

September 20, 2010

Andrew Rollo, Project Manager
Raven Underground Coal Mine Project
Canadian Environmental Assessment Agency
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Dear Mr. Rollo

Re: CEAR Reference Number 10-03-055529

We are writing to express our profound concern regarding possible adverse effects of the Raven Underground Coal Project. We believe that the proposed Raven Underground Coal Project will have a deleterious effect on the Comox Valley, the local watersheds and Baynes Sound, the residents, terrestrial species, and marine life found in the area. The shipment of coal to Asia from this proposed mine and its use will have a negative impact on an already compromised global ecosystem. For this and the following reasons, we believe the proposed mine should be assessed by a joint federal/provincial independent expert Review Panel conducting full public hearings.

Further Concerns:

Geopolitical - Although geopolitical considerations are not normally considered by independent expert Review Panels, we believe that in a time of crisis such as we all face at this time in our history as our climate changes and threatens us on a global scale, we must set aside our local concerns and address global issues affecting us all. We need to change the way we produce energy, as green house gases are proving to be a lethal byproduct. Coal is one of the worst producers of these gases. We need to abide by the spirit of the new laws enacted by the Province of British Columbia to reduce our carbon imprint. We can have a major impact on emissions by leaving the coal in the ground. Users of coal will seek alternative means for creating energy if this resource is not available to them. This is a straight forward strategy for promoting the innovation needed to create clean energy options thereby shifting ourselves and others to non GHG producing sources of energy.

Watersheds and Ocean Waters – both surface and ground water in four watersheds (Wilfred (Coal), Cowie (Cougar Smith), Tsable, and Hindoo) will be impacted by the proposed mine. Three of these creeks/rivers are known to be salmon bearing. Cutthroat and rainbow trout are also found in these waters (an updated baseline study is needed). What is not known is the extent of the aquifers in the area that will be impacted by the underground operations. We do know that complex interaction between underground waters and surface waters occur and that water contaminated by acid mine runoff and toxic heavy metals dissolved in the water will move over time from one body of water to another. In the case of the waters in this area, there is the potential for contaminating

Baynes Sound and the valuable shell fish farmed there. Baynes Sound is known for having limited flushing capability which compounds the problem. We believe a comprehensive aquifer mapping and modeling of the entire 3100 hectare Raven coal tenure is required. Without that, an appropriate environmental assessment cannot occur.

The amount of mine waste deposited on the surface site of this underground mine will be massive. Severe weather events due to global warming are increasing. Risk of earthquake does exist in this area. These could result in serious problems related to the mine, retention ponds, the watershed, and the environment. Spontaneous combustion in the mine itself and in the waste piles also pose a threat.

Due to the greater exposure of coal underground once the tunneling takes place and the greater exposure of waste coal and rock piled above ground exposed to air and rain, there is an increased threat to the aquifers and watershed in general.

Air Quality – coal mining will have an adverse effect on air quality in the area, with increased particulate matter affecting the health of all living organisms. This can be expected from the mining operations as well as the shipment of the coal to Port Alberni. The ultimate burning and/or coking process of the coal will add immense amounts of carbon dioxide and particulate matter to the atmosphere contributing to the global increase in greenhouse gas and increase in global temperature. We are already at 380 plus ppm and can ill afford to increase the unrelenting assault on our global atmosphere and climate.

Sustainability and Quality of Life - we need to pursue sustainable economic activities in the Comox Valley. The shell fish industry in Baynes Sound represents one of these industries. The Comox Valley Regional Growth Strategy states that the shell-fish industry remains a major and growing employer in the region and that Baynes Sound is the hub of British Columbia's oyster farming sector. This sustainable industry needs to be protected. The settlement of retirees in the Comox Valley represents a sustainable economic strategy as long as the area maintains its quality of life, including its natural beauty and opportunities for recreation, that attracts retirees. The Growth Strategy for the Comox Valley points out that retirees make a very considerable contribution to the economy of the region. (They have not been drawn to this area by coal mines.) This is buttressed by marketing the area of the Comox Valley as providing "natural beauty and outdoor recreation opportunities" to the tourism/ecotourism/retirement market. Major housing developments, accommodation and recreational proposals as well as a new university and elite sports academy are being considered for the valley. A coal mine is not a sustainable enterprise and in this case threatens to do irreparable harm to the major sustainable economic drivers in the region.

Transportation of the Coal – the Raven Coal Project proposal to ship coal by truck to Port Alberni for shipment to Asia will put an intolerable demand on the narrow highway that connects the Inland Highway #19 to Port Alberni, passing through Cathedral Grove, skirting Cameron Lake where the road narrows between overhanging rocks and the lake shore, over a mountain pass and down a major hill ending in a sharp left turn into the Alberni valley. The road is heavily travelled throughout the year by tourists with their campers and boat trailers as well as by heavy trucks hauling milled lumber to eastern markets. It is subject to strong winds, heavy rains, ice, slush, and periodic snowfalls on the pass at various times in the winter. The risk of major accidents, resulting in highway

disruption, injury, and death is very real. The negative impacts will be felt in Port Alberni as well as tourist destinations on the west coast - Ucuellet, Tofino and the Pacific Rim National Park. A thorough risk assessment needs to be conducted regarding the highways.

The cost to the tax payer for maintaining the highways to accommodate the 52,000 plus trucks travelling back and forth per year needs to be factored in as well as the emergency pull over areas, weigh stations, and turn around areas that would need to be provided.

The risk of accidents and spills from the coal carrying B-Trains endanger creeks, rivers, Cathedral Grove, and Cameron Lake along the transportation route. The real possibility of a Panamax freighter spill or accident in the Port Alberni Inlet and Pacific Rim Park looms large with its potential devastating effects on the marine environment. We have all seen in the past year how the 'latest technology' still leaves room for errors of major proportions.

Adverse Effects Brought on by Climate Change/Global Warming – we are experiencing the effects of climate change now and these effects are expected to increase over time. We have seen a decline in snow pack during the winters resulting in less melt in the spring and summer to provide both the flow and cooling temperatures required by the rivers and streams to maintain their ability to provide viable aquatic habitat. There is little knowledge regarding the aquifers but we can assume the changes in snow melt are having similar effects on these bodies. We have been experiencing more severe weather events which will pose a threat to any attempts to maintain retention ponds. At the same time we are experiencing longer periods of summer drought which only exacerbates the changes in water availability and the recharging of aquifers. These changes are impacting our streams, the forest, and water used by residents for human consumption.

Human Health Issues - Research provides evidence of person's experiencing health issues related to coal, the closer they live to coal mines and transportation routes. The following are a few of the many titles related to health and coal - links can be found at www.coalwatch.ca under DOCS.)

- The Negative Impact of Abandoned Coal Mine Workings on Drinking Water Quality and the Health of Residents on Vancouver Island by Karla Joy Biagioni 2006
- Cradle to the Grave: the Environmental Impacts of Coal. Clean Air Task Force, Boston, June 2001
- Ecological Integrity of Streams Related to Human Cancer Mortality Rates by Nathaniel P. Hitt and Martin Hendryx, [EcoHealth](#), June 2010

Jobs – We currently have a sustainable shell fish industry employing in excess of 500 people in this area. We see no justification in risking these jobs for the sake of short term mining jobs in an industry that is so destructive to our environment and possibly to the health of its citizens.

Wildlife Corridors and Species at Risk - Wildlife corridors have proposed and appear in Nature Without Borders and the draft Regional Growth Strategy. What effect will a coal mine have when it is placed in close proximity to these corridors? Similarly what effect

will the coal mine have on the species at risk noted in the Raven Coal Project Addendum?

Cumulative Effects – Two housing developments are slated for this area which will add to the impacts on Baynes Sound – the Kensington Development and the Sage Hills Sports Academy and University which will include up to 3000 residential housing units, student residences, golf courses, commercial enterprises. A second coal mine being consider by Compliance (see their website) sits in the watershed of the Trent River which flows into Baynes Sound. All of these developments will add to the strain on the watersheds, aquifers, and the Sound itself.

Decommissioning - The decommissioning of the mine will add to environmental problems. Acidification of ground and surface water will continue unabated for years, with the leaching of heavy metals eventually entering our food chain. As this happens, shell fish in Baynes Sound may become unfit for human consumption. Other species such as salmon and herring will also be impacted as these toxic metals move up the food chain.

The closing of the mine will involve the removal of pillars that support the mine. We do not know how this will increase surface subsidence and further impact the rivers and streams in the area.

There is talk of a bond being ‘set up’ by Comox Joint Venture to cover any adverse effects but there is no bond large enough to compensate for the possible negative impacts of this mine once they have occurred. Mitigation is a word often used related to this and other mines but mitigating merely means to moderate impacts not to remove them. This is not good enough for the environment. There are just too many additional stresses being borne by the environment that we, and the generations to come, depend on.

Quality of the Coal - There appear to be serious questions needing to be addressed regarding the quality of the coal and the feasibility of this mine based on some of the submissions that have been forwarded to you during this public comment period.

Monitoring of Mines - Vancouver Island has seen its share of adverse effects from mines. The Comox Valley does not have to look far for this. The copper mine at Mount Washington which operated for a short period caused massive problems for the Tsolum River and its aquatic species. The cleanup bill for has been in the millions to date. According to a letter written to the BC Ministry of the Environment January 25/10 by Greenways Land Trust and Campbell River Environmental Committee, the Quinsam Coal Mine in Campbell River has on many occasions exceeded its permit restrictions which has resulted in their permits being expanded to allow for them to continue. Long Lake in close proximity to the Quinsam Mine has arsenic levels much beyond the provincial guidelines. The report states that although more study is required “no geological sources in the area could account for the levels found in Long Lake..” The federal departments for fisheries and oceans and the environment have seen considerable cutbacks over the past 10 years. How can a citizen feel confident that there will be staff from the provincial and federal governments monitoring the conduct of this mine, should it proceed? How will the public be included in the ongoing assessment of the mine? How, when and where would reports concerning the mines activities related to the environment be made public to local governments and the citizens at large?

A recent memo sent by Deputy Minister Doug Konkin to BC Ministry of the Environment staff stated "It is clear we can no longer spend so much of our time responding to specific projects and trying to mitigate negative impacts," (E. Baron, The Province, Sept.15). Knowing this, how can we have any confidence effective monitoring would occur for this proposed mine.

Because of the significant and widespread concerns expressed by individual citizens, organizations, technical experts, and local governments within the region concerning the potential adverse effects of this mine, we again ask you to refer the environmental assessment of the mine to a Review Panel and ensure the comprehensive aquifer mapping and modeling is completed before any decision is made in regard to the Raven Underground Coal Project.

Sincerely

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