



RESPONSIBLE MINING

ANSWERING ALBERTANS' BIG QUESTIONS - OCTOBER 2021

Albertans have been asking questions about metallurgical coal mining and we've been listening. Following below are the questions we've heard most often since the discussion began in 2020

QUESTION: If the world is moving to net-zero or green technologies why are we still talking about extracting fossil resources?

Steel is a major component of our everyday lives. Steel is used to build homes and schools, fridges and cookware, cars and buses, sports equipment and computers, to list only a few of its many uses. Steel is also used to build renewable or net-zero products such as wind turbines, frames for solar panels, electric and low emission vehicles.

When steel is produced most efficiently, the process utilizes metallurgical coal. Other technologies cannot provide the quantities of steel needed by Canada and other nations each and every day.

QUESTION: What will be left behind when the mining is done?

Modern mining operations are conducted with the end of mine life squarely in mind.

Restoring as work progresses across a site, the footprint left behind will not look out of place with the surrounding natural landscape. Responsible mine planning starts with the return of the proposed mine site to a natural habitat that supports sustainable, multi-generational land use.

QUESTION: Should Albertans be concerned about new mines releasing selenium?

Selenium is a mineral found naturally in the environment. Selenium is present in rock, soil and water in Alberta. Too much – and too little – selenium can cause problems for living things. As a result, Alberta's agriculture, electric power generation, oil and gas and mining industries must manage selenium.

Modern mines are designed to prevent selenium from being released in the first place. Through engineering and monitoring implemented right from the start, new mines reduce the amount of selenium released by up to 70% compared to historical mining practices.

New mines use site-wide water management strategies to ensure mine-affected water is captured and treated. A range of physical, chemical and biological treatment technologies have been proven to remove selenium from water. Detailed reports on these technologies can be found here: <https://www.namc.org/docs/00300393.pdf> and here: <https://www.namc.org/docs/00180231.pdf>.

The specific technologies used by modern mines to manage selenium include active Moving Bed Bioreactors or Fluidized Bed Reactors, semi-passive saturated rock fills (SRF) and passive biochemical reactors (BCR) These treatment methods can remove as much as 99% of selenium from mine-affected water.

The design and operation of a modern mine prioritizes maintaining selenium at its natural level in the nearby watershed. Untreated water will never be released. Any discharge of treated water will meet the rigorous standards of the Government of Canada and Government of Alberta.

QUESTION: Should Albertans be concerned about new mines reducing how much water is available?

The management and protection of Alberta's water is governed by the Alberta Water Act.

The rights of existing water users are strongly protected by the "first in time, first in right" priority system put in place under the Act. Older license holders will always get their water before newer ones.

The Government of Alberta has repeatedly said that no changes will be made to water allocations. There have been no changes, nor will any be made for mining projects.

Existing users will always have priority under Alberta's water regulations.

QUESTION: Does Alberta have the high-quality coal needed for steelmaking?

Metallurgical coal is the critical ingredient used in making steel, carbon, iron alloy and other metals.

The physical properties of this coal – also known as met coal, coking coal and steelmaking coal – determine its quality. This includes its chemical composition, moisture and density.

Governments and financial markets require that coal companies provide independent testing and confirmation of coal quality. Extensive study has proven the quality of Alberta's met coal for steelmaking.

Metallurgical coal in southwestern Alberta is found within a coal bearing formation that extends into southeastern British Columbia. Technically called the Mist Mountain Formation of the Kootenay Group, the region holds a well documented and long proven metallurgical coal resource. The same formation has been actively mined in BC's Elk Valley for many years.

QUESTION: Will met coal produced in Alberta increase global climate change?

Metals produced using metallurgical coal are part of everything we do every day. From buildings to transportation to household goods and technology of every description – including smart phones, surgical implants, wind turbines and solar panels – metallurgical coal supports the manufacturing of the necessities that provide the foundation of daily life.

Metallurgical coal is produced in response to the demand for steel. Global demand for steel is expected to steadily increase through to 2050. Experts emphasize this will be the case even with greatly expanded recycling of old and scrap steel.

Alberta's metallurgical coal produces less CO₂ than coal from other nations. Using Alberta coal lowers global CO₂ emissions compared to using coal from these other producers.

As billions around the world seek to improve their quality of life, metallurgical coal will continue to be produced and consumed. Increasing the use of metallurgical coal produced in Alberta will decrease the climate warming emissions of this ongoing global development.

QUESTION: Does it make business sense to develop new metallurgical coal mines in Alberta?

Mining creates hundreds of good paying, long-term jobs, produces new royalty revenue for the Government of Alberta and be responsible – directly and indirectly – for new taxes paid to all three levels of government.

The investment fundamentals for Alberta metallurgical coal are strong because of high and increasing demand, limited new supply and alternative technologies that experts say are decades away from meeting the world's need for steel and other metals.

During the life span of any proposed mine, businesses in local communities will also benefit. Much of the spending to operate and maintain a mine will be in the form of sub-contracting, equipment and operational "consumables" (for example, food, office supplies, cleaning materials and hotel rentals) purchased from nearby communities. This will amount to many millions of dollars.