermittent. Trolley assist could be that bridge.
  - Teck is also investigating opportunities with carbon capture utilization and storage technologies. However, the design and environment of each mine is different and understanding the distinctions of each is critically important when thinking about the success of various technologies.

Emissions Reductions Targets

The Panel's discussion on this topic is summarized below by theme.

- **Climate targets**
  - A Panel member inquired about the decision to use 2020 as the baseline for the company's emissions reduction target of 33%, in comparison to other years (i.e., was this the peak-level of emissions? How would the company's plan change if they used other baselines?)

- o Teck shared that one of the challenges for resource companies is that their portfolio changes over time. The company believes that the 2020 baseline is representative of emissions over the past five years and that it has had a reasonably stable portfolio since that time. The company offered to share baselines from other years for comparison.
- **Site specific reductions**
    - o A Panel member asked whether there were some areas in which the company expected more reductions than others.
    - o Teck shared that it is taking a portfolio perspective to understand the most cost-effective approach to maximize emissions reduction. One of the biggest challenges is transitioning their fleet off diesel fuel.

5.5 Managing Turnover and Retention

During the dialogue, the Panel discussed appropriately resourcing the site and creating a safe and inclusive work environment.

Hiring and Retention

The Panel's discussion on this topic is summarized below by theme.

- **Staff turnover**
    - o Reflecting on resourcing at HVC over the last five to seven years, Teck shared that several staff had left their positions and were not replaced quickly enough. This created capacity constraints and a downwards trend in performance around community engagement. Teck is now working on resourcing HVC with experienced staff members to support improved relationships.
- **Staff retention**
    - o Teck has several existing or planned initiatives to support retention at HVC (e.g., competitive benefits package). Recently, the site launched a flexible work program to reduce the burden of the commute and is also working on bolstering psychological safety on-site.
- **Hiring experienced staff**
    - o There were some mistakes made when entering the process for HVC 2040 (e.g., staff lacking experience advancing major projects). To rectify these mistakes, Teck has hired a General Manager to focus on this project and the company underwent a reorganization to fill some of the remaining gaps.

Safe and Inclusive Work Environment

The Panel's discussion on this topic is summarized below by theme.

- **Treatment of Indigenous workers**
    - o A Panel member noted that the treatment of Indigenous staff on-site affects relationships with the broader community. They had heard of an Indigenous worker on-site who faced racism by their peers and superiors. There is a reluctance to report this behavior to senior leadership due to fear of reprisal.
    - o Teck shared that there is still work to be done to protect the psychological safety of Indigenous employees. Teck plans to be intentional about understanding the workplace culture at HVC this year.
- **Cultural sensitivity and awareness**

- o Teck is in the process of rolling out new Indigenous cultural awareness training at HVC, in collaboration with local First Nations. The goal is to facilitate increased awareness and behavior change on-site.
  - o The training is comprised of two modules. The first is a more generic computer-based module that covers Indigenous rights from a broad, international perspective. The second module is yet to be designed but is intended to be an interactive learning opportunity with participating agreement-holding Nations.
  - o Teck will be working with local First Nations partners to develop the second module and aspires to have 100% compliance by the end of the year. The module will include videos to share local stories and content. Eventually, Teck would like the second module to include time on the land.
- **Engaging with unions**
  - o Teck has recently signed a collective agreement with HVC's union, which included forming an Indigenous committee. Teck will liaise with this committee and relay any issues to a joint working-level committee.
  - o Teck will need to be proactive when communicating with the union about the role of Indigenous communities as decision makers around the future of the project. The company does not want to put Indigenous employees in an uncomfortable situation because of the operationalization of the United Nations Declaration of Indigenous Peoples.

See the 2021 TSM Progress Report for Teck Resource's full TSM scores.

6. Results of the Post-Verification Review: Copper Mountain

About Copper Mountain Mining Corporation

Copper Mountain is a Canadian-based copper producer, developer, and explorer in world class mining jurisdictions. The company's flagship asset is the 75% owned Copper Mountain Mine (CMM), an open pit copper/gold mine, located in southern British Columbia near the Town of Princeton, adjacent to and on either side of the Similkameen River.

The following Copper Mountain team members attended the PVR discussions with the Panel:

- Don Strickland, Executive Vice President of Sustainability
- Eric Dell, Senior Vice President of Operations
- Megan Bonn, Director Sustainable Development
- Walt Halipchuk, Director Sustainable Business Development
- Frank Catalano, General Manager
- Jaime Weber, Mill Manager
- Colleen Hughes, Environmental Manager
- Jeff Zmurchyk, Health & Safety Manager
- Cory Forcier, Materials Management Superintendent
- Sheryl Brown, Human Resources Manager

Additional information on Copper Mountain can be found on its website: https://cumtn.com/

6.1 Indigenous and Community Relations

During the dialogue, the Panel discussed the company's engagement COI and its hiring and retention initiatives.

Engaging with Communities of Interest

The Panel's discussion on this topic is summarized below.

- Copper Mountain has identified Indigenous COI, the Lower Similkameen Indian Band (LSIB) and the Upper Similkameen Indian Band (USIB). Other COI include surrounding towns and regional districts.
- Generally, engagement with First Nation communities happens formally through quarterly Joint Implementation Committee (JIC) meetings and periodic Technical Sessions, and informally on a more regular basis, as required. It occurs less regularly with other COI. During these engagements, Copper Mountain provides updates on site performance, projects, labor, and other business opportunities. Any issues identified during engagements are inputted into a tracker for follow-up.

- Copper Mountain also engages COI on different aspects of the operation, such as environmental work. The company worked with the LSIB and USIB on designing field programs and conducting archeological work, as there is strong local capacity in this area.
- At times, Copper Mountain receives calls and emails from the public. A record of questions and comments is managed by one of the company's staff members.
- Copper Mountain is sometimes contacted by media outlets for information and responds to these requests with accurate information about its operations.

Hiring and Retention Initiatives

The Panel's discussion on this topic is summarized below.

- **Hiring Indigenous employees**
  - Copper Mountain shared that it has struggled to hire Indigenous employees. One of the challenges with hiring from local First Nations is the long commute to the site. However, the company has seen some success in increasing Indigenous hiring through the creation of a general labour pool for applicants.
  - Beyond entry level, there are few Indigenous candidates in local communities with the required skillsets. Some members of local First Nations with these skillsets are living off-reserve.
  - Currently, the majority of Copper Mountain's Indigenous workforce are in entry-level roles and trades; however, this is starting to change. It is also difficult to precisely calculate the number of Indigenous employees as some may choose not to disclose this information.
  - An industry Panel member shared that Glencore's Raglan Mine in Nunavik saw some success in hiring Inuit employees when they created an entirely Inuit work crew.
- **Hiring youth on-site**
  - Copper Mountain hires young temporary workers from local bands, which gives them exposure to mining and environmental field work. There is shared learning for youth and other staff when working out on the land together.
  - Copper Mountain also has initiatives and programs to hire youth from surrounding universities and schools through co-op and engineer-in-training programs.
- **Retaining employees**
  - Copper Mountain provides funding for employees who need to attend substance abuse programs. While enrolled, they can collect short term disability. When they finish the program, they have the choice to return to work.
  - In addition to exit interviews, Copper Mountain conducts "stay at work interviews" to understand why employees work on site (e.g., what excites them about their work).

6.2 Tailings

During the dialogue, the Panel discussed the legacy of the mine site and tailings management.

Tailings Management

The Panel's discussion on this topic is summarized below.

- **Global Industry Standard on Tailings Management (GISTM)**
  - When asked about the GISTM, Copper Mountain noted that most of the requirements are already covered by the BC provincial standard for tailings and

the TSM Tailings Management Protocol. Therefore, the company does not see an advantage in pursuing another accreditation. Copper Mountain would prefer to work with MAC to achieve alignment between TSM and GISTM.

- o An industry Panel member shared that the Church of England plans to challenge the boards of companies that are not committing to the GISTM. However, companies implementing TSM will be exempt from this shareholder activism.

- **Adoption of TSM's Tailings Management Protocol**
    - o MAC recently wrote a paper comparing the TSM Tailings Management Protocol and the GISTM. The paper makes the case that there are more benefits to improving tailings management by continuing to encourage the international adoption of TSM.
    - o An industry Panel member reflected that the Canadian mining industry needs to do a better job of sharing the benefits of TSM, encouraging the global mining industry to adopt this standard, and helping shareholders understand how TSM drives performance. They suggested that more money could be invested in marketing for the program.
    - o Another Panel member shared that there is still the public perception that TSM is the mining industry regulating itself. It is possible that the external verification component is not well known or understood.

6.3 Energy and GHG Targets

During the dialogue, the Panel discussed research and development and renewable energy.

Research and Development

The Panel's discussion on this topic is summarized below.

- Copper Mountain aims to reach net-zero emissions by 2035, a vision driven by the company's CEO. Research and development efforts are underway to meet this objective.
- Copper Mountain does not treat the trolley assist technology as its own intellectual property. It is shared widely for the betterment of the industry. A Panel member commented that the company needs to consider cost-efficiency, and that the trolley-assist system is the right path forward.
- In addition to trolley assist, Copper Mountain is investigating renewable diesel, hydrogen, battery and fuel cell technology for its haulage fleet and other innovative technologies, through continued collaboration with its partners.
- A Panel member inquired about the heat load of the site and whether Copper Mountain has considered using heat pumps to increase energy efficiency and reduce water use. Copper Mountain has done some research on these types of technologies. The company is looking at constructing a new administrative building, which could be an opportunity to integrate heat pumps.

Renewable Energy

The Panel's discussion on this topic is summarized below.

- **Studying Renewables**
    - o Copper Mountain has commissioned a third party to review renewable energy alternatives for the site (e.g., solar, wind) to understand emissions and cost implications. Currently, BC Hydro remains the most cost-effective option.

- o BC Hydro is focused on completing the Site C Clean Energy Project. When that is complete, the next energy source for the province will be onshore wind. The company has been thinking about exploring a joint-venture partnership with a First Nation to pursue this opportunity.
  - o A Panel member noted that many First Nations want to be energy sovereign. If this initiative supported energy sovereignty for local First Nations, then it would likely be well received.
- **Solar panels**
  - o An industry Panel member shared that Agnico Eagle installed a wall of solar panels on their mill in Val D'Or. It took 5-7 years to pay off this project, which represents a reasonable return in the life of a mine.
  - o The same industry Panel member inquired whether Copper Mountain would be penalized by BC Hydro if it installed solar panels on site to become more energy independent. Copper Mountain responded that they would need to do a system impact study to understand impacts on the grid. BC Hydro would not purchase any excess electricity from solar panels at this stage.

6.4 Site Expansion and Permitting Process

During the dialogue, the Panel discussed historical considerations, water management, and integrating new technologies into the design of the site expansion.

Historical Considerations

The Panel's discussion on this topic is summarized below.

- A Panel member inquired whether there are any historical challenges for the New Ingerbelle site with regards to legacy operations and drainage systems. Copper Mountain responded that the site was partially reclaimed in the 1990s and that there is ongoing monitoring of historical waste rock dumps along the river. The company has deemed that no water collection is necessary at this time because the waste rock is non-acid generating.

Integrating New Technologies

The Panel's discussion on this topic is summarized below.

- Copper Mountain has conducted several studies to arrive at the current project proposal, considering various approaches and existing technologies (e.g., conveyors vs. trolley assist).
- The company is currently undertaking a pre-feasibility study to understand the possible integration of new technologies (e.g., Hydrofloat). Foundational to this study is how to design the site to minimize impact and disturbance and to ensure that landforms can be reclaimed as the project progresses.

Water Management

The Panel's discussion on this topic is summarized below.

- Copper Mountain has convened an Independent Water Review Board (IWRB) to advise the company on best practices around water management and to drive greater performance. The intention is for the IWRB to act as an independent engagement body with COI.

- The Similkameen river runs next to the pit of the expansion site, which the company dewaters and pumps to Copper Mountain's water management facility to avoid overflow flowing to the river. One aspect of the new design is the ability to collect all contact water and use it at the mine.

6.5 Reflections on TSM

Copper Mountain shared the following reflections on their experience with their first PVR dialogue.

- Overall, Copper Mountain felt that the PVR was a good experience, and it helped the team to understand where and how they can improve performance, and to understand the perspectives of COI.
- Given that this was the company's first PVR, the team was surprised by the amount of work required to prepare the report, webinar, and in-person dialogue.
- Copper Mountain saw value in the conversations with the Panel around performance during the PVR dialogue. The company liked that the webinar had occurred before the in-person session, because the dialogue was the most important aspect to have in person.
- Copper Mountain is an advocate for TSM as a requirement for all members of the Mining Association of BC because of the credibility it lends to operations and the assurance that sites are meeting a high standard of performance. The company believes that TSM will help attract strong talent and grow the company.

6.6 Copper Mountain's TSM Assessment Results

See the 2021 TSM Progress Report for Copper Mountain's full TSM scores.

7. Panel Feedback on the Post-Verification Review Process

Panel members shared that, overall, the PVR process was a positive experience and they were pleased with the companies' willingness to have open and honest conversations and to learn from the Panel. However, the Panel reflected on the challenges of speaking only to the companies, and not with their COI, regarding performance.

Given the preparation required by companies for a PVR dialogue, some members thought that perhaps the Panel should revisit PVR guidance for companies to alleviate some of the reporting burden. It was also suggested that the Panel could be more intentional about asking companies whether they find the PVR dialogue useful.

Panel members greatly appreciated the opportunity to visit Copper Mountain's mine. In the future, Panel members would also like to spend time visiting the community and surrounding sites, in addition to the regularly scheduled meeting.

Appendix 1: List of Post-Verification Reviews

Past PVRs were conducted with the following companies:

2007: Albian & Hudbay Minerals
2008: Barrick, Xstrata Nickel & Xstrata Zinc
2009: BHP Diamonds - Ekati & IAMGOLD
2010: Breakwater & Teck
2011: De Beers & Iron Ore Company of Canada
2012: Cameco & Inmet
2013: Teck & Vale
2014: ArcelorMittal & Barrick
2015: Taseko & Agnico Eagle
2016: Hudbay Minerals & Suncor Energy
2017: Glencore & Rio Tinto
2018: Imperial Metals & Dominion Diamond Mines
2019: New Gold Inc. & Vale
2020: Syncrude & Baffinland Iron Mines

2021 Company Selection for PVR:

The following companies externally verified their 2021 TSM results and were therefore eligible for PVR selection. In general, the Panel seeks to select companies that have not been subject to a recent PVR and considers factors such as commodity type and location.

- Agnico Eagle
- Cameco
- Canadian Malartic
- First Quantum *(All closed sites)*
- Newmont *(Eleonore)*
- IAMGOLD
- New Gold *(New Afton)*
- **Teck *(Line Creek, Highland Valley Copper)***
- **Copper Mountain**

Appendix 2: Acronyms List

Acronym	Full Term
BC	British Columbia
CMMC	Copper Mountain Mining Corporation
COI	Community of Interest
DRIPA	Declaration of the Rights of Indigenous Peoples Act
EA	Environmental assessment
GHG	Greenhouse gas
GISTM	Global Industry Standard on Tailings Management
HVC	Highland Valley Copper
IAA	Impact Assessment Act
IBA	Impact Benefit Agreement
ICMM PE	International Council on Mining and Metals Performance Expectations
IWRB	Independent Water Review Board
LSIB	Lower Similkameen Indian Band
MAC	Mining Association of Canada
PVR	Post-verification review
TSM	Towards Sustainable Mining
UNDRIP	United Nations Declaration of the Rights of Indigenous Peoples
USIB	Upper Similkameen Indian Band