Socio-Economic Impact Analysis
Analysis of Compliance Coal 's response to public comments on the dAIR and EISG for the Raven Underground Coal Mine Project
Alberni Environmental Coalition and Comox Valley Coalwatch
November 25, 2011

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Introduction

At the request of the Alberni Environmental Coaltion and Comox Valley Coalwatch, the author scanned the following documents submitted to the BCEAO and CEAA by AMEC on behalf of Compliance Coal:

- Background and General Comments Response Document
    - Appendix A- tracking of "general" public comments and responses
    - Appendix B- tracking of "specific" public comments

The purpose of the scan was to note recorded comments and the corresponding Compliance Coal responses reflecting the issues, concerns and recommendations from the Kuyek socio-ecnomic report report submitted by AEC and Coalwatch dated June 11, 2011.

The author was unable to find a copy of the actual report on the EPIC website although there were a number of comments that either quoted from the report (acknowledged or unacknowledged) or spoke to similar issues. The result was that the overall arguments and logic of the issues raised by AEC and CMVC during the public comment period and previously were lost to the process.

With very few exceptions, the Compliance Coal response has been to dismiss the socio-economic recommendations and leave the previous version of the dAIR/EISG unchanged. From reading the three Compliance response documents and searching the public comment websites, three key challenges have emerged, which can be briefly categorized as

- a refusal by Compliance to consider ecological accounting to evaluate the project,
    - a trivializing of the discussion of the sustainable development approach, and
    - the company's refusal to address the overseas costs of coal production and consumption.

These themes are elaborated further below.

The public comments contain a wealth of information and analysis from the public – anecdotal and quantative – that should be incorporated into the Environmental Assessment. How do the governments who are conducting the Environmental Assessment intend to use this information to inform their decision about the project? Or will it just be managed and contained?

General comments on the Compliance responses to public comments

1. Compliance appears to have heard our request that opposition to the project be recorded. In Appendix A, almost 200 pages of comments (pages 474-645) are designated as "General- Statement of Opposition". Within these comments are a number of passionate statements about the relationship of environment, economy and culture, which are then not considered further (examples include #3224, 3808 and 3167). There appear to be a number of other statements of opposition that are not recorded as such, and were also ignored.

2. Compliance says that 551 comments out of 6118 (9%) were "inappropriate", but does not say why. Most of the comments considered "N/A" are strong statements about Greenhouse Gases and the use of coal. However, also among the comments considered "Out of scope" are the following:

Comment 138 from Anonymous*2011-05-21*

I have lived in Fanny Bay for all of my life,I own a home with my wife and two children,and I grow shellfish for a living. My mentors have been fanny bay oysters and keith reid who are leaders in this field. My wife has worked for fanny bay oysters for 13 years doing all of their shipping while I have ventured off into starting our own farm. In 2010 we both decided to do farming full time and started selling our product to restaurants direct in whistler for the olympics.Over the past year we have established our brand as a local west coast product that chef's are proud to serve their customers.Our focus is on sustainable farming practices, and selling as locally as possible.today 100% of our customers are within a 100 mile radius of our farm, and our delivery vehicle runs on propane in an attempt to do what we can to reverse the effects of global warming. Baynes Sound has great potential for employment in the region as long as the water remains pristine. There are scallops,goeducks,oysters,clams, large schools of herring all generating excellent economic benefits and creating long term employment in the region.As a byproduct of this economy the residents receive clean water and an abundance of wildlife and marine life due to the sustainable nature of the industry. The government is aware of the economic benefits of the shellfish sector which is why they have invested millions into a new wharf at fanny bay and a new field station in deep bay for scientists,chefs and students to come together to help increase technological advancements. population growth,pollution,waste,and heavy industry are problematic for the shellfish industry which is why the field station was built to such rigourous LEED standards in hopes that the public will realize the importance of reducing their fertilizer use,or preventing leaching septics which can cause difficulty for baynes sound's overall water quality. This year is the 100th anniversary of parks canada,and it would be a wonderful gift to all canadians to make baynes sound a marine shellfish park which would protect the governments investment in the wharf and the field station,it would help incease technological advancements in the shellfish industry which would increase jobs and productivity as well as create a low impact tourist destination for kayakers and toursist wanting to enjoy tree island or enjoy the stellar sea lions barking at the fanny bay wharf. Fanny Bay is already a sustainable thriving green economy that deserves to be given a chance at producing at it's fullest potential to provide more long term employment opportunities without doing damage to the region. —- ---------- **Compliance** Response to Comment 138: N/A

Comment 995 from Anonymous- Fanny Bay, British Columbia2011-06-01

I am a local resident of fanny bay,and lived here all of my life, married with two girls,and I work as a shellfish farmer in baynes sound.My family has lived here for 3 generations,and my wife's family has also lived on denman island for many generations.My grandfather met my grandmother working in the mines located in cumberland before the war.All of our families worked at one time or another picking oysters,logging or fishing in the area.We currently sell direct to restaurants and sell within 100 miles of our farm,we have also helped coalwatch raise $8000 at the Ocean of Plenty dinner last november to help the local community learn more about the potential effects of a mine in the fanny bay region.Fanny Bay is my home, and it is one of those places you only see in fairy tails.It truly is super natural british columbia with unsurpassed views in every direction and the water quality is the epicentre of all the activity for the commnity.Today,for example I was able to see an eagle eating something at low tide while I picked clams,and before I left for work a farmer told me he saw a large whale with a pod of killer whales looking to snack on a sealion for lunch. I missed it, but a month ago I was fortunate to see a pod of killer whales slowly swim by my boat as I turned off the motor to watch them swim by.This is why we all moved here,it is this that the community wants to preserve,and give to the next generation.I have put both my kids into the Beachcombers school in hopes that they will enjoy playing outdoors amongst the natural beauty of the area on many of their outside adventures,last week they went kayaking,and hopefully as they grow older they will remember how special the area really is,and in turn,love the planet we all share.
*---------- **Compliance** Response to Comment 995N/A*

3. Despite an attempt by AMEC in Table 2.2.1 (page 8) to classify comments into different categories, 1171 comments classified by "environmental component " were classified as "other"; and - by "project component" - 1456 (page 9). These are 19% and 24% respectively of total comments. I scanned what was included in "other" for both categories, and thought that a number of the comments could have been included elsewhere. It is unclear if they were given equal weight to the comments that could be more easily slotted into categories. Two stunning examples are below:

Comment 1667 from Anonymous- Bowser, British Columbia2011-06-13
These photos show some of the water flows from the highlands of East Vancouver Island along BAYNES SOUND between Deep Bay and Courtenay. They speak for themselves. Image files page 90 to 107 (89 of 114) (90 of 114) (91 of 114) (92 of 114) (93 of 114) (94 of 114) (95 of 114) (96 of 114) (97 of 114) (98 of 114) (99 of 114) (100 of 114) (101 of 114) (102 of 114) (103 of 114) (104 of 114) (105 of 114) (106 of 114) (107 of 114)
----------**Compliance** Response to Comment 1667N/A

Comment 3072 from Leo Polowich- Courtenay, British Columbia2011-06-27 (n part)
There are many areas of additional information that need to be included in the assessment process. I wish to address two areas. Economic impact Clear cost assessment and not just economic benefits must be included here. What will the impact on land values be considering increased noise and traffic levels and issues around air quality? What impact will there be on tourism given the fact that we promote ourselves as a recreational destination? What will the impact be on our shellfish industry? If nothing else how will it overcome the negative perception upon the quality of its product if not the reality of the effect of a coal mine on top of its watershed? How will our community attract individuals with innovative ideas and capital and the spin offs their ideas generate if a major coal mine is in operation so close to our town sites? Decommissioning and site remediation If the decommissioning process is deemed sub standard or if negative effects are noted in 20, 30, 40 years time, to whom will these issues be addressed? Whose responsibility is it to monitor land and water quality and for how long? To whom will the issue of further needed reparation (if necessary) be made? How will these considerations be financed in the future?
----------**Compliance** Response to Comment 3072N/A

4. The requirement to use the comment form is very problematic. While seeming to simplify response to single comments, it discourages approaches that critique the over-all approach of the dAIR/EISG, and divides coherent arguments into meaningless pieces. Key points from the Kuyek report are completely lost in the shuffle:

- that *the Need and Purpose of the Project* and the *Contribution of the Project to Sustainable Development* should be approached from the perspective of the affected communities and not from the perspective of the Proponent, and
    - demands for a full cost analysis which includes natural capital and lost opportunity costs are completely ignored.

The use of the comment form aooears to deliberately overwhelm the unpaid public opponents to the mine with administrivia and confusion, and absorbs valuable time and energy. An attempt to use "Step 3" of the process –where comments are listed by number and there is a one click comment response , revealed that most of the comments the author considered relevant to the Kuyek report were not on the Step 3 list. Amongst the comments that were not accessible in this way were:

778 (Armstrong)
1695 (Zimmerman)

2596 (name withheld)
3331(withheld- direct quote from my report!)
3332 (Citizens Stewardship Coalition- direct quote from my paper)
3995 (name withheld)
4010 (John Snyder)
4043 (name withheld)
4044 (Louise Bell)
4046 (name withheld)
4051 (Jane Armstrong)
4054 (Citizens Stewardship Coalition)
4055 (Pam Harrison)
4056 (Pam Harrison)
4057 (Name withheld)
4059 (Name withheld)
4103 (Patricia Willis)
4109 (Jane Armstrong)
4126 (name withheld)
4203 (name withheld)
4255 (name withheld- direct quote)
4283 (name withheld)
4303 (Jen and Stephen Fisher)
5007 (Armstrong)
5059 (name withheld)
5060 (Patricia Willis)
5395 (John Snyder)
5964 (Conservancy Hornby Island)
5988 (John Snyder)
5989 (Garry Swann)
5990 (Mayo Stano)
5991 (John Snyder)
5992 (Tim Theilmann)
6034 (John Snyder)
6035 (John Snyder)
6045 (John Snyder- submission of my comments!)
6051 (John Snyder)

At the end of the document these omitted comments including the number, the commentator , date, the comment itself (as abbreviated by AMEC) and the Compliance response are attached, with replies from AEC and CVCW. In almost all cases Compliance's response to the omitted comments indicated that the dAIR/EISG would remain unchanged. Although similar comments to those that are not on Step 3 may be available elsewhere in Appendix A and B, this is certainly not readily apparent. It is much harder to reply to the government about concerns that have been sidelined in this manner.

Key Themes to Address from the Compliance response

From the point of view of the dAIR/EISG, the Compliance responses in Appendix A and B raise three key themes that must be addressed:

1. Ecological accounting. The company argues that benefit cost accounting is not a viable approach to evaluating the project, and they will use "an alternative process". We have proposed a process that would work and they are ignoring it.

"Benefit cost analysis is no longer used to evaluate the costs and benefits of projects because much valuable information is lost in the process of converting biophysical and other effects into economic terms. The Application/EIS process has evolved as an alternative process that allows the full range of project effects to be quantified objectively. For example, there is no way of quantifying cultural in effects in economic terms. There will be some attempts to incorporate information from other sectors in the assessment of social effects insofar as the potential changes for some biophysical VCs, such as animal and plant species used by aboriginal people and others, will affect the ability of those people to continue to use and harvest the species. The assessment will include consideration of the effects of road transport on infrastructure (dAIR section 7.2.3.1) and information regarding the potential costs of government services and infrastructure that may be required." (Compliance response to comment 5964 and others)

We need to clearly state in every appropriate response:

- The tools do exist to undertake benefit cost analysis beyond GDP , taxes anticipated and employment rates:
    - Social costs: revised hospital, critical care, policing, education, social welfare costs, support for the social safety net, all report in currency
        - lost opportunity costs: tourism, arts and culture, sports fisheries, aquaculture, agriculture and recreational industries all report in currency. So does the investment from retirees.
        - Natural capital costs: considerable analysis is available to provide proxies for the services provided by nature.
- GDP and employment are even less accurate and blunter instruments to measure benefits and costs than those listed above, as there is no debit column for GDP, and , in a community that is dependent on the investments of retirees and life style migrants, employment may not a useful indicator of wellbeing.
    - In a political process where "economic benefits" and jobs are pitted against the issues of environmental integrity, quality of life and long term sustainable livelihoods, every effort should be made to develop full cost accounting, that does not unfairly disadvantage a polluting industry.

2. Trivializing sustainable development. Compliance argues that sustainable development is an overarching issue and will finally be assessed in a discussion in Section 22.20 of the dAIR/EISG, the <u>Capacity of Renewable Resources</u>. It will not.

Falling near the very end of the dAIR/EISG, this is all that section actually says:

22.20 Capacity of Renewable Resources

The Application / EIS will include an analysis of the capacity of renewable resources to meet the needs of the present and those of the future where these resources are likely to be significantly affected by the proposed Raven Project. Renewable resources will include but not necessarily be limited to forestry, shellfish aquaculture, fishing, trapping, and tourism (page 227 DAIR/EISG)

It should be noted that these "resources" will only be entered into the analysis where they have met the standard of being "significantly affected". This section of the dAIR/EISG is not a proxy for sustainable development analysis.

This is what the Compliance responses say:

The Application /EIS will include a sustainability discussion in the Capacity of Renewable Resources section. 22.2 (Compliance response to comment 5989 and others)

Sustainable development is an overarching issue that includes disciplines other than just socio□economic. The land use study will specifically address project effects and compatibility with regional land and resource use plans, and the assessment of social effects will be undertaken in the context of those plans and planning documents. Family and community well□being is one of the VCs included in the dAIR and the indicators used to evaluate this VCs would be determined based on existing community values and planning exercises already in place. VC will consider the compatibility of the project with the vision of development in the region. Other relevant social VCs include housing, while the economic assessment will examine effects in terms of VCs that include economic diversification and effects on local and regional employment and income. If, during the environmental assessment, other VCs with relevance to sustainability are identified, these will be considered for inclusion with the Application. 7.2.4 (Compliance response to comment 5395 and others)

In the face of these responses, we need to reiterate the requests made in the June submission. " As it stands, the dAIR/EISG does not provide the tools to evaluate the fit of the proposed mine with the visions that the affected communities have for themselves, nor does it respect the community consensus that has emerged over long years of community consultations. This omission could be remedied by 1) developing Value Components specifying whether or not the Raven Project is in keeping with the documented visions of the local communities and 2) developing Valued Components (VCs) to evaluate the project's contribution/detraction to sustainable development, so desired by these communities. This need is not satisfied by Section 22.20 of the dAIR/EISG.

These latter VCs would be determined based on existing community values and planning, and activities already in place. Valued Components for analysing the contribution/detraction of the Raven Coal Project to sustainable development could be based on the key issues identified in the community official plans:

For Port Alberni:

- housing, services and businesses that improve the quality of life for seniors and amenity housing with waterfront views
- quality of shopping experience
    - enhanced arts and cultural events
    - diversification of local economy
    - the quality and sense of place associated with Southport and the waterfront
- support for local agricultural initiatives, food security
    - protection of fisheries sensitive zones
- reduction of harmful emissions and improve air quality

For the Comox Valley, the VCs could mirror the goals of the Regional Growth Strategy:

- Housing: Ensure a diversity of housing options to meet evolving demographics and needs;
    - Ecosystems, Natural Areas, and Parks: Protect, steward, and enhance the natural environment and ecological connections and systems;
    - Local Economic Development: Achieve a sustainable, resilient, and dynamic local economy that supports Comox Valley businesses and the region's entrepreneurial spirit;
    - Transportation: Develop an accessible, efficient, and affordable multi-modal transportation network that connects Core Settlement Areas and designated Town Centres, and links the Comox Valley to neighbouring communities and regions;
    - Infrastructure: Provide affordable, effective, and efficient services and

infrastructure that conserves land, water, and energy resources;

- Food Systems: Support and enhance the agricultural and aquaculture sectors, and increase local food security;
- Public Health and Safety: Support a high quality of life through the protection and enhancement of community health, safety, and well-being; and
- Climate Change: Minimise regional greenhouse gas emissions and plan for adaptation.

3. Refusal to address the full costs of coal production and consumption.

What Compliance says:

The proposed Raven Project's incremental contribution to total national and provincial GHG emissions on an annual basis where information is available.

- *Implications of GHG emissions from the proposed Raven Project, and the*
- *implications of climate change on the proposed Project design considered in the*
  - *climate and air quality analysis.*

GHG emissions for transport of coal to overseas destinations will not be included. (page 11-12 Background and General Comments)

*Reference will be made to "Incorporating Climate Change Considerations in Environmental Assessment: General Guidance for Practitioners" (CEA Agency 2003) in compiling the Application / EIS. The potential effects on climate change from coal use overseas are not within the scope of the assessment. (*Page 14, Background and General comments)

These statements from Compliance energy are an attempt to turn their wishes into statements of fact. It is precisely during the discussion of the Terms of Reference that the scope of the assessment is being established.

Reflections on the Background and General Comments Response Document

- It is not clear from the Public Comment Posting Policy, if replies to the Background and General Response Document will be posted or even accepted, as that document does not contain Comment IDs.

- Compliance has made no changes to the Local Study Areas or Regional Study Areas, except to say that they will be changed if studies indicate this is necessary. An exception has been made to the marine study area which has been extended to include the northwest side of Ship's Peninsula.(page 9). This leaves the LSA for noise at radius of 1.5 km (page 15), and the LSA for surface and underground water confined to Cowie Creek and its tributaries (despite the underground mine extending under the Tsable River).

- They affirm that the port area will be included. (page 9)

- They will look at alternatives to the use of Highway 4 . (page 9)

- They insist that Greenhouse Gas emissions resulting for the consumption of coal produced at the mine will not be included. (page 11-12). Compliance states that this is not within the scope of the CEAA, but no reference is provided.

- The discussion of environmental health is confined to a risk assessment of toxicity pathways. They do not even mention our request that First Nations and local communities be involved in developing the parameters of this risk assessment. The same is true of traditional knowledge (section 4.11)

- Section 4.8.1 Social conditions – Compliance says: "*The proposed social conditions studies consider the effects that the Raven Project will have on the economy and the social conditions in the region through all phases of the project including post-closure. The Application / EIS will provide a summary of proposed Raven Project-related social impacts in the context of other proposed economic development in the region (cumulative effects), and will identify any residual effects that may result after the proposed mitigation and enhancement strategies have been implemented."*

Although Compliance appears to acknowledge our concern about the effects on the wellbeing of communities, families and individuals, it has yet to change the language of the dAIR/EISG, nor does it say what these studies will be.

- In Section 4.8.2 Economic Conditions, Compliance has not budged from its insistence on using GDP, employment and income to measure economic benefits to the province, and – as a result- there is no measure of natural capital costs or costs to other sectors. " *This assessment will be undertaken by asking BC stats to model the economic impacts using its provincial economic input-output model*. *Economic effects will be described in terms of the construction and operations labour requirements, hiring standards, the operating work schedule, worker accommodation; transportation of people, materials and clean coal, capital and operating costs, and company procurement and purchasing policies. The assessment will include consideration of the economic effects attendant with the eventual closure and decommissioning of the mine."*

- Compliance also now proposes a second level of economic study at the regional and local level which will include supply and demand matching and interviews with local officials. However, there are no changes proposed to the dAIR/EISG.

- Section 4.8.1-Social conditions and Section 4.8.3- Non-traditional Land Use, and Section 4.8.4 – Visual and Aesthetic Effects remain separated from the economic conditions section- in effect this means that the costs of mitigating social problems, and effects on tourism , commercial fisheries, aquaculture and recreation will not be integrated into the economic analysis.

- How monitoring is to be carried out has been relegated to the permitting process, and to be developed with regulatory agencies.(4.12, page 42). This obviates an independent monitoring agency with community participation.

- Cumulative Effects. The possible development of the Bear and Anderson deposits are specifically excluded from the cumulative effects analysis. (page 46)

- Section 4.15 – Assessment Process and Scope of Assessment – reiterates the tired logic of the previous dAIR/EISG. Our comments on the purpose and scope of the project have been completely ignored, as have our requests the VCs be developed for Sustainable Development.

(Section 4.15) Most of our comments have been referred back to Section 4.15. This is developed in Key Themes (above)

Reflections on Appendices A and B.

A. Social conditions

1.Sustainable Development – there are many comments providing detailed information about the project effects on the sustainability of the community. All are "Referred to the General Comments Response document". The appropriate response to each and every one is similar, and is highlighted in grey below:

As it stands, the dAIR/EISG does not provide the tools to evaluate the fit of the proposed mine with the visions that the affected communities have for themselves, nor does it respect the community consensus that has emerged over long years of community consultations. This omission could be remedied by 1) developing Value Components specifying whether or not the Raven Project is in keeping with the documented visions of the local communities and 2) developing Valued Components (VCs) to evaluate the project's contribution/detraction to sustainable development, so desired by these communities. This need is not satisfied by Section 22.20 of the dAIR/EISG.
These latter VCs would be determined based on existing community values and planning, and activities already in place. Valued Components for analysing the contribution/detraction of the Raven Coal Project to sustainable development could be based on the key issues identified in the community official plans.
For Port Alberni:

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    - Transportation: Develop an accessible, efficient, and affordable multi-modal transportation network that connects Core Settlement Areas and designated Town Centres, and links the Comox Valley to neighbouring communities and regions;
    - Infrastructure: Provide affordable, effective, and efficient services and infrastructure that conserves land, water, and energy resources;
    - Food Systems: Support and enhance the agricultural and aquaculture sectors, and

increase local food security;

- Public Health and Safety: Support a high quality of life through the protection and enhancement of community health, safety, and well-being; and
- Climate Change: Minimise regional greenhouse gas emissions and plan for adaptation.

Following below are the public comments and Compliance response that merit the reply highlighted in grey above:

Comment 5362 *2011-06-27 Citizens Stewardship Coalition Society: Socio-economic information needed Sustainable development is a fundamental objective of the federal environmental assessment process, and the province of BC also says that is its goal. However, the Project's effect on sustainable development and the need for and purpose of the Project are not assessed in the EA process. We suggest these be assessed by developing Valued Components (VCs) that are part of the matrix for determining residual effects. These VCs would be determined based on existing community values and planning exercises already in place.*
Compliance Response: *Sustainability is an overarching issue that includes disciplines other than just socio-economic. The land use study will specifically address project effects and compatibility with regional land and resource use plans, and the assessment of social effect*

Comment 1453 June 8, 2011 Margaret L. Zimmerman
The dAIR/EIS is deficient as follows: 2.The AIR/EISG should include as a VC the local community's vision for the Comox Valley, as documented in its OCPs, Regional Growth Strategy, and Sustainability Strategy. This vision includes a shift away from a mine□based economy to a sustainable economy based on the agriculture, tourism and shellfish industries. The Raven project is contrary to this vision. Federal and provincial ministers are called upon to not trump the rights of local citizens and governments to determine the future direction and character of the Comox Valley.
Compliance Response: *The definition of a valued component (VC) of the local ecosystem in the region of the proposed Project would exclude a local community's vision of its future. The assessment of social effects of the proposed Project would include VCs such as family and community wellbeing, parks and protected areas, renewable resource use, tourism and other recreational users, marine uses and the visual landscape, as well as mining and exploration activities.*

Comment 2371 from Anonymous- Qualicum Beach, British Columbia*2011-06-27Duplicate of 2553: Dear Sir - I am sending this letter because of the grave concern I have over the proposed development of the Raven Coal Development on Vancouver Island. While I am mindful of the need to explore new energy opportunities and the need for increased employment opportunities, we must also balance these needs with the social and environmental needs of the community. Vancouver Island is a major centre that encompasses tourism, a unique combination of natural recourses and a growing residential influx . The environmental concerns of the community are genuine- and the potential pollution in terms of the development of a mining operation in conjunction with the logistics problem of transporting huge volumes of trucks through inhabited areas and the potential damage to natural parks and preserved areas such as irreplaceable treasures as Cathedral Grove needs to given more consideration. Once these projects are begun they tend to have a life of their own. While the initial development is underground, you can see that father development, such as the Bear Deposit, could soon lead to open pit mining and the kind of degradation that we have seen emerge in the oil sands project. It is ironic that the potential destination for the coal is for China - when they are actually looking at ways to lessen their dependence on coal by way of of using wood pellets and other biomas to co-fire with coal to reduce their carbon imprint and combat pollution and the global warming problem. As a current resident of Qualicum Beach, I sincerely hope that this project will get a great*

*deal more deliberation before it is approved. ---------- **Compliance** Response to Comment 2371 Please see the General Comments response document section(s): 4.8.1.*

Comment 6167 2011-06-27 Don Castleden- Courtenay

The Fanny Bay Conservation Management Plan (1992) p. 40 closes with the following statement. In the last century, Fanny Bay has evolved from an agricultural and wood processing industrial centre, to a community which thrives on non polluting recreational enjoyment and the culturing of shell fish. Throughout the years, the natural resources of this region have remained in the forefront. These attributes have been the catalyst for government agencies and conservation groups to work towards the continued protection of this ecologically important estuary. By protecting the natural habitats of Fanny Bay, the wildlife and fish of this area will continue to prosper and be enjoyed, by all of us now, and in the future. This protection will also be vital to the shellfish industry as their existence relies heavily on the sustainment of high water quality standards. It is in the best interest of all interest groups to work together, so the Fanny Bay estuary continues to prosper in a relatively unaltered state. It is the commitment of the Ministry of Environment, Lands and Parks to ensure that this common goal is achieved. Hopefully, this management plan can be useful in carrying on the impressive ecological wealth and tradition of the Fanny Bay and Baynes Sound region.

1824 June 19, 2011 Lynne Wheeler

The proposed economic impacts assessment is inadequate. It emphasizes the benefits, but not the costs. include costs, for example taxpayer supported infrastructure highways; vehicle inspection stations; property value loss; increased health care costs; impacts on tourism and migration to the area as a desirable place to live; stress to people who will be affected by the mine. and infrastructure that may be the amount of taxes and royalties paid to the provincial government; and effects on unemployment, as well as information on any assumptions used in the economic analysis.
***Compliance response:** The Application will include potential effects on tourism activities (dAIR section7.2.4) and potential health effects (section 9). The Application will include information on the potential costs of government services required; 6.2.2.2*

2147 June 25, 2011 Andrew Bowman

the project's overall sustainability indicators are inadequate. The study must consider long term viability of local/regional economics, maintenance/strengthening of biophysical values, and maintenance/strengthening of healthy communities.
***Compliance Response:** Other Sustainability assessments will be based on guidance provided by regulatory agencies. In terms of specific legislation, the Canadian Environmental Assessment Act requires the consideration of potential adverse environmental effects on the capacity of renewable resources that are likely to be significantly affected by the project. The Application/EIS will include an*
analysis of the capacity of renewable resources (e.g., forestry, shellfish aquaculture, fishing, trapping, and tourism) to meet the needs of the present generation and those of future generations, where these resources are likely to be significantly affected by the proposed Project.

2. Social conditions- Study Areas

The Compliance dismissal of request for changes to LSA and RSA boundaries, requires the reply: Two examples are below:

Comment 145 from John Snyder2011-05-21

Under Part B, of the dAIR," Assessment of Potential effects, Mitigation, and significance of residual effects," specifically Section 6 " Assessment of Potential Economic Effects";and Section 7, "

Assessment of Potential Social Effects"; the temporal and spatial boundaries for any studies done under Section 6 and Section 7 should include any communities along the transportation corridor from the mine site near Fanny Bay to the proposed coal storage facility in Port Alberni. Residents and communities along Highway 4 west of Port Alberni may be potentially impacted by the additional truck traffic generated by the Raven Coal Mine Project. Therefore, spatial and temporal boundaries under Section 6 and Section 7 should be expanded to include any residences, businesses or communities along Highway 4 west of Port Alberni, including the communities of Ucluelet, Long Beach and Tofino.
*----------**Compliance** Response to Comment 145 Local and regional study areas are defined in the dAIR document and are considered adequate to capture all potential effects of the proposed mine. If, during the environmental assessment, potential effects are identified outside these study areas, study .*
Reply: Public input has been ignored; we still argue that the boundaries are inadequate.

Comment 178 from Jane Armstrong*2011-05-21 The socio-economic impacts for not only Port Alberni but Torino, Ulcuelet have to be addressed. ---------- **Compliance** Response to Comment 178 Local and regional study areas are defined in the dAIR document and are considered adequate to capture all potential effects of the proposed mine. If, during the environmental assessment, potential effects are identified outside these study areas, study...*

Reply: Public input has been ignored; we still argue that the boundaries are inadequate

3. Social Issues: Ecological Economics

Some key comments and Compliance responses on the issues of ecological economics are below. The AEC and CVCW reply to each of them is to reiterate the reply below:

This issue requires the use of full cost ecological accounting.

- The tools do exist to undertake benefit cost analysis beyond GDP , taxes anticipated and employment rates:
    - Social costs: revised hospital, critical care, policing, education, social welfare costs, support for the social safety net, all report in currency
        - lost opportunity costs: tourism, arts and culture, sports fisheries, aquaculture, agriculture and recreational industries all report in currency. So does the investment from retirees.
        - Natural capital costs: considerable analysis is available to provide proxies for the services provided by nature.
- GDP and employment are even less accurate and blunter instruments to measure benefits and costs than those listed above, as there is no debit column for GDP, and , in a community that is dependent on the investments of retirees and life style migrants, employment may not a useful indicator of wellbeing.
    - In a political process where “economic benefits” and jobs are pitted against the issues of environmental integrity, quality of life and long term sustainable livelihoods, every effort should be made to develop full cost accounting, that does not unfairly disadvantage a polluting industry.

Comment 2662 from Anonymous*2011-06-23*
Draft AIR refers to the GDP as a measurement to support its contention of the numerous economic benefits that will flow if their project will be allowed to proceed. The use of G.D. P. as a true

measurement of societal well being is now being questioned. Attached is an article from the New York Times that underscores what is NOT being measured by this current Canadian Environmental Assessment. No where in the Draft AIR is there any attempt made to establish base lines of the existing quality of life nor do the mine proponents recognize the importance of this. A properly conducted poll would provide indications as to the residents expectations in the affected areas, and focus groups would provide further information. It appears that the current CEAA and BOCCE process provides no place for the input of what is now considered an important measurement of modern society. ---------- ***Compliance*** *Response to Comment 2662The Application/EIS will include an analysis of the positive and adverse economic effects of the Project, as required by current provincial and federal requirements for environmental impact assessment of this proposed Project*

Comment 3548 from Delores Broten- Comox, British Columbia2011-06-27
I would like to see the social impact assessment include a full review of the impact of both the Raven and Bear mines on property values in the Comox Valley. I would like to see an assessment of the co-existence of tourism, shellfish industry, and retirement havens with coal mining, both underground and above ground. It is necessary to include the Raven and Bear mines both in the social impact assessment becacuse the financial viability of the project, including stock sales, requires the processing of both mines' product at the Raven site and becuase the social impact of an open pit mine in the valley 3 kilometres from Cumberland will have an impact on Trilogy, Kensington, possibly Sage Hills, Komoks' First Nations and other planned largescale developments. The impact on these real estate sales needs to be included in the social assessment of the impact of the mines. ---------- **Compliance** Response to Comment 3548 The assessment of potential effects on economic and social conditions in the region will be assessed in the context of other activities in the region as part of consideration of cumulative effects. Potential effects on property values will be assessed in (ends here).

Comment 2180 2011-06-26 Jane Armstrong- Port Alberni.
*:Section 6 of the dAIR - Assessment of Potential Economic Effects - methodology and value components are deficient. The assessment must use the most robust and recent study pertinent to coal: Paul Epstein, Harvard Medical School, paper, Full Cost Accounting of Coal published in 2011 must be the basis for methodology. Further, this is consistant with the direction of Environment Canada as far back as 2001 when it provided financial support for the UN Expert Working Group developing environmental management policieshttp://www.un.org/esa/sustdev/publications/ policiesandlinkages.pdf ** Due to the size of the attachment it will be posted in ePIC Pre-application Public Comments/ Submissions Comments received on June 26***
Compliance Response*: The Application/EIS will include an analysis of both the positive and adverse economic and social effects of the proposed Project at a local, regional and provincial level.
The Application/EIS will include an analysis of adverse effects of the proposed ...*

Comment 3834 from Anonymous*2011-06-27*
I am not satisfied with the extent of the environmental assessment process as outlined so far. The ripples from this mine project reach farther than what you are assessing. I want a full and extensive assessment process the includes: 1 Economic impact of a possibly forever damaged shellfish industry. 2. Complete and comprehensive waterways mapping and implact. 3. Traffic analysis of Port Alberni highway and impact on tourism in Tofino and Uclulet. 4. The ethics of destroying a vital and viable Way of Life in the Comox Valley. And it would alter and destroy what is already in existence. Please listen to the many learned and studied papers you are receiving. These people should be hired to offer expertise to this assessment. This is a poorly conceived project for this geographical area.
*----------**Compliance** Response to Comment 3834 Comment is directed to regulatory agency.*

Reply to 3834

This is not a matter for the regulatory agency , but for the Environmental Assessment. Full cost accounting –including social costs, lost opportunity costs, and natural capital costs - of the potential impacts of the mine on the region must be undertaken.

3. Social Conditions - Non-Traditional Land Use

The AEC and CVCW reply to each of Compliance' responses to public comments in this category is highlighted in grey belwo

This issue requires the use of full cost ecological accounting.

- The tools do exist to undertake benefit cost analysis beyond GDP , taxes anticipated and employment rates:
    - Social costs: revised hospital, critical care, policing, education, social welfare costs, support for the social safety net, all report in currency
        - lost opportunity costs: tourism, arts and culture, sports fisheries, aquaculture, agriculture and recreational industries all report in currency. So does the investment from retirees.
        - Natural capital costs: considerable analysis is available to provide proxies for the services provided by nature.
- GDP and employment are even less accurate and blunter instruments to measure benefits and costs than those listed above, as there is no debit column for GDP, and , in a community that is dependent on the investments of retirees and life style migrants, employment may not a useful indicator of wellbeing.
    - In a political process where "economic benefits" and jobs are pitted against the issues of environmental integrity, quality of life and long term sustainable livelihoods, every effort should be made to develop full cost accounting, that does not unfairly disadvantage a polluting industry.

Comment 66 from Fiona Mackey*2011-05-19BC - 'Best Place on Earth' to live. Pat Bell, minister for jobs, tourism and innovation shared with the town hall meeting in Comox on May 17th, he holidays at home - why then could you consider supporting a decision to put a coalmine right in the middle of one of the top tourist destinations in the world (Hornby, Denman Islands included), plus plan to transport coal from an area en route to another world famous getaway? (Tofino). Port Alberni has revitalised itself as an eco- friendly tourism destination. ---------- Response to Comment 66 Please see the General Comments response document section(s): 4.8.1*

Comment 218 from Anonymous *2011-05-23*

Discussing the "social aspects" of the Raven mine: There is an overwhelming rejection of a coal mine along the Baynes sound, to a great extent by a population very much attached to the outdoors environment. This is something that mining developers and investors are unable to understand. It is hoped that this review board will attempt to recognize the very real feelings of the people around here. To illustrate this I would like you to Google "Watershed Projects Society, Comox Valley". This is a group representing 60 other groups, all concerned about the outdoors and environment. They include: the Fanny Bay Salmonid Enhancement Society, Denman Conservancy Society, Comox Land Trust, Comox Valley Greenways Project, Community Fishermen's Centre, Baynes Sound Stewardship Action Group , Comox Valley Environmental Council, Courtenay and District Fish and Game Protective Society, Courtenay Valley Naturalists ... and some 50 more groups. It is quite overwhelming to understand the concern of the local people for their surroundings

One such group (the Comox Valley Land Trust) states: "Our vision is to protect and restore ecosystems through voluntary conservation and advocating for defined recreational trails ...." To so many people, the idea of putting a mine here is the equivalent of mining in Stanley Park for Vancouver people. This area is our contact with nature. Surely our wishes should be considered.more than the wish of a mine promoter from Vancouver and investors from Korea and Japan (having no attachment whatever to this area). Surely the profits of a tiny minority don't outweigh the wishes of the overwhelming majority. And surely the assessment review process can give due weight to the values of people. ---------- ***Compliance*** *Response to Comment 218 Please see the General Comments response document section 4.8.1.*

Comment 263 from Anonymous*2011-05-24*

I hope the deciding factor will be to preserve the environment and the local jobs (including tourism) that would be gravely effected by this decision.
*I have travelled with family and have spent much time on Vancouver Island with family who live there. We have hiked along riverbeds, climbed mountains and enjoyed kayak paddles in the ocean in an environment that is safe and thriving. Let's keep it that way.We hope that it will not be allowed to happen. ----------****Compliance*** *Response to Comment 263P lease see the General Comments response document section Section 4.8.1"*

Comment 422 from Anonymous- Parksville, British Columbia*2011-05-25*
*I wish to comment on the draft document and the general need for the Raven Coal Mine Project in the Courtenay/Union Bay area of Vancouver Island. Registration Reference 10-03-55529. I am opposed to this project. However I wish to make special reference to the effect of the transportation section of the draft application. No where in section 7.2.3. has adequate concern been addressed of the effects of B-train type vehicles running 16 hours a day seven days a week for 16 years. The roads to be travelled from the coal mine to the port are in part only two lane. This is highway #4. This is the same road that is the only road to the resort Mecca of the west coast of Vancouver Island. Tourism is our bread and butter for the employment industry both on the east coast as well as the west coast. The beaches at Toffino are full of tourists both summer and winter with the new surfing push for the winter storm period. Highway #4 is the only road across central Vancouver Island and it is two lane only. The road to Port Alberni is narrow, windy, curved, hilly and often covered in snow on the "hump" in winter. The grades will call for slow low gear movement both up and down the hill for safety in both direction into and out of Port Alberni. This tourist road in summer is the only road to all the camp and mobile home parks on the west coast of the Island including the Federal Pacific Rim National Park also known as Long Beach. ----------****Compliance-*** *Response to Comment 422Transportation is one of the VCs that will be included in the social assessment. Potential effects will be assessed in terms of changes in traffic volumes and potential for increases in accidents that could result from all mine-related traffic.*

Comment 1070 from Anonymous- Port Alberni, British Columbia*2011-06-01Port Alberni is becoming a tourist destination, with kite boarding just starting in our inlet. There is world class fishing along with camping and so many outdoor activities. Being a tourist destination is a value to our community. No one will come to a coal port on their holiday destination. ----------* ***Compliance*** *Response to Comment 1070Please see the General Comments response document section(s):4.8.1*

Comment 1279 from Anonymous- Port Alberni, British Columbia*2011-06-04Tourists will go elsewhere to fish, camp, pump up and buy their food. Many businesses would be effected negatively*

by the presence of Raven Underground Coal Project at the port and their dirty coal. We have businesses, cafe's and outdoor farmer's markets etc. right down at the port. These companies and our local farmers stand to lose business from this coal being exported right in the heart of our downtown. We rely heavily on tourism. We don't want coal stored or exported from here. ---------- ***Compliance*** *Response to Comment 1279 Please see the General Comments response document section(s): 4.8.1.*

Comment 1330 from Fiona Mackey- Fanny Bay, British Columbia*2011-06-05*
*I recently spoke with a visitor from UK, who attended Union Bay public meeting. He told me that he would no longer recommend that travellers from UK go to Port Alberni and The West Coast if they have to follow, and drive towards the huge B train coal trucks. Loss of revenue from tourism will be huge. ----------****Compliance** *Response to Comment 1330 Please see the General Comments response document section 4.8.1.*

Comment 3097 from Janine Croxall- Tofino, British Columbia*2011-06-27The proposed truck route to reach the port will not be able to accommodate the traffic of dozens of overweight/oversized coal trucks nor the damage which will be imposed on our highways. These highways are the lifelink to so many small communities. ----------* ***Compliance*** *Response to Comment 3097 Please see the General Comments response document section(s):4.8.1, 4.8.3"*
Comment 427 from Anonymous*2011-05-25I would like to voice my strong opposition to the Raven Coal Mine.Please do not allow this project to proceed. The jobs will be short-lived, and the impacts will be felt for generations. Thank you ----------* ***Compliance*** *Response to Comment 427Please see the General Comments response document section(s): 4.8.1.*

Comment 1058 from Lynne Wheeler- Fanny Bay, British Columbia*2011-06-01I find it extremely stressful to have to fight this mine. I am a new grandmother, and I just want to spend time with my grandchild, not endless hours on the computer, reading up on the detrimental effects of mining and writing letters to politicians and decision makers. The mine isn't here yet, and it has affected my quality of life. If this mine goes through, and I sincerely trust that the CEAA and the EAO will not permit it, I will be moving away from the area, as will many of my friends and neighbours. Who will compensate me for the lost value of my home? Would I even be able to sell my home? ----------* ***Compliance*** *Response to Comment 1058Please see the General Comments response document section(s): 4.8.1.*

Comment 1132 from John Snyder- Fanny Bay, British Columbia*2011-06-02Specifically, in regards to the dAIR in process now, the project's overall sustainability indicators are inadequate. The study must consider long term viability of local/regional economics, maintenance/strengthening of biophysical values, and maintenance/ strengthening of healthy communities----------*
Compliance *Response to Comment 1132 Sustainability is an overarching issue that includes disciplines other than just socio-economic. The land use study will specifically address project effects and compatibility with regional land and resource use plans, and the assessment of social effect.*

Comment 1203 from Judy LeBlanc- Fanny Bay, British Columbia*2011-06-03I am completely opposed to a coal mine. At the very least, I am in support of a joint federal/provincial independent expert review panel with full public hearings. When the world can no longer deny that it is in the midst of a significant environmental crisis and when the damning evidence is stacked against coal mining, it is not a time to discuss mitigation and measures to minimize impact. I was at the meeting on the 30th and the message was loud and clear. Out of hundreds of people no one spoke out in support of the mine. It is not wanted in this community. We live part time in Fanny Bay, part time in Victoria. Our dream is to one day move to Fanny Bay full time and enjoy the beauty and cleanliness we find in*

*the natural environment there. We appreciate the opportunities for recreation in the Comox Valley (hiking, kayaking, skiing), the thriving food movement and potential for farming. This is a community that respects the environment, fosters sustainable industries (recreation, tourism) and is unwilling to put them at risk. Compliance Coal offers nothing to this community other than a claim it will create several hundred jobs during its operation. I would like to see a comparative figure showing a projection of jobs created in that same time without the mine. How many jobs will be created in the shellfish industry, in tourism, in a growing food industry in the next fifteen years? What is the potential for green industries in the valley - a steel recycling plant, for example, a production plant for alternatives to steel. How many jobs are threatened because of this coal mine? I think if we do the math, in fact there is no benefit to this mine. It seems to me there are many ways to create jobs without paying the heavy price exacted by coal production. I've traveled by train through coal mining towns in China, and one need not go even that far to see the damage done by coal mining. Let's not let this be a case of you don't know what you've got till it's gone. ---------- **Compliance** Response to Comment 1203Please see the General Comments response document section(s): 4.8.1.*

Comment 3197 from Anonymous- Denman Island, British Columbia*2011-06-27False economy: The Raven project has to the potential put more people in a sustainable industry- that of the shellfish industry, out of work than the total number of employees it proposes to hire...and this for 16-17 years? Why even bother taking the chance? For the possibility of profit in the owners and shareholders pockets?...the risks are too great and the environment too precious to gamble on. Fanny Bay and Buckley Bay have been functioning just fine without the injection of a potentially very dirty industry moving in....If it ain't broke, don't fix it! Coal mining is one of the most destructive activities on earth, threatening our health, fouling our air and water, harming our land and animals, and contributing to global warming. People with any education in these areas are all ringing the alarm bell. Who are you to silence them? You are the miners...can you honestly point to a "clean" coal mine? It is evident from the public meetings that the majority of people who live here DO NOT WANT YOUR MINE. Please take into consideration this very vocal majority and the utterly destructive impact you will have on our lives.
 ----------**Compliance** Response to Comment 3197 Please see the General Comments response document section(s): 4.8.1.*

B. Environmental Health

Comments and company responses under the section on environmental health show the same lack on understanding of the interconnected of issues as do the responses under Social conditions. Some key comments and response are listed below. The AEC and CVCW reply to all of them is:

Environmental Health is connected to economic sustainability and human health. Without ecological accounting for natural capital, social effects, income inequality and lost opportunities for sustainable development, we will never have a healthy environment. Accounting for the full costs of coal including overseas consumption is essential, and is not barred by CEAA. The scope of the project must include this; section 4.7 does not address the issue.

Comment 840 from Anonymous*2011-05-30*
Comox Town Residents' Association was founded in 1991 with the objective of involving citizens in planning processes for Comox and the wider Comox Valley. At present there are 162 members. Our Association is not in favour of the Raven Underground Coal Mine proposed by Compliance Energy Coal at Fanny Bay. How can a Company that wishes to be considered ethical and environmentally responsible, ignore the implications of profiting from the mining of a polluting fossil fuel for export to

*other Countries. At the same time, the proposal will create a potential toxic threat to established clean industries like shellfish farming and tourism in this Country? The Comox Valley currently provides ideal conditions for these clean, sustainable industries; both of which provide long term jobs, and are a major factor in our economy. These industries also provide healthier jobs than coal mining, which can result in lung disease. ----------**Compliance** Response to Comment 840 Please see the General Comments response document section(s): 4.7*

Comment 3205 from Anonymous*2011-06-27 During the UN World Ocean's Day, acidification of the ocean's throughout the planet is the greatest threat to the marine environment. Scientists from the University of Victoria have shown that the burning of COAL in China is the greatest source of acidification off the coast of B.C. I urge you to say NO to the proposed Raven Coal Mine near Courtenay. Not only will it emit 52 tonnes of C02, negating the $500. million carbon tax that we pay at the pumps, it will threaten Baynes Sound and several creeks and rivers that drain into it. The $22 million sustainable shell fish industry will be at risk and ground water will be affected including the drinking water of both Cumberland and Royston if the phase 2 open pit development goes forward. Coal dust will pose health risks ,42 tonne coal trucks (140/ day) on our highways and in our communities are a safety issue and 17 million tonnes of acidic waste will be left at the site on the 200 hectare footprint. We have been told by the surveyor of taxes that our real estate values will be negatively impacted if the mine goes ahead. This is the biggest threat to the environment of the Comox Valley . Show some leadership and say NO to Raven Coal!!! _____**Compliance** Response to Comment 320 5Please see the General Comments response document section(s): 4.8.1.*

Comment 943 from Anonymous*2011-05-31Finally: As a citizen of BC, Canada, and the world, I strongly object to the use of coal for generating electricity. Clean coal is far from a reality, and the much taunted "carbon capture" is a pipe dream (pun intended). I visited China in the fall of last year. On a bad day in the city of Xian I could not see farther than one hundred metres on account of the pollution created by the coal burning generating stations. The same fog happens all over China, and I am told much of Asia. After a few hours, you can feel it in your throat and lungs.The mine proponents stated that the coal mined at Raven will be used to produce steel, and that because some of the carbon released during the burning goes into the steel, the amount of carbon released into the atmosphere is smaller. That statement is truly an insult to common sense. Yes, a small amount of carbon goes into the steel, but not the bulk of it. Also, the argument that we have no control over what environmental standards are in place in other countries holds no water to the fact that in the end, we will, and we already do, breathe in some of that pollution.The current technology implemented in the extracting and burning of coal is inadequate to warrant a mine in the Comox Valley. In fifty years, when mining has cleaned up its act and when a true clean coal technology exist, we may give it another look.Meanwhile, the coal is doing no harm in the ground. In fact, it is only getting more valuable. I am of the strong opinion that we are not ready, yet, as a society to put the right price on this coal. When we are, when we become serious about extracting and using it cleanly, then maybe the time will have arrived. But not now. ---------- **Compliance** Response to Comment 943 Please see the General Comments response document section(s): 4.7*

C. Human Health –General

The human Health section of the document refuses to use the World Health Organization Determinants of Health, stating that "***T****he BC EAO has mandatory requirements to assess healthy living and environmental factors. This is reflective of the Determinants of Health Model. The dAIR responds to these requirements. Health Canada has provided new and revised guidance regarding health.*

Reply to Compliance response in this category:

In the cited Health Canada document, on Page 10, Health Canada states:"Health Canada does not currently have the expertise to comment on the human-health related socio-economic impacts of projects. Health Canada suggests that the responsible authority seek this expertise from appropriate agencies." Will the dAIR seek this expertise? If not, then the Social Determinants of Health will not be addressed, and neither will the full costs of exporting coal. Please use this information in replies, as in the examples below:

4833 June 24, 2011 John Snyder
We are deeply concerned that neither the Social Effects nor Health Effects analysis requires the use of the World Health Organisation Determinants of Health, although this is widely regarded as best practice. We propose changes to the dAIR/EISG to enable the use of these determinants, including a gender analysis.
***Compliance Response**: Provincial and federal regulators have mandatory requirements to assess healthy living and environmental factors. This is reflective of the Determinants of Health Model. The dAIR responds to these requirements. Health Canada has provided new and revised guidance regarding health impact assessment in their 2010 publication "Useful Information for Environmental Assessments". The dAIR responds to this new guidance. Gender□specific data will be reported, used and analyzed if it is available. 7.2, 9.2*

***Comment 4467 from Alison Painchaud- Denman Island** 2011-06-275.*
*In regards to Health issues, human as well as other organisms; Sections 9.2.1.1 and 9.2.2.1 of the draft AIR are very vague as to what aspects will be considered and what the mitigation measures will be. Clarification is needed for these very important issues. ---------- **Compliance** Response to Comment 4467 **The** human and environmental health components of the Application utilize the information provided in many of the Application/EIS sections (i.e. for water quality, noise, air and country foods). The evaluation will be based on the guidance set out by Canada in the publication Health Canada 2010"Useful information for Environmental Assessments" Clarification is needed for these very important issues. Appropriate mitigation measures will be designed accordingly, as any potential health effects are identified. 5.8, 9.2.2*

***Comment 4468 from Anonymous- Denman Island, British Columbia**2011-06-27 I am also deeply concerned that neither the social effects nor health effects analysis requires the use of the World Health Organization Determinants of Health, although this is widely regarded as best practice. ---------- Response to Comment 4468The BC EAO has mandatory requirements to assess healthy living and environmental factors. This is reflective of the Determinants of Health Model. The dAIR responds to these requirements. Health Canada has provided new and revised guidance regarding health.*

4834 June 24, 2011 John Snyder
The sections on Social and Health should provide tools to assess potential social and health effects, but they are very undeveloped compared to some other sections in the dAIR. For example, the VCs suggested do not reflect the Health Canada guidance on Health Impact Assessment or the World Health Organisation's Determinants of Health,
***Compliance Response:**Other Provincial and federal regulators have mandatory requirements to assess healthy living and environmental factors. This is reflective of the Determinants of Health Model. The dAIR responds to these requirements. Health Canada has provided new and revised guidance regarding health impact assessment in their 2010 publication "Useful Information for Environmental Assessments", a recognised best practice guide. This needs to be remedied in the EIS. The dAIR responds to this new guidance.*

4835 June 27, 2011 Heather Castleden

Finally, the lack of socio□economic studies and the absence of a 'social determinants of health' agenda in decision□making around resource development and extraction industry decision□making is in stark contrast to contemporary scholarly literature, which is based on a tremendous bank of empirical study in this area.
***Compliance Response**: Provincial and federal regulators have mandatory requirements to include 'healthy living' and sport/physical education' valued components. The dAIR responds to these requirements for social determinants of health.*

There are also a number of important comments (listed below) about the effects of stress, which are not dealt with in the Compliance response, which refers everything to Section 4.9 of the General Response Document.

Reply:
Section 4.9 says nothing about stress and anxiety, and does not respect the WHO Social Determinants of Health. In the cited Health Canada document, on Page 10, Health Canada states:"Health Canada does not currently have the expertise to comment on the human-health related socio-economic impacts of projects. Health Canada suggests that the responsible authority seek this expertise from appropriate agencies." Will the dAIR seek this expertise?

***Comment 1877 from Tom Wheeler- Fanny Bay, British Columbia**2011-06-21*
*The proposed Raven Coal Mine has caused a great deal of stress for my family, friends and neighbors. We have lived in Fanny Bay since 1986. We built our own home and consider ourselves to be stewards of our land, not using pesticides or chemicals, retaining the trees, and creating a habitat for birds, butterflies, squirrels, raccoons and tree frogs. We can't imagine living downstream from a coalmine and worry constantly about having to leave the Comox Valley which has always been a haven for nature lovers. Fanny Bay is the kind of place where everyone is a walker, and there are so many places to enjoy, lovely Ships Point, the bird sanctuary, the forest, or paddling in Baynes Sound. How can we stay if we will always be worried that our bodies are being poisoned with every glass of water we drink and every breath of air we take? ---------- **Compliance** Response to Comment 1877 Please see the General Comments response document section(s):4/9*

***Comment 2850 from Anonymous- Fanny Bay, British Columbia**2011-06-26Stress has serious health impacts. The residents of Fanny Bay, Buckley Bay, Denman Island, the Comox Valley and Port Alberni have been subjected to major stress since the inception of the project. Enduring nearly two years of uncertainty about their future and knowing this could continue long into the future has been extremely distressing for hundreds of people. Add to this the potential health impacts of toxic metals in the air, drinking water, fish and shellfish, as well as potential death and injury on the highway and the health costs far outweigh any benefit this project can bring. ---------- Response to Comment 2850 Please see the General Comments response document section(s):4.9*

And then there are important statements like the following on the relationship of coal to health, which are trivialized by the response. (see Key Themes)

***Comment 3689 from Robin Mumblo- Fanny Bay, British Columbia**2011-06-23My question has to do with Section 9 of the dAIR, ASSESSMENT OF POTENTIAL HEALTH EFFECTS, described by the proponent as "This section of the Application / EIS would describe scope, approach, methods, and analysis used to describe the human health component of the proposed Raven Project setting. The Application / EIS will include a current health profile and baseline description of public health parameters." Being that The Center for Health and the Global Environment at Harvard Medical School has published "Mining Coal, Mounting Costs: Full Cost Accounting for the Life Cycle of*

*Coal," with relevant references, appearing in the January 2011 issue of the Annals of the New York Academy of Sciences and also available online at: http://chge.med.harvard.edu/programs/ccf/documents/ MiningCoalMountingCosts.pdf states that: "Coal carries a heavy burden. The health and environmental hazards stem from exploration, extraction, processing, transport and combustion, and the large waste stream of air and water pollutants generated." and that in U.S.: "Coal-Mining Regions -11,000 excess deaths annually from lung cancer, heart, respiratory and kidney disease; highest health burden in heavy coal mining areas. - Lives lost evaluated at $74.6 bn/yr; includes impact of carcinogens: $11.8 bn/yr. - Reproductive disorders, increased cancer rates, social and environmental losses.: And from a report entitled "Coal's Assault on Human Health" published in November 2009 by the Physicians for Social Responsibility, and available online at: http://www.psr.org/assets/pdfs/psr-coal-fullreport.pdf "Coal pollutants affect all major body organ systems and contribute to four of the five leading causes of mortality in the U.S.: heart disease, cancer, stroke, and chronic lower respiratory diseases. This conclusion emerges from our reassessment of the widely recognized health threats from coal. Each step of the coal lifecycle — mining, transportation, washing, combustion, and disposing of post combustion wastes—impacts human health." Considering that this and other conclusive research assessing the health effects of living near a coal mine, on a coal transportation route, or near a coal port, was done by bodies much more qualified and less biased than Compliance Energy Corporation, and AMEC, how can the proponent possibly add anything to this discussion? Section 9 must not be a whitewash, and the entire population of the Comox Valley, and all communities between the mine and the port must be included in the "Raven Project setting." Anyone who lives here knows how hard the winds blow. How can the government of British Columbia and the government of Canada even consider sabotaging the health of its citizens when so much is now known about the health risks associated with coal? ----------**Compliance** Response to Comment 3689 Please see the General Comments response document section(s): 4.9*

Reply: this comment speaks to the need for the use of full cost accounting – social costs, lost opportunity costs and natural capital costs of the project, including the overseas costs of coal. . The compliance response is totally inadequate; section 4.9 does nothing to address the issues raised.

Comment 4465 from Jen and Stephen Fisher- Port Alberni, British Columbia*2011-06-08*

STATEMENT - JEN FISHER-BRADLEY PRESIDENT WOMEN'S FOOD AND WATER INITIATIVE Women's Food and Water Initiative does not accept that any industry sector has the right to put these kinds of burdens, fears and stresses described in this document, upon any of the families of Vancouver Island. Families who are already struggling with economic meltdown, climate change and the prospect of peak oil in the context of a faltering health care system. Based on these realities we invoke the precautionary principle for all of its evident values and oppose this proposal and any like it that propose to shit coal or other dangerous toxic goods through the Port of Alberni. Nothing should be allowed to impair the sustainable development of the Port of Alberni with its bright, prosperous and diverse future. Through consensus, many in the community have chosen agriculture for their futures. They don't see the coal industry's presence in our harbour, or on our Island, providing the quality of life, or the food and water security, that we need, deserve and have worked hard to protect, stewarding it from just such exploitations as the proposed Raven coalshipping project. We have seen no believable evidence that clean-coal exists. The body of proof is just not there. We accept, in principle, that saying no to coal, especially because it is the ethical thing to do in the face of rapid climate change, means we have to alter our own expectations of the amount of energy the fossil-fuel sector can provide to us. We agree to commit to the dialogue on how we, as a community, acting together, can wind down our energy consumption, in effect transitioning our town, and shift our focus towards our current GHG reality. Women's Food and Water Initiative will continue to prioritize food and water security in a rapidly changing climate where there is absolutely no room for a coal port in

*Alberni's future. Whereas there is plenty of room for a very active, and diverse, developing and future use of the deep sea port and the estuary. A sustainable vision points towards this defined use of the publicly owned facilities and infrastructure in the port as well as the natural resources we are committed to stewarding, together. This is the vision that WFWI promotes and supports. ----------****Compliance*** *Response to Comment 4465Information from other VCs will be incorporated into the assessment of economic and social effects, such that any potential changes in biophysical VCs, such as food and water, that affect the ability of those people to use those resources will be assessed*

Reply: this comment speaks to the need for the use of full cost accounting – social costs, lost opportunity costs and natural capital costs of the project, including the overseas costs of coal. . The compliance response is totally inadequate; section 4.9 does nothing to address the issues raised.

D. Other Comments (on Step 3) Specific to the Kuyek Report that Require a Reply:

Comments that can be found at Step 3 on the EAO website:
5065 (John Snyder-sustainable development) –
4832 (Garry Swann-sustainable development ; natural step)
3991 (John Snyder- 100 studies and community visions)
3990 (anonymous- full cost accounting)
3989 (Marc Gaudreau-Fanny Bay)
4872 (John Snyder- full costs)
3330 (John Snyder- full costs)
2633-(John Snyder- full costs)

AEC and CWCV Reply to each one:

> The Project's assessment of economic effects needs to incorporate information from all the other sectors evaluated in the EA, including lost opportunity costs, social costs and benefits, cultural costs and benefits, effects on other industries, and health care costs and benefits. The dAIR/EISG does not provide a means to critically evaluate the costs and benefits of the project to BC, the region, or the local communities, as it relies heavily on GDP, which has no debit column. We continue to propose a number of questions that might elicit more useful information

E. Comments that do not show up on the Step 3 or other parts of the "comment" website

There are a number of comments/responses related to socio-economic issues that are not accessible from the comment website, except by ploughing through Appendix A and B. Many of these are very significant, so they are itemized below. Since most of them address the key themes as well as the actual submission of the Kuyek Report, the reply for each of them is to reiterate the the argue ments in the original report and the Key Themes.

They are sorted by category: Sustainable Development, Ecological accounting, Health, Designing for Closure

Ecological Accounting.

Reply to all Compliance responses in this category are highlighted in grey below:

- The tools do exist to undertake benefit cost analysis beyond GDP , taxes anticipated and employment rates:
    - Social costs: revised hospital, critical care, policing, education, social welfare costs, support for the social safety net, all report in currency
        - lost opportunity costs: tourism, arts and culture, sports fisheries, aquaculture, agriculture and recreational industries all report in currency. So does the investment from retirees.
        - Natural capital costs: considerable analysis is available to provide proxies for the services provided by nature.
- GDP and employment are even less accurate and blunter instruments to measure benefits and costs than those listed above, as there is no debit column for GDP, and , in a community that is dependent on the investments of retirees and life style migrants, employment may not a useful indicator of wellbeing.
    - In a political process where "economic benefits" and jobs are pitted against the issues of environmental integrity, quality of life and long term sustainable livelihoods, every effort should be made to develop full cost accounting, that does not unfairly disadvantage a polluting industry.

Comment 778- Jane Armstrong, May 29, 2011-

The dAIR sections 6 & 7 must be amended to require that the methodology for socio□economic study be the full cost accounting as described in Paul Epstein's book, Full Cost Accounting for the Life cycle of Coal. Epstein is the Director of the Harvard Medical School Centre for Health and Global Environment. The proposed method in the dAIR as it stands is a very narrow, outdated method that only looks at GDP. This project study deserves the most current methodology with all aspects weighted and all valued components in the full cost accounting method.

Compliance Response

Other Project effects as measured using GDP will only be quantified for BC. While GDP has its limitations as an indicator, it is a conventional measure of economic growth for the province. At a regional level, project economic effects will also be measured in terms of employment and unemployment, as
well as labour income and economic diversity. It should be noted that economic effects include both positive and negative effects. In addition to information loss, a comprehensive benefit cost analysis is not the most effective tool for assessing the positive and adverse effects of the project. Information regarding potential costs of government services and infrastructure that may be required, and the amount of taxes and royalties paid to the provincial government, and effects on unemployment, as well as any assumptions used in the economic analysis, will be provided as part of the assessment.

Comment 1695 - M. Zimmerman, June 15, 2011, and
Comment 2596- name withheld, June 3, 2011

The dAIR/EIS Guidelines document does not address the dollar value ofbiodiversity services lost (such as the loss of vegetation and ecosystem that prevents soil erosion and improves water quality and provides carbon sequestration). Accounting systems are available for calculating

these losses and need to be included in a cost/benefit analysis. For example, what eco□system services are lost due to the destruction of the upper tributary to Cowie Creek that would have contributed to the water flow and quality of lower Cowie Creek

Compliance Response
The Application/EIS will include an assessment of the potential adverse effects the proposed Project on vegetation in the local and regional study areas. Cost/benefit analysis is not part of the environmental impact assessment process in Canada.

Comment 3117- Name withheld, June 27,2011
We are the owners of a property on Denman Island and like many others would be adversely impacted in a number of ways if this proposalgoes ahead. We are opposed to it on the following grounds: □ Noise levels would increase (explosions, trucks on highway): we already hear every sound from across the water. □ Water pollution would affect the oysters on our beach and those working in that industry, as well as our pleasure and safety in bathing there; also our well water. □ Air pollution from coal dust: negative effect on quality of life and health, not good for tourism. phased out, not encouraged. □ Any jobs created likely to go to cheap temporary foreign workers, not local people who depend on fishing/oysters and tourism for a living. We consider that an independent federal/provincial assessment of all the potential and cumulative effects of such a mine is essential, and public input should be more extensive and better informed. The Islands Trust should be involved because of the impact on Denman Island. residents and property values.

Compliance Response
The Application/EIS will include an assessment of the potential effects of the project on noise levels; surface water and sediment quality; air quality; human health; and social conditions, including employment opportunities and quality life. 5.2, 5.4, 7.2, 9.2

Comment 3331. Name withheld. June 25, 2011.
The Project's assessment of economic effects needs to incorporate information from all the other sectors evaluated in the EA, including lost opportunity costs, social costs and benefits, cultural costs and benefits, effects on other industries, and health care costs and benefits. Unfortunately, this is not the case in the current dAIR/EISG. We propose changes to incorporate these values into the economic costbenefit analysis. Both Port Alberni and the Comox Valley have spent the last 15 years developing economic, social, and cultural plans leading to a vision of sustainability for their communities. Well over 100 studies and workshops have been undertaken, and hundreds of community members in both regions have participated. Yet the dAIR/ EISG does not provide a means to critically evaluate the costs and benefits of the project to BC, the region, or the local communities. Instead, it relies heavily on GDP, which has no debit column. We require the proponent to conduct and report on a multiple accounts analysis in the EIS.

Compliance Response

Benefit cost analysis is no longer used to evaluate the costs and benefits projects because much valuable information is lost in the process of converting biophysical and other effects into economic terms. The Application/EIS process has evolved as an alternative process that allows the full range of project effects to be quantified objectively. For example, there is no acceptable way of quantifying cultural effects in economic terms. There will be some attempts to incorporate information from other sectors in the assessment of social effects insofar as the potential changes for some biophysical VCs, such as animal and plant species used by aboriginal people and others, will affect the ability of those people to continue to use and harvest the species. Project effects as measured using GDP will only be quantified for BC.

While GDP has its limitations as an indicator, it is a conventional measure of economic growth for the province. At a regional level, project economic effects will also be measured in terms of employment and unemployment, as benefits have to be weighed against the existing economy of Baynes Sound and any potential disruption that ML/ARD production could cause the local economy.
well as labour income and economic diversity. It should be noted that economic effects include both positive and negative effects. In addition to information loss, a comprehensive benefit cost analysis is not the most effective tool for assessing the positive and adverse effects of the project. Information regarding potential costs of government services and infrastructure that may be required, and the amount of taxes and royalties paid to the provincial government, and effects on unemployment, as well as any assumptions used in the economic analysis, will be provided as part of the assessment. If, during the assessment, potential environmental effects are identified for Baynes Sound, the potential effects of these environmental changes in terms of resource harvesting activities will be assessed, with the effects being described using the economic and social VCs listed in the draft AIR.

Comment 3332. Citizens Stewardship Coalition Society, June 25, 2011

Letter 2719 economics model defined: The Projects economic effects needs to incorporate information from all the other sectors evaluated in the EA, including lost opportunity costs, social costs and benefits, cultural costs and benefits, effects on other industries, and health care costs and benefits. Unfortunately, this is not the case in the current dAIR/EISG. We propose changes to incorporate these values into the economic cost□benefit analysis. Both Port Alberni and the Comox Valley have spent the last 15 years developing economic, social, and cultural plans leading to a vision of sustainability for their communities. Well over 100 studies and workshops have been undertaken, and hundreds of community members in both regions have participated. Yet the dAIR/EISG does not provide a means to critically evaluate the costs and benefits of the project to BC, the region, or the local communities. Instead, it relies heavily on GDP, which has no debit column. We require the proponent to conduct and report on a multiple accounts analysis in the EIS.

Compliance response
Information from other VCs be incorporated into the economic and social effects insofar as the potential changes for some biophysical VCs, such as animal and plant species used by aboriginal people and others, will affect the ability of those people to continue to use and harvest the species. However, these effects will not be quantified in economic terms, as would be done in an benefit□cost analysis, because much valuable information is lost in the process of converting biophysical and other effects into economic term and there is no acceptable means of converting potential cultural effects in economic terms. The Application/EIS will include information on the potential costs of government services and infrastructure that may be required (including highways). GDP will only be quantified for BC because it is a conventional measure of provincial economic growth.

Comment 3995. Name withheld. June 27, 2011

Economics: This project demands an unbiased evaluation of the economic viability from the perspective of the people of BC. The proponent has touted all the economic benefits of the project from the Raven perspective but has done no evaluation of the huge risks and the associated liabilities .The analysis would include any subsidies a and tax breaks that are provided to Raven Such a study would be best done by an academic with experience as there are several subtle costs that should be included . It should be evident from all the comments that have been sent and the complexities that have been described.

Compliance Response
The Application/EIS will include an analysis of the economic effects of the proposed Project, including

construction and operational hiring requirements and including estimates of the types and values of materials, goods and services that might be supplied by local businesses. Cost□benefit analysis is not within the scope of the economic assessment of the proposed Project.

Comment 4010. John Snyder. June 9, 2011.

Finally, the dAIR does not address the of accounting quantifying the loss of eco□system services and biodiversity (such as the loss of vegetation that prevents soil erosion and improves water quality and provides carbon sequestration).

Compliance response
The plant community structure composition be discussed within the biogeoclimatic framework including a discussion on the site series present as well as their area (ha) and their loss following mine infrastructure development.

Comment 4043. Name withheld, June 16, 2011

Further concerns include the following: Proposed economic impacts assessment is inadequate. It emphasizes benefits BUT NOT COSTS. It must include costs such as tax□payer supported infrastructure (highways); property value loss; impacts on tourism; HOMEOWNERS' LOSS OF QUALITY AND QUANTITY OF WATER FROM WELLS; and OF PEACEFUL ENJOYMENT.

Compliance response
The Application/EiS will include information on the potential costs of government services and infrastructure that may be required; the amount of taxes and royalties paid to the provincial government; and effects on unemployment, as well as information on any assumptions used in the economic analysis.

Comment 4044. Louise Bell, Denman Island, June 21, 2011

Last, I can foresee little or no economic benefit from the proposed mine for Denman Island. In my view the economic impact assessment outlined in the dAIR should address the long□term viability of local and regional economies, were the mine proceed. In addition to the positive indicators identified in the dAIR for the economic impact assessment, indicators of negative impact on economic health should be included, for example, the impacts on local property taxes for infrastructure support (i.e., highway maintenance), tourism, and property values for nearby residential areas, including Denman Island.

Compliance response
Economic and social conditions for Denman and Hornby islands have been included in the socio□economic baseline and any project effects on these communities will be addressed using the VCs listed in the draft AIR. The Application/EIS will include information on the potential costs of government services and infrastructure that may be required; the amount of taxes and royalties paid to the provincial government; and effects on unemployment, as well as information on any assumptions used in the economic analysis. 6.2.1.1, 6.2.2.2

Comment 4054. Citizens Stewardship Coaltion Society, June 27, 2011.

economics info – defined :The requirement for other economics□related information needs to be required

in the finalversion of the AIR and be evident in the EIS, including: · □ What is the nature and extent of subsidies to the mine from federal, provincial, regional and municipal governments, including access to water, port fees, tax incentives and allowances, infrastructure support, costs for environmental assessment, road upgrades, etc? · How many employees of the mine will be unemployed at the time of hire? How many will come from the local areas? · What are the lost opportunity costs for resource users and the loss of country foods to First Nations? · What are the estimated increased costs to federal, provincial, and municipal governments for increased social and health services, including emergency response to potential accidents at the mine, the port, and on highways 4 and 19? · What is the amount of actual revenue to the government from the Mining Lands Tax and payment of resource licenses?

Compliance Response

The Application/EIS will include information on the potential costs of government services and infrastructure that may be required; the amount of taxes and royalties paid to the provincial government; and effects on unemployment, as well as information on any assumptions used in the economic analysis. Information from other VCs will be incorporated into the assessment of economic and social effects insofar as the potential changes for some biophysical VCs, such as animal and plant species used by aboriginal people and others, will affect the ability of those people to continue to use and harvest the However, these effects will not be quantified in species. economic terms because much valuable information is lost in the process of converting biophysical and other effects into economic term and there is no acceptable means of converting potential cultural effects in economic terms.

Comment 4055. Pam Harrison. June 27, 2011
assessment should include all economic impacts; economic benefits would appear to be relatively limited, very short term (16□20 years),accruing mainly to the proponent for a product to be exported, yet fraught with many demonstrable negative impacts. Infrastructured gradation in terms of the highway use is one obvious negative economic impact.

Compliance response

The Application/EIS will include information on the potential costs of government services and infrastructure that may be required (including highways); the amount of taxes and royalties paid to the provincial lgovernment; and effects on unemployment, as well as information on any assumptions used in the economic analysis.

Comment 4056- Pam Harrison, June 27, 2011.
There is no positive aspect to the use of the highway to Alberni by this project: there will be added danger to all other users, gradual degradation of the roadbed, obvious negative impacts in terms of noise and pollution to the surrounding area, not to mention impacts on the character of downtown Port Alberni, all of which can be translated into economic impacts (not to mention the environmental impacts of this use) and need to be assessed. it would seem that all aspects of assessment need to be broadened.

Compliance Response
Transportation is one of the VCs that will be included in the social assessment. The Application/EIS will include information on the potential costs of government services and infrastructure that may be required (including highways).

Comment 4057. Name Withheld. June 27, 2011
Economic Impact proposal is incomplete. It does not include all costs to tax□payer supported infrastructures. Impacts on tourism and property loss are not dealt with. Future long term viability for

local/ regional economies, maintenance and strengthening of healthy communities.

Compliance Response
The Application/EIS will include information on the potential costs of government services and infrastructure that may be required (including highways). One of the social VCs relates to effects on tourism and other recreational users. Potential effects on property values will be assessed in the context of Project effects on land and resource use plans and policies.

Comment 4059. Name withheld. June 27,2011
What will be the economic impact costs to Vancouver Island? This should include highways, property value losses and impacts on tourism. Specifically the areas of the Comox Valley, Port Alberni, Tofino, Ucluelet, Qualicum, Parksville and all surrounding areas as the transportation of coal in this proposal includes all these areas which are heavily reliant on the tourism industry serviced by these same highways.

Compliance response

The Application/EIS will include information on the potential costs of government services and infrastructure that may be required (including highways). Local and regional study areas are defined in the draft AIR and are considered adequate to capture all potential effects of the proposed mine. If, during the environmental assessment, potential effects are identified outside these study areas, the study areas will be refined and requisite baseline data collected. Potential transportation effects on tourism will be assessed in the EIS/Application/EIS and mitigation measures provided.

Comment 5007. Jane Armstrong. June 27, 2011.
Economic and social studies must include A detailed description of proposed mine and spin□off jobs, including skills and experience required, along with an equally detailed assessment of whether these skills can be found in local communities. If the skills are not available locally, the proposal must identify the likelihood of training local workers, and/or where trained workers are likely to come from and their numbers.

Compliance Response
The socio□economic assessment will determine the number of direct and spinoff jobs that will occur locally and regionally based on the labour requirements of the Project and local availability of the skilled labour. The assessment will identify opportunities such as training to enhance project benefits for local and regional residents. The number of workers that cannot be supplied from within the region will be identified.

Comment 6034. John Snyder. June 6, 2011
5. Assessment of Potential Economic Effects □ GDP, discounted benefits analysis, expanded cost analysis, sustainable development impact. See the attachment to the correspondence.

Compliance Response
Project effects on only GDP will be quantified for BC because it is a conventional measure of economic growth for the province. Information from other VCs will be incorporated into the assessment of economic and social effects However these effects will not be quantified in economic terms because much valuable information is lost in the process of converting biophysical and other effects into economic term and there is no acceptable means of converting potential cultural effects in economic terms

Comment 4046. Name withheld, June 23, 2011

Coal mine developments in other areas have shown the devastating impacts that these developments can have on the local economy, human health and the environment. Contaminated water, air pollution, increased road hazards and the potential danger associated with coal storage are just a few of the human health related concerns that need to be considered and addressed. The shellfish industry as well as tourism and ecotourism are important to the local economy of the area and all face a very real threat of collapsing if the raven coal mine project should be approved. This collapse will clearly have far reaching economic impacts on all levels of the local economy. The proposed coal mine also poses a very real threat to the water aquifers, the local watershed and the marine ecosystems due to the contamination caused by toxic run□off from the mine.

Compliance response

Information from other VCs will be incorporated into the assessment of economic and social effects insofar as the potential changes for some biophysical VCs, such as animal and plant species used by aboriginal people and others, will affect the ability of those people to continue to use and harvest the species. However, these effects will not be quantified in economic terms because much valuable information is lost in the process of converting biophysical and other effects into economic terms and there is no acceptable means of converting potential cultural effects in economic terms. The human health effects assessment component of the Application/EIS will include an evaluation of drinking water, air quality and traffic safety. These will be evaluated in the context of potential exposure pathways, potentially affected populations, potential for change in exposure levels, and potential health effects. The health effects assessment will largely be based on data provided by other disciplines (e.g. air quality, noise, water quality).

Sustainable Development

AEC and CVCW reply to comments in this category highlighted in grey below:

In the face of these responses, we need to reiterate the requests made in the June submission. " As it stands, the dAIR/EISG does not provide the tools to evaluate the fit of the proposed mine with the visions that the affected communities have for themselves, nor does it respect the community consensus that has emerged over long years of community consultations. This omission could be remedied by 1) developing Value Components specifying whether or not the Raven Project is in keeping with the documented visions of the local communities and 2) developing Valued Components (VCs) to evaluate the project's contribution/detraction to sustainable development, so desired by these communities. This need is not satisfied by Section 22.20 of the dAIR/EISG.
These latter VCs would be determined based on existing community values and planning, and activities already in place. Valued Components for analysing the contribution/detraction of the Raven Coal Project to sustainable development could be based on the key issues identified in the community official plans:
For Port Alberni:

- housing, services and businesses that improve the quality of life for seniors and amenity housing with waterfront views
- quality of shopping experience
    - enhanced arts and cultural events

- diversification of local economy
- the quality and sense of place associated with Southport and the waterfront
- support for local agricultural initiatives, food security
- protection of fisheries sensitive zones
- reduction of harmful emissions and improve air quality

For the Comox Valley, the VCs could mirror the goals of the Regional Growth Strategy:

- Housing: Ensure a diversity of housing options to meet evolving demographics and needs;
- Ecosystems, Natural Areas, and Parks: Protect, steward, and enhance the natural environment and ecological connections and systems;
- Local Economic Development: Achieve a sustainable, resilient, and dynamic local economy that supports Comox Valley businesses and the region's entrepreneurial spirit;
- Transportation: Develop an accessible, efficient, and affordable multi-modal transportation network that connects Core Settlement Areas and designated Town Centres, and links the Comox Valley to neighbouring communities and regions;
- Infrastructure: Provide affordable, effective, and efficient services and infrastructure that conserves land, water, and energy resources;
- Food Systems: Support and enhance the agricultural and aquaculture sectors, and increase local food security;
- Public Health and Safety: Support a high quality of life through the protection and enhancement of community health, safety, and well-being; and
- Climate Change: Minimise regional greenhouse gas emissions and plan for adaptation.

Comment 6045. John Snyder, June 6, 2011.
I'm submitting these Comments on the Socio Economic Sections of the EIS proposed Underground Mine draft AIR/Guidelines on the Raven Coal Project. Prepared for the Alberni Environmental Coalition and CoalWatch Comox Valley Society by Joan Kuyek DSW. The comments are in the enclosed attachment. 2. Sustainable Development Definition of terms, federal legislation, values and vision, VCs See the attachment to the correspondence.

Compliance response

The Application /EIS will include a sustainability discussion in the Capacity of Renewable Rsources Section 22.2

Comment 6051- John Snyder. June 6, 2011.
Prepared for the Alberni Environmental Coalition and CoalWatch Comox Valley Society by Joan Kuyek, DSW. The comments are in the enclosed attachment to the correspondence. (15 page pdf) 1. Introduction Want to ensure that the environmental impact statement will address the socio economic matters that concern us the most: VC's for sustainable development, GHG for end use, indicators of economic effects, expanded definition of costs, WHO Social and Health Effects indicators, design for closure, expanded boundaries for studies, monitoring, follow up and adaptive management, and the tracking of public comments.

Compliance response

Sustainability is an overarching issue that includes disciplines other than just socio economic. The Application/EIS will specifically address project effects and compatibility with regional land and resource

use plans, and the assessment of social effects will consider changes in family and community well□being. The Application/EIS will include information on the potential costs of government services and infrastructure that may be required. The effects of mine closure will be addressed using the full range of economic and social VCs and closure planning and this will be a key consideration in determining the residual social and economic effects of the Project.

Comment 4013. Patricia Willis. June 13, 2011.
At the time of cessation of historical mining activities in this area, the imperative to conserve lands was at its infancy. Now, it is an integral and prominent component of the local and regional social fabric in proximity to the proposed coal mine, as evidenced by, for example: a) the establishment of numerous civic conservation organizations with extensive memberships inclusive of all demographics b)environmental/conservation education in regional public and private schools; community and senior centres; daycares; etc. c) establishment f both terrestrial and marine protected areas by means of civil society fundraising and/or cooperative arrangements with local, regional and federal governments and national conservation organizations d)establishment of a new, innovative type of local government (Islands Trust) that is distinct in Canada, with a mandate specific to conservation– that is, "to preserve and protect" e) introduction of conservation and sustainability provisions in government policies, growth strategies and official community plans f) initiation of enhancement and restoration activities relative to watercourses, lands and species at risk g) growth of eco□tourism reliant on pristine natural environments h) increase of property values of lands in proximity to conservation areas i) development of voluntary land and marine stewardship programs j) development of legal instruments to facilitate conservation, such as conservation covenants, legal easements, rights□of□way k) events, festivals, workshops, community work bees, and other cultural events devoted specifically to conservation l) increased consciousness of importance of local, sustainable food industries (shellfish, organic farming, etc.) and their dependence on a pristine environment Locating a coal mine in this region is in flagrant disregard of the social value and cultural practice of conservation

Compliance response
Sustainable development is an overarching issue that includes disciplines other than just socio□economic. The land use study will specifically address project effects and compatibility with regional land and resource use plans, and the assessment of social effects will be undertaken in the context of those plans and planning documents. Family and community well□being is one of the VCs included in the draft AIR and the indicators used to evaluate this VC will consider the compatibility of the project with the vision of development in the region. The Application/EIS will include a comprehensive identification of land uses, including conservation areas, parks, and other protected areas. Other relevant social VCs include housing, while the economic assessment will examine effects in terms of VCs that include economic diversification and effects on local and regional employment and income. If, during the environmental assessment, other VCs with relevance to sustainability are identified, these will be considered for inclusion with the Application/EIS.

Comment 4109. Jane Armstrong. June 27, 2011
Economic and social studies must include, at minimum: an explanation of how the project fits with the regional plans of all communities affected, including the Islands Trust. To the best of our knowledge, none of the local regional development plans have included coal development. These are the result of more comprehensive investment, consultations and study than the proponent could ever provide, and must be accepted as expressions of the aspirations and interests of the people who live here.

Compliance response

The land use study will specifically address project effects and compatibility with regional land and resource use plans and the assessment of social effects will be undertaken in the context of those plans and planning documents.

Comment 5059. Name Withheld. June 27, 2011.
Socio□economic information needed Sustainable development is a fundamental objective of the federal environmental assessment process, and the province of BC also says that is its goal. However, the Project's effect on sustainable development and the need for and purpose of the Project are not assessed in the EA process. We suggest these be assessed by developing Valued Components (VCs) that are part of the matrix for determining residual effects. These VCs would be determined based on existing community values and planning exercises already in place.

Compliance response
The Application /EIS will include a sustainability discussion in the Capacity of Renewable Resources section.

Comment 5060. Patirica Willis. June 13, 2011.
Further, Table 7.2□1 notes that the scope of the proposed analysis will be confined to how the Valued Component ("Parks and Protected Areas") interacts with the Raven Project "due to land alterations, air emissions, associated mine facilities and traffic." Although these factors are important, the scope of the analysis is deficient in that it should also include the effects of the project on the social practice and cultural ethic of conservation in the region.

Compliance Response
The land use study will specifically address project effects and compatibility with regional land and resource use plans and the assessment of social effects and will be undertaken in the context of these plans and planning documents.

Comment 5395. John Snyder. June 6, 2011.
Alberni Environment Coalition and CoalWatch Sustainable Development □ The Project's effect on sustainable development and the need for or purpose of the project are not actually assessed in the EA process. We suggest that they be assessed by developing VC's that can then be part of the matrix for determining residual effects.

Compliance Response

Sustainable development is an overarching issue that includes disciplines other than just socio□economic. The land use study will specifically address project effects and compatibility with regional land and resource use plans, and the assessment of social effects will be undertaken in the context of those plans and planning documents. Family and community well□being is one of the VCs included in the dAIR and the indicators used to evaluate this VCs would be determined based on existing community values and planning exercises already in place. VC will consider the compatibility of the project with the vision of development in the region. Other relevant social VCs include housing, while the economic assessment will examine effects in terms of VCs that include economic diversification and effects on local and regional employment and income. If, during the environmental assessment, other VCs with relevance to sustainability are identified, these will be considered for inclusion with the Application. 7.2.4

Comment 5964. Conservancy Hornby Island. June 15, 2011.
Second, we would like Compliance Coal to provide us with a cost: benefit analysis. We realize that the

operation of a mine at Buckley Bay will provide benefits (mainly jobs). However, mine operations come with a cost. With respect to the second issue, we know that the proposed coal mine will yield 350 jobs over a period of sixteen to seventeen years. That benefit however must be set the possible costs of impacting the Baynes Sound shellfish industry, on the environment surrounding the mine, and the highway between the mine and Port Alberni. Baynes Sound shellfish industry has a gross output of $24 million per annum. CHI cannot see that the benefit of the mine could match that (at a rough guess, the gross value of the mine's salaries is about half the shellfish gross). Compliance Coal could argue that if it creates adequate containment structures so the shellfish industry can continue unharmed. However, on the one hand, the cost of such structures could render the mine uneconomic while, on the other, the history of mining is replete with examples of failure of dams and other containment structures. Putting a cost on the impact of acid leaching and the release of heavy metals on the quality of groundwater is far more difficult. Nevertheless, Compliance Coal must provide us with plans for preventing or remedying such consequences and must put a cost on possible and probable ill effects. In particular we are concerned about the continued presence of tailings. Should the mine come into operation, then, for decades to come, the tailings will leach unwanted chemicals into streams and aquifers
What steps will Compliance Coal take to deal with that situation? Finally, we have the impact of very heavy traffic on Highway 4. Given that the highway was not designed to accomodate such heavy vehicles the impact will be severe. It should be possible to estimate the additional costs of maintaining the highway and adding these to the total costs of mining.

Compliance response
Benefit cost analysis is no longer used to evaluate the costs and benefits of projects because much valuable information is lost in the process of converting biophysical and other effects into economic terms. The Application/EIS process has evolved as an alternative process that allows the full range of project effects to be quantified objectively. For example, there is no way of quantifying cultural in effects in economic terms. There will be some attempts to incorporate information from other sectors in the assessment of social effects insofar as the potential changes for some biophysical VCs, such as animal and plant species used by aboriginal people and others, will affect the ability of those people to continue to use and harvest the species. The assessment will include consideration of the effects of road transport on infrastructure (dAIR section 7.2.3.1) and information regarding the potential costs of government services and infrastructure that may be required.

Comment 5989. Garry Swann..June 21, 2011
The CEA Act 4(1b) sets out the requirements regarding sustainable development. “The purposes of the Act are...to encourage responsible authorities to take actions that promotes sustainable development and there by achieve or maintain a healthy environment and a healthy economy.” On page 27 of Version 7.0 this purpose is affirmed. However, within the EA process itself, the contribution or detraction of the proposed Project to sustainable development is not specifically addressed. (See Joan Kuyek’s Comments on the Socio□Economic Sections or the dAIR/EIS Guidelines) The Alberni Environmental Coalition recommends that the proponent be obligated to assess the sustainability of the Raven Underground Coal Mine using the Natural Step framework. (see naturalstep.org or naturalstep.ca). The Natural Step framework is a scientifically based systems approach for analyzing proposed projects for their impact on sustainability. Many governments, communities, organizations and individuals use the Natural Step framework, to guide development to a more sustainable future. It is recognized as a world leader in sustainability analysis. The B.C. Ministry of the Environment, at one time, had some institutional knowledge of The Natural Step framework. Will this project, including its production, make the world, Canada and British Columbia more sustainable or less sustainable? This is important information for the Canadian public and the Minister(s) responsible for making the decision on the Raven Underground Coal project.

Compliance Response
The Application /EIS will include a sustainability discussion in the Capacity of Renewable Resources section. 22.2

Comments 5990, 5991 and 5992 (Mayo Stano, Jon Snyder and Tim Theilman). June 27, 2011.
Recommendation 9 DAIR should be revised to include a section on the need for the purpose of and the alternatives to the project from the perspective of the public. See Correspondence ID 2078 for attachment Coalwatch CV.

Compliance response to all three
Need is determined by the regulatory agencies through the Application/EIS. The Application/EIS will summarise information from the public

Health

Reply in this category:
Coal consumption cannot be removed from the scope of the project. There is no regulatory bar to its inclusion.

Comment 4203. Name withheld. June 17, 2011.
Another concern with the transportation of the coal is the excess Green House Gas emissions (GHG's) from elevated number of trucks on the Highway 19 and Highway 4. The ships which would carry the coal to Asia would in turn contribute to the GHG emissions we as a society should begin to decrease.

Compliance response:
GHG emissions will be estimated based on diesel fuel consumption. 5.2.2.2, 5.2.3

Comment 4255. Name withheld. June 25, 2011
Although the dAIR/EISG addresses greenhouse gas emissions and climate change in relationship to the Project activities, it does not address the contribution of the Project's production to GHGs and climate change. In our view, this is much too narrow and self interested an approach. To deal with these issues, we propose changes to the dAIR/EISG.

Compliance response

While the Draft AIR will address greenhouse gas emissions associated directly with the project it is beyond the scope of the project to examine how and where the coal will ultimately be used and its potential effects because the proponent has no control over its product once the coal has been shipped.

Comment 4283. Name withheld. June 27,2011.
Our feelings of hope and personal/community power and worth also affect mental and physical health at individual and community levels. We have been through other disempowering experiences with government most recently the prov govt forcing a deadline on our regional growth strategy against our will, with unsatisfactory results. We need feel that our voices, our observations, our knowledge of our own home and our needs as a community, count for something.

Compliance Response
Comment received and reviewed. Thank you. 3.1

AEC and CVCW reply to this comment:

Section 4.9 says nothing about stress and anxiety, and does not respect the WHO Social Determinants of Health. In the cited Health Canada document, on Page 10, Health Canada states:"Health Canada does not currently have the expertise to comment on the human-health related socio-economic impacts of projects. Health Canada suggests that the responsible authority seek this expertise from appropriate agencies." Will the dAIR seek this expertise?

Comment 4303. Jen and Stephen Fisher. June 8, 2011

OVERALL HEALTH, STRESS AND CULTURAL IMPLICATIONS REGARDING POTENTIAL INVALIDATION OF CANADA'S APOLOGY TO FIRST NATIONS BY THREATENING SALMON AS AN INHERENT, CULTURAL RIGHT AND SOCIOECONOMIC FOODSOURCE: The added stress of a variety of unnecessary, yet totally valid fears, based on science, experience and data: the fear of a spill of either coal or fuel or both, the fear of spontaneous combustion or ignited explosion, the fear of toxin□caused disease, fear of more toxic
industrial products entering and or leaving Port Alberni's deep sea port. The fear of losing the Salmon resource, possibly forever. Remembering that if temperatures in the Somass River reach 24 degrees Celsius the fish will not enter the estuary and the species will soon die off. Responsibility to lower GHG emissions cannot be overstated in this. The fear of not being able to realize a sustainable future for Port Alberni.

Compliance Response

Section 18 describes how the proponent and the Crown will consult with potentially affect Aboriginal people to: (1) Identify past, present and anticipated uses of the proposed Raven Project area by Aboriginal groups; (2) Identify any specific asserted aboriginal rights (including title); (3) Identify potential effects of the proposed Raven Project on identified uses and asserted rights. Methods to mitigate, avoid, or reduce any identified effects will be negotiated with affected First Nations and described in the Application/EIS. Section 19 of the draft AIR describes how Aboriginal interests with respect to potential social, economic, environmental, heritage and health effects of the proposed project will be identified and how they will be addressed. These will be described in the Application/EIS.

AEC and CVCW Reply to this comment:

Section 4.9 says nothing about stress and anxiety, and does not respect the WHO Social Determinants of Health. In the cited Health Canada document, on Page 10, Health Canada states:"Health Canada does not currently have the expertise to comment on the human-health related socio-economic impacts of projects. Health Canada suggests that the responsible authority seek this expertise from appropriate agencies." Will the dAIR seek this expertise?

Designing for Closure

AEC and CVCW reply to the comments in this category:

Full reclamation bonding and specific Closure plans need to be put in place during the Environmental Assessment. Permitting is not a public process.

Comment 4126- Name Withheld- June 26, 2011

We need more information on the proponent's plans to cover, in perpetuity, all the liabilities arising from this mine. How will the province or the federal government insure that no damage will occur to the

waters flowing into Baynes Sound?

Compliance Response
A detailed conceptual reclamation and closure plan will be developed for the Application/EIS and a more detailed plan completed when detailed engineering is available to support issuance of Mines Act and Environmental Management Act permits. A liability assessment following government guidelines is required as part of both the Application/EIS and detailed reclamation and closure plans.

Comment 4126. Name Withheld. June 26, 2011
We need more information on the proponent's plans to cover, in perpetuity, all the liabilities arising from this mine. How will the province or the federal government insure that no damage will occur to the waters flowing into Baynes Sound?

Compliance response
A detailed conceptual reclamation and closure plan will be developed for the Application/EIS and a more detailed plan completed when detailed engineering is available to support issuance of Mines Act and Environmental Management Act permits. A liability assessment following government guidelines is required as part of both the Application/EIS and detailed reclamation and closure plans.

Comment 6035. John Snyder. June 6, 2011.
7. Designing for Closure add social, heath and economic impacts to the design. See the attachment to the correspondence.

Compliance Response
The Application /EIS will include a closure plan that will provide key information in determining potential residual social and economic effects of the Project. The effects of mine closure will be addressed using the full range of economic and social VCs.

Boundaries
Comment 4051. Jane Armstrong. June 27,2011

The Draft AIR's sections on the economic and social impact of the proposal tell us only about sources the proponents will use to describe a limited number of "valued components". It does not tell us how these will be assessed, or weighed, and we argue again that the proponent is not in a position to provide an independent assessment of the project's impact. Independent social and economic impact studies must include all communities from Qualicum to Campbell River and Port Alberni,Bamfield Uclulet and Tofino. Mines and their associated activities are notsimple industrial additions they define communities and displaceexisting community identities. That change, and the fact that it is indirect opposition to existing identities, must be detailed and weighed in this assessment.

Compliance Response

The sources of information and methods to be used to assess the Project's economic and social effects will be identified in the Application/EIS. No weights are assigned to the individual VCs and will be up to BC EAO and CEAA to determine the relative importance of the individual VCs in their assessment of the Project. The assessment will include potential effects on the Alberni Clayoquot Regional District as well as on the LSA and RSA described in the draft AIR.

AEC and CVCW Reply to this comment:

This is not a public process. The boundaries should be determined before the EA begins.We are glad it will include Alberni-Clayquot.

Monitoring and Followup

Comment 5988. John Snyder. June 6, 2011.

9. Monitoring and Follow□up □ The Monitoring and follow up program must be a participatory, inclusive and transparent process that involves the First Nations and vulnerable populations in all the local communities. This plan should be spelled out at the EA stage, as required in the CEAA Operational Policy Statement. The nature of Aboriginal and stakeholder engagement in the monitoring program should be spelled out in the EIS.

Compliance Response

A monitoring plan will be developed and conditions for monitoring specified in the Mines Act and Environmental Management Act permits required for mine operation. The requirements of the Monitoring Plan will be outlined in the Application/EIS including Aboriginal and stakeholder involvement.

AEC and CVCW reply:

Permitting is not a public process, and the communities and First Nations affected have to be an intrinsic part of designing monitoring and followup for a project of this magnitude.