Improving Dust Management Practices in the Elk Valley

Teck recognizes Elk Valley residents' concerns with dust from our operations have increased over the last two years. We take these concerns very seriously and are continuously seeking to enhance our dust management measures. We know that dust generated at our operations can impact communities in and around the Elk Valley and we are taking all practical measures to reduce dust.

For more information about dust management at Teck's operations, monthly air monitoring data and a live camera feed of Elkview Operations, visit www.teck.com/elkvalleydustmanagement.

Current dust management practices

- Water trucks are available at all times to keep active road and pit areas wetted to minimize dust generation. Water trucks receive priority maintenance. We added an additional truck to the fleet last year and continue to optimize their operation.
- Hydro seeders to apply mulch material on the lagoons, coarse coal refuse, clean coal stockpiles, high walls, and various other locations around the mine site. Mulch has been proven to be effective at minimizing airborne dust due to wind.
- Mister trucks, mister trailers or mister cannon systems are deployed throughout site, including high walls, spoils and blast areas. Watering these surfaces helps to prevent airborne dust caused by wind. Similarly, water sprinkler systems are deployed at the processing plant and in-pit operations.
- Wind fencing is in place around the lagoons to act as dust catchment.
- Chemical dust suppression is applied to roads and rail cars to prevent dust generation
- Speeding up reclamation of former mining areas, specifically targeting visible areas from the community of Sparwood, including the new 6 Mile Access Road, areas below the Baldy Ridge II pit and unclaimed areas of the Bodie spoil and areas of the Baldy Ridge VI spoil.
- Elkview Operations continues to evaluate mine design and sequencing to reduce community impact. This includes blasting changes, bottom up spoiling.
- Live monitoring via intermittent and real-time cameras directed at operations to help personnel understand what site looks like from the community and to aid dust management planning.
- Dust and air quality monitoring and tracking systems, visit **www.teck.com/elkvalleydustmanagement** to see monthly results and more.

New solutions trialed in 2018

In 2018, we trialed the following additional dust management solutions and we are continuing to expand on these ideas and testing new options going forward.

Action: Test wetting blast patterns to reduce dust generation from blast.

Result: Successful. Currently working with a supplier to develop an easy-to-move hose system to improve water reach and coverage.

Action: Develop a model of dust sources on site.

Result: Underway. Elkview Operations completed a computational fluid dynamics model that shows localized weather patterns. This information will now inform blasting practices and placement of mitigations such as water trucks, misters and mulch material.

Action: Engage external experts to assist with dust source identification.

Result: In progress. Researchers from the Massachusetts Institute of Technology (MIT) are exploring various monitoring techniques to collect data in and around the mine and Sparwood. The data will inform mitigation activities at site. Learn more at **http://senseable.mit.edu/cityscanner/**

What's new in 2019

In 2019, we are working on new and innovative solutions including a focus on minimizing and managing dust generation on active waste rock dumping areas and as a result of blasting, This includes:

- Closing access and capping portions of the Natal Spoil with coarse rock to reduce dust from fine surface material. We are also planning to trial helicopter assisted grass seeding on this spoil.
- Focusing on material size and selective dumping to reduce fines on wind-affected spoils
  - Optimizing blast fragmentation (increasing material size) to reduce the production of fine material from blasting.
- Implemented Trigger Action Response Plans (TARP) for 'high' and 'excessive' risk fugitive dust sources
  - Developing localized weather pattern models to understand 'upset conditions' and inform TARPs for blasting and spoiling
  - Developing a real-time predictive weather model for blasting
- Investigating the use of MicroPulse LiDAR to determine dust source generation and movement.
- Evaluating the Regional Air Monitoring Network to ensure the network remains suitable and relevant to understanding impacts to the community

We welcome community feedback

Feedback from the community helps us to understand whether our mitigation measures are working, and if there are new issues that we need to address.

Please tell us your feedback by leaving a message at **1.855.806.685**, **feedbackteckcoal@teck.com** or leave a comment in the feedback box outside District of Sparwood Offices. Feedback can be anonymous. If you leave your contact details, we will respond directly to you.

Teck