



Review of Coal Sea gas Activities In NSW

nah to: csg.review

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History:

This message has been replied to and forwarded .

To the Chief Scientist and Engineer ,

Attached is my submission on behalf of the Stop CSG Sydney Water catchment to your review.

Thank you,

Will D'Arcy



President Stop CSG Sydney Water Catchment Submission Chief Scientist's review April 2013.pdf



25th April 2013

To the Chief Scientist and Engineer,

Thank you for the opportunity to provide a submission into this Review of Coal Seam Gas activities in NSW.

Stop CSG Sydney Water Catchment represents a body of concerned residents who live within Sydney's water catchment area. In this submission I will restrict my comments to the issue of coal seam gas mining within Sydney's water catchment, as set out in Point 2 of the Terms of Reference.

I am sure other submissions will address the other equally important areas to be addressed by this review.

As we are not scientific experts in this field, our information is based on reports all available in the public domain from individuals who **are** acknowledged as having expertise in these areas, including Dr Phillip Pells, Dr Stuart Khan, Professor Alan Randall.

Lake Burrangorang provides 80% of water needs to the residents of the Greater Metropolitan Sydney, a population of approx. 4 million people. There is no source of water for Sydney that could replace or meet Sydney's water needs if Lake Burrangorang water supplies were not available, therefore the consequences of loss of water in Lake Burrangorang by contamination, lowered surface water levels, or run-off damage could be considered catastrophic.

CSG requires deep drilling through various rock strata and through various levels of groundwater aquifers. Drilling and fracturing of rock strata creates potential conduits to allow potable groundwater sources to mix with contaminated underground water sources, thus rendering all unpotable.

Coal seam gas extraction requires depressurisation by removal of the water in the coal seam beds, to allow gas to flow. Depressurisation by extraction of megalitres of water runs the risk of altering flows of water surface and ground water, lowering the local water table and jeopardising Lake Burrangorang's actual capacity. Only 7 years ago during a drought, when Lake Burrangorang reached less than 50% capacity, the most severe level of water restrictions were imposed on Sydney residents for 30 months and triggered the construction of a water desalination plant at Kurnell.

Extracted CSG water presents a significant risk to adjacent surface water in the water catchment. The water pumped to the surface from coal seam beds is recognised to be high in salt and contains various toxic organic compounds (BTEX chemicals). Accidental spillage of contaminated water in the catchment area could contaminate the fresh water held in Lake Burragorang.

The Sydney Water Catchment Area around Lake Burragorang has a vast area of natural bushland. Bush fires throughout the catchment are a regular occurrence. Coal Seam Gas mining within the catchment dramatically adds to the risks of these fires, due to increased atmospheric methane levels caused by fugitive emissions that have been shown to be associated with CSG mining. This represents an unacceptable increase in risk to both residents and the fire fighting personnel sent in to protect us.

The Sydney Catchment Authority which manages Sydney's water resources has, to this date, worked to the principles of **neutral or beneficial** effect for any activity within the water catchment protected areas, i.e. no activity can be carried out in water catchment areas unless they are seen to provide a net neutral or beneficial effect for the water catchment. This has put stringent limits on the kinds of activities that can be carried out there.

There is no possible definition of coal seam gas activities that could be considered beneficial to land within the water catchment, nor can CSG effects be considered neutral.

In terms of management of risk, we believe the only acceptable way to manage the severe risks associated with CSG mining in protected areas would be to disallow CSG mining in catchment areas.

The embryonic nature of coal seam gas mining in NSW, and the lack of any effective regulatory mechanisms to manage the industry at this point in time, means that the coal seam gas industry does not have the capacity or knowledge to safely extract CSG, particularly at the rate at which the roll out has been planned. Any industrial mishap has the potential to cause a major environmental disaster in a sensitive area such as Sydney's Water Catchment.

For these reasons we believe there is no place for coal seam gas mining within Sydney's drinking water catchment.

Will D'Arcy

President Stop CSG Sydney Water Catchment