

RAVEN UNDERGROUND COAL PROJECT

COMMENTS ON dAIR v.7

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1. NEED FOR THE PROJECT

The need for the project must balance the advantages to the proponent (Compliance Coal Corporation) with the potential damage to the local environment and properties of residents of the area. The costs of long term monitoring and mitigation must be quantified and bonding or other guarantee provisions put in place as part of any future EA certificate.

There is no technical requirement for this project, as the projected annual production is a minuscule proportion of world production.

There are moral objections to coal production at a time when carbon combustion threatens our world climate.

2. DATA SOURCES

The dAIR document contains some description of the proposed activities, but is largely a copy of the EAO Table of Contents format. Two additional documents have been provided which appear to be intended as secondary sources of information: UPDATED PROJECT DESCRIPTION, Amec, May 2011; TECHNICAL REPORT ON THE RAVEN COAL PROJECT, Pincock, Allen and Holt (PAH), June 8, 2011.

Documents intended to support the dAIR should be listed in the Appendices. All documents must be edited to remove any discrepancies.

3. HYDROGEOLOGY AND HYDROLOGY

a. Modelling

The documents implicitly acknowledged that vertical conduits, either from existing faults and fractures, or fracturing resulting from post-mining subsidence, will be major sources of mine water inflow. The field investigation must include sufficient test wells suitably located to test the hydraulic conductivity of existing geological faults. Long term modelling must include estimations of the effect of mine-induced fracturing. The model must consider linkage of the mine openings to various overlying strata, including aquifers supplying. Local shellfishers have stated that freshwater springs in the tidal area are important for oyster production.

This mine would be entered at an elevation above much of the settled area between mine portal and seashore. This raises the probability of mine water being forced upwards to springs and aquifers when and if the mine fills with water after closure.

b. Spatial Boundaries

The surface water hydrology boundaries have been defined as the Cowie Creek watershed. This does not take into account the linkages through horizontal mine openings and vertical fractures, which may link across surface watershed boundaries.

Monitoring and modelling must extend from the full length of western (upstream) boundary of the Raven property to the downstream limits of aquifers and surface drainage. This must include sampling of marine organisms in Baynes Sound, and may include well sampling on Denman and Hornby Islands.

c. Temporal Boundaries

Post-operational monitoring is mentioned in the text, but the rudimentary schedules provided show activity for only one year after completion of mining. No long term cost allowances are obvious in the estimates.

Monitoring will be needed at least until the hydraulic system stabilizes, primarily indicated by stabilization of mine water level (with seasonal variations). If the mine does not fill with water, this will indicate that outflow is occurring at depth, probably through fractures to aquifers or springs. Springs might commonly occur in stream beds, so they will not be visually obvious; chemical testing of water, sediments, and biota will be needed. This may impose long term water treatment.

d. Water Balance

Water balance calculations are mentioned, but facilities for balancing are not mentioned. Presumably the objective is to determine the quantity of water that must be supplied to operate the washing plant. It is quite conceivable that the mine drainage will exceed the plant requirements, and that the problem will be the treatment of water discharge to prevent harm to receiving surface waters. Seasonal flows in these creeks may be very low, so that in summer the discharge water must be essentially at original stream quality to prevent damage to the biota.

Heavy rains can wash plant site materials into the creeks. The indicated size of the settling pond does not appear adequate for surge events.

Post closure water balance will be key to determining the long term monitoring and treatment requirements, as noted above.

4. OPEN PIT OPERATIONS

The PAH technical report still contains a reference to open pit mining of the upper section of the coal seams, although this is contained in an excerpt from a previous report. Any EA issued must contain conditions that will limit operations to underground mining within the present Raven Project boundaries.