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Submission

to

Federal Minister for the Environment

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on

Referral - Reference Number: 2013/6918

Title: Santos NSW (Eastern) P/L/Exploration (mineral, oil & gas - non-marine)/PEL 238 & PAL 2, Narrabri Area, Gunnedah Basin/NSW/Energy NSW Coal Seam Gas (CSG) Exploration & Appraisal Program

**Compiled by John Edwards
Honorary Secretary**

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Introduction.

The Clarence Environment Centre has maintained a shop-front in Grafton for over 23 years, and has a proud history of environmental advocacy. We have been particularly concerned about the activities of coal seam gas miners in NSW and have already made a number of submissions and approaches at both both State and Federal level over the past 4 years calling for a comprehensive review of all aspects of the industry. We have sponsored numerous information seminars for concerned landowners, and made representations to the Clarence Valley Council, the NSW Chief Scientist and Engineer, and various State Government ministers.

The screening of the American documentary, "Gasland", was a wake-up call to the world, and the predictable response from the gas mining industry, claiming that what they were doing here in Australia is not the same, failed to convince many in the community.

It now seems the community's scepticism was well-founded, with evidence emerging from Queensland to show that what the gas industry is doing in that State exactly replicates what has happened in the USA. Water bores are being set alight, carcinogens being found in water supplies, exploding well heads, and releasing toxic produced water into waterways. Fugitive methane emissions are finding their way to the surface, resulting in elevated levels of methane and other toxins occurring in the vicinity of gas mining operations in the south east of the state, and human health is being impacted.

The claims by the industry that it is highly regulated is a complete nonsense, and Governments across Australia must take responsibility for firstly failing to undertake a thorough risk assessment, or to put adequate controls in place, and secondly failing to monitor compliance with those few controls that were in place.

Justification

Coal seam gas (CSG) is a fossil fuel and its use contributes to greenhouse gas pollution. It generates more than 40 times the amount of greenhouse gas per unit of energy generated than solar or wind and will make a major contribution to global warming.

The big lie being promoted by the Australian CSG industry, is that methane is an ideal, low emissions, transitory fuel for electricity production as the country moves away from coal to a renewable energy future. While that statement holds true for natural gas, i.e. that sourced from underground reservoirs that do not require multiple well heads, horizontal drilling, and hydraulic fracturing (fracking) of underground rock formations, it does not hold true for unconventional gas.

The lie becomes clear when all the collateral carbon emissions are taken into consideration, something that has now been quantified by scientists from the Cornell University in the USA and other scientific institutions. They have found that when all the emissions, including methane vented or flared directly into the atmosphere, along with emissions from machinery used in land clearing; the manufacture and laying of pipelines; in drilling and fracking processes; as well as the pumping, refining and liquefaction processes, and transport, the total footprint of CSG exceeds even that of coal-fired electricity production.

The fact that most gas in NSW is extracted for export, and not to meet local energy needs, further confirms the transition fuel lie. **Therefore there is no justification for unconventional gas mining at this time.**

Summary.

Faced with global warming (currently trending to 6 degrees hotter within 90 years, it is imperative that the world moves immediately to using renewable energy. There are vast solar, solar thermal, geothermal, and wind resources in areas where CSG mining is now proposed, The massive expansion of coal seam gas production is delaying the transition to renewable energy alternatives, while adding to atmospheric pollution, so it is equally imperative that unconventional gas mining be curtailed.

Added to CSG's contribution to global warming, are the already identified threats of pollution and depletion of ground and surface water, is the destruction of the natural environment through the construction of well heads, a network of pipelines, access roads, toxic waste water holding lakes, evaporation ponds, compressor stations and waste water treatment facilities. As well there are clear signs of health implications for people forced to live in close proximity to these gas fields because they can no longer sell their properties.

The process of hydraulic fracturing (fracking), the 'blasting open of underground rock strata through horizontal drilling in the rock seams, cannot be undertaken without consequences. Those consequences are:

- migration of potentially toxic water via the resultant cracks in the rock to potable water aquifers,
- depletion of aquifers draining through those cracks,
- fugitive emissions finding their way to the ground's surface via those cracks, as demonstrated by the current leaks in the Condamine River,
- the contamination of wells and bores with gas released by the fracking process, that have already been recorded in the US and in Queensland,
- the potential for subsidence following the breaking of rock strata, and the removal of the huge amounts of water that is extracted with the gas, and
- the clear implications for human health impacts for those forced to live in a gas field with elevated levels of aerial borne methane and toxins.

We strongly believe Santos' referral of it's plans to mine the Pilliga Forest must be refused. A report has already been put before the Government suggesting that all remaining fossil fuels remain stored underground if we are to avoid runaway climate change, so we urge the Minister to use his powers to protect water under the EPBC Act, to ensure this highly polluting and dangerous industry does not progress.

In terms of the loss of revenue that the State would incur, should it be decided that CSG mining should not proceed, we would like to see the introduction of a scheme whereby stored fossil fuels can attract carbon credits to ensure they are kept underground.

The Clarence Environment Centre thanks the NSW Government for this opportunity to comment further on the coal seam gas industry.

Yours sincerely
John Edwards
Honorary Secretary
Clarence Environment Centre.