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To: M. Steven Guibeault,
Minister, Environment and Climate Change Canada
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RE: January 22, 2022: Proposed Coal Mining Effluent Regulations

To Whom It May Concern:

Please accept the following letter with our concerns about the Proposed Coal Mining Effluent Regulations. We believe that the regulations have been designed to allow the coal industry to receive approvals and permits that are contrary to careful management of the environment. This is clear from the number of times the words *LESS STRINGENT* have been used in the document. In our opinion the new proposed regulations are not based on science nor do they address the precautionary principle, cumulative effects of multiple water contaminants from multiple sources, or the bioaccumulation properties of contaminants within the effluent. Allowing such high levels of toxins into the Oldman Watershed where we live will create a lasting problem for Albertans.

The Crowsnest Conservation Society: Who We Are

The Crowsnest Conservation Society (CCS) is a not-for-profit organization based in the Crowsnest Pass, and devoted to ensuring a healthy future for the natural environment in the region surrounding our community and the people and wildlife that live within it. The Tent Mountain site lies within the southwest boundaries of our municipality, and mining operations at that site may impact objectives in our strategic plan for activities within the region.

We are the only local group with conservation of the natural environment as a primary purpose. A principal objective in our strategic plan is to promote awareness and enjoyment of the unique natural heritage of the Crowsnest Pass (CNP) among residents and visitors alike. We held our first meetings in 2004, were incorporated in 2005, and became a registered Charitable Organization with Revenue Canada in 2009.

Most members of our Society, many of them lifetime members, are local residents, and therefore directly affected by the prospect of new mining projects in our area. Many have spent their lifetimes in “the Pass”, while others who left the community for careers in a broad variety of occupations eagerly returned as retirees to the home and landscape that shaped their early lives. Still others migrated here from nearby or distant places, attracted by the friendly towns, relaxed lifestyle and ready access to the outdoor recreation

opportunities that beckon from all sides of our valley. New businesses have sprung up to support and nurture these opportunities, creating a visibly growing sector of our local economy. We take special delight in seeing young families in the community; they remind us that there is no better place, anywhere, for children to grow and flourish.

Our volunteer board members reflect a broad cross section of the community. We feel privileged to contribute our time, talent and enthusiasm to applying the environmental conservation principles set out in our mission statement and strategic planning document. We are competent, experienced, and capable of making scientifically informed decisions based on sound ethical principles that reflect our organizational mission, and most of all, serve the best interests of the Crowsnest Pass and its people.

The CCS was deeply involved in the recent deliberations of a federal-provincial Joint Review Panel (JRP) which closely examined the Benga Mining Grassy Mountain Project, specifically its Environmental Impact Assessment. In our role as a full and active participant, we submitted timely documents and position papers, exercised our options to present and cross-examine expert testimony, and filed our submissions in the permanent archive of the Panel. We have estimated that several hundred hours of volunteer time was invested in this contribution.

Our Concerns

We are dismayed that all of the proposed regulations have been made less stringent, even as the science predicts that doing so will be unhealthy for aquatic life. The scientific research coming from the United States highlights the need to protect their valuable resource: water. We are very concerned that these decisions are being made without conducting the proper research to evaluate the long-term effects on the water quality and aquatic life. There is a lack of scientific research conducted in Canada to support less stringent regulation. Here are some of the specific things we are concerned about.

1.2.2 Total Dissolved Solids

With climate change affecting weather, it seems likely that “exceptional rainfall events” are going to happen with more frequency, and that the chances of a catastrophic release are even higher. This would suggest that coal mines should be asked to plan much more carefully for this eventuality. Instead the proposed regulations are less stringent and ask for exemptions for rainfall events. CCS believes that the regulations should state that the amount of total dissolved solids be the same for exceptional rainfall events as they are at other times.

1.2.3 Nitrate

The Canadian Water Quality Guidelines for Aquatic Life state that the allowable standard for nitrate should be a monthly mean of 3 mg /L. When the environmental science is this clear, CCS believes that the regulations should meet this requirement. There is no scientific research to support an increase in nitrate

levels in mining effluent. It appears the rationale for this request to increase nitrate levels is due to the nitrate joining a water source. However, it does not consider the cumulative effects of multiple mines releasing effluent or other industries in the area. A number of coal mines are being proposed within 60 kilometers of our town. In addition, CNP is at the headwaters, and directly downstream is a large agricultural sector. Nitrogen is already being inputted into this water due to agriculture and fertilizer runoff. The scientific research has not been completed to support an increase in nitrate levels.

Dilution is not the solution and should not be a rationale to contaminate the headwaters for a large portion of Canada. CNP is at the headwaters and the water sources around CNP are small creeks. Even Crowsnest River, one of the larger rivers in the area, can often be walked across. Even farther down the rivers continue to be small and extremely low in winter.

In addition, the creeks and rivers around CNP are home to sensitive species. Both westslope cutthroat trout and bull trout reside within these waters. Westslope cutthroat trout and bull trout are listed both federally and provincially as species at risk, as well as Critical Orders are in place to protect their habitat. There is no scientific research completed to evaluate the impact on these species at risk to support an increase in nitrate levels. The proposed coal mines around CNP are within the current range of these species and an increase in nitrate levels should not be approved before there is an understanding of how it will impact aquatic life, with specific research conducted to understand the impacts on species at risk.

1.2.4 Selenium

An increase to selenium levels in coal mining effluent is being proposed based on industry not being able to meet the current guidelines. The current guidelines for selenium based on the *The Canadian Water Quality Guidelines for Aquatic Life* is 1 ug/L. This is the amount previously researched and studied to determine a healthy aquatic environment. The amount first proposed in the Coal Mining Effluent Regulations was 5 mg/L, and has now increased to 10 ug/L based on “concerns ...raised by industry and provinces over the achievability of previously proposed new mine limits of 5 mg/L (monthly mean), and now ECCC is proposing to decrease the stringency of the regulatory standard for new mines to 10 ug/L.” This means that the aquatic life living near the end-of-pipe will be subject to 1000% more selenium than is considered healthy. The research and studies completed to determine the current guidelines is being compromised due to a lack of achievability by industry. Aquatic health and water quality should not be compromised now or for our future. If coal mines cannot meet the current guidelines, they simply should not be conducting the work.

The CCS is strongly opposed to industry deciding what levels of selenium are acceptable based on what is achievable for them without conducting third party scientific research to evaluate how the increase in selenium will impact aquatic life and water quality. This research should include studies along the entirety of the water course as selenium bioaccumulates in the ecosystem and downstream. Major water quality and aquatic life concerns are being made by the United States regarding selenium being released in British Columbia from coal mining companies. The long-term impacts of this contaminant are still being

understood, and changing regulations to allow an increase in selenium in mining effluent is strongly discouraged. Selenium, especially in a mobilized state, should continue to have high standards regardless of what is achievable..

CCS does not support an increase in selenium levels in coal mining effluent without having long-term studies and research conducted to understand how this increase in selenium will impact aquatic life and water quality. Scientific research must be conducted by a third party and include the impacts to species at risk. Due to mobilized selenium bioaccumulating in ecosystems and that selenium is being released into the water course, the scientific research must evaluate the entirety of a water course. Decisions to change regulation should not be decided based on what is achievable and should be decided based on scientific research. We owe it to all living things, other industries downstream, the food we consume, the water we drink, and the future of other generations to make informed decisions based on research and not achievability.

At this moment, CCS asks the ECCC to make the regulations around selenium MORE STRINGENT and set the level at 1 ug/L.

3.5 Biological Monitoring and Annex C Selenium and Nitrate Treatment Technology

CCS values environmental monitoring and its purpose to quickly and safely mitigate. In the case where a toxic level of selenium is reached in coal mining effluent, mitigation is extremely difficult, and has so far not been successful.

Teck's water quality problems in the Elk River should be a cautionary tale. Annex C shows technologies that coal mines are using to control selenium. It was not until after selenium levels in the Elk River exceeded safe levels in fish, that Teck started researching new technologies. They are trying biological reactors and saturated backfill to immobilize the selenium. This technology is new and has not been tested in the long-term yet. There are still several unanswered questions about the new technology and the mining processes, such as 'Who treats the water after the mine is done?' Until this technology is proven and shows long-term success, it should not be used as a means to change regulation.

There are 11 effluent treatment technologies listed in the Proposal. However, none of them are expected to be sufficient to meet *The Canadian Water Quality Guidelines for Aquatic Life*. We are concerned that several sections of the proposed document had to be made *less stringent* in order for coal mines to be approved. We would like ECCC to base their decisions on scientific research and not the achievability of industry.

Conclusion

Crowsnest Conservation Society would ask Minister Guilbeault and the committee tasked with evaluating coal mining effluent standards to carefully consider the request to change regulations. CCS is concerned



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about the water quality and aquatic life impacted by having less stringent guidelines. Scientific research and guidelines for aquatic life do not support an increase in nitrate or selenium levels in mining effluent. Decisions to increase these contaminants in mining effluent require careful consideration and long-term studies and research to make an informed decision. Decisions about water quality and aquatic life must be evaluated based on third party studies, studied throughout the water course and include cumulative effects, include specific research on species at risk, and show long-term impacts. This research must be conducted before there is a good understanding of how this regulation will impact water quality and aquatic life, and a decision should not be made to allow an increase in nitrate or selenium. We owe it to all living things, other industries downstream, the food we consume, the water we drink, and the future of other generations to make informed decisions based on research and not achievability.

We already have some scientific research available and know what the guidelines are based on *The Canadian Water Quality Guidelines for Aquatic Life*. Therefore, we are asking the committee and the Minister of ECCC to please make coal mining effluent standards meet The Canadian Water Quality Guidelines for Aquatic Life.

Yours truly,

Susan Wagner,
Office Volunteer,
On behalf of
The Board of the Crowsnest Conservation Society