

**Submission
No 181**

INQUIRY INTO COAL SEAM GAS

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Date received: 3/09/2011

3 September 2011

From

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Re: Coal seam gas Inquiry - General Purpose Standing Committee No. 5

Prologue: The subject of coal seam gas (CSG) mining could fill a book. I will address only some aspects of long-term environmental damage and leave it to others to describe other aspects of the issue.

Potential environmental damage

The greatest risk of CSG mining is the potential damage to 1) groundwater 2) air quality and

3) human and animal habitats:

1. Groundwater contamination

The risk of salt and other contaminants transferring from one aquifer to another because of drilling is substantial even without considering the additional pathways produced by CSG fracking techniques. The potential to pollute artesian water supplies is so serious that the precautionary principle needs to be applied.

1A. Before CSG mining is allowed to proceed the applicant should be required to pay for tests of water quality in and around every drill site. These need to be conducted by government rangers who monitor the site at regular intervals, rather like a local Council may require inspection of building at pre-set stages of the project, and must be signed off before any further work proceeds. The costs of such testing should be borne by the applicant and the results be made available to the public.

1B. Mining companies need to lodge substantial bonds which are only returned following complete remediation of the areas affected by their activities. (Mining company executives claim they will cause no damage, so this should be not be a major problem despite large scale activities.) The question of how to remediate pollution of deep aquifers may create difficulties estimating the costs of cleanup and most troubling is the prospect of a contaminated artesian water supply. The recent oil spill by BP in the Gulf of Mexico might supply some insight into the scale of costs and the gravity of such damage. (Here I would warn against claims that the only problem is "cowboy" elements in the mining community. The examples of BP in USA and the Exxon Valdeez in Alaska exemplify how even world leaders in petroleum mining have been unable to avoid disasters.)

2. Air pollution

The leakage of methane, and other gasses associated with CSG mining, into the atmosphere is so well documented as to be beyond dispute. Recently I heard one mining company CEO say that the process of CSG mining was "completely safe" and that methane is "not toxic." If this is so why do canaries die in mine shafts when such gasses are present?

Any additional load of fossil fuel emissions is likely to create increasingly devastating weather events whose costs cannot easily be estimated. Are the mining companies prepared to contribute to a natural disaster relief fund to offset these increased risks?

3. Habitat destruction

3a. The carve-up of native vegetation to allow for a grid of CSG drill sites, access roads and pipelines causes massive habitat loss and will accelerate species decline, even in remote areas. Australia is currently leading the world in species extinction, a title that does us no credit. The structural disturbance of large areas of geological strata such as coal seams creates the potential for earthquakes due to subsidence, such as currently being reported in the American state of Arkansas. Many US states report flora and fauna deaths in areas where CSG mining has taken place.

3b. Human living arrangements are dependent upon the maintenance of a sustainable environment. The potential damage caused by CSG mining cannot be compensated by income transferred from one part of the planet to another. A short-term fixation on extraction and exportation of CSG by multinational mining companies diverts attention from the challenge of developing alternatives to fossil fuel technologies. At the very least the Australian public deserves a concise and accurate summary of cost-benefit analyses: how will the fabulous wealth supposed to be generated to be shared? Australian mineral resources - including hydrocarbons - are commonwealth property and not simply there for the taking by any who happen to wish to profit by their extraction.

Conclusions:

1. State government needs to establish clear guidelines of how and when any damage caused by mining will be remediated.
2. A summary cost-benefit analysis needs be prepared showing exactly how much income is derived from a typical CSG mine for the various parties: miners, land owners, state. And how much each will party will contribute/lose in value.
3. A state disaster relief fund be established to which mining royalties are contributed. No "holiday" from such royalty payments is to be allowed. If the mining companies cannot agree to pay a fair share for this community resource then we do not need to exploit this resource until such a time as it is of benefit to the greater community.
4. A verifiable system of monitoring must be instituted as drilling activities are hard to observe and analyse. The current system of self-reporting is clearly inadequate. No responsible government would leave Dracula in charge of its blood bank.