The Wilderness Society Newcastle Submission

Prue Bodsworth to: csg.review 26/04/2013 07:06 PM

History: This message has been forwarded.

Please find attached The Wilderness Society Newcastle submission to the NSW Chief Scientist & Engineer Review of Coal Seam Gas activities. Due to the large size of the reports that have been included as appendices please find below the links to online source of these reports:

http://www.stoppilligacoalseamgas.com.au/wp-content/uploads/2011/12/The_Truth_Spills_Out_Final_May_2012_without_appendices.pdf

http://www.stoppilligacoalseamgas.com.au/wp-content/uploads/2011/12/PILLIGA-ECO-REPORT_Web2.pdf

Should you have any questions regarding this submission please contact me on the details below.

Yours sincerely,

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Prue Bodsworth
Community Campaigner
The Wilderness Society Newcastle
P: (02) 4929 4395
M: 0427 417 870

www.wilderness.org.au/campaigns/coal-seam-gas Submission to the Chief Scientist.docx

The Wilderness Society Newcastle
90 Hunter Street
Newcastle, NSW 2300
26th April 2013

The Wilderness Society Newcastle welcomes the opportunity to make a submission on the Chief Scientist & Engineer independent review of coal seam gas activities in NSW. To date there has been a serious lack of rigor around coal seam gas exploration and production development application assessments. There have been no independent investigations into the impacts of coal seam gas drilling on groundwater for many coal seam gas approvals. To have no transparent means of assessing this risk to our water supplies has left the public outraged at this 'suck it and see' approach that the State Government has taken with regards to this industry.

We would also like to provide the Chief Scientist and Engineer with information on the Terms of Reference that we hope will inform this study:

1. *Undertake a comprehensive study of industry compliance involving site visits and well inspections. The Chief Scientist's work will be informed by compliance audits undertaken by regulatory officers, such as the Environment Protection Authority and other government agencies*

The Wilderness Society has detailed knowledge of the damage that be caused to our environment from coal seam gas operations due to poor operations and a lack of monitoring from the EPA. The Pilliga Forest has been subject to numerous environmental disasters from coal seam gas drilling including spills of untreated coal seam gas water, water treatment plant failure and the discharge of hundreds of litres of contaminated water into local water bodies, animal kills and unlined drill ponds.

The Wilderness Society Newcastle and the Northern Inland Council for the Environment produced a report into these incidents 'The Truth Spills Out: A case study of Coal Seam Gas Exploration in the Pilliga'.

This report provides detailed evidence to show that the coal seam gas operations in the Pilliga to date have resulted in harm to the environment, including water pollution and soil

contamination. It alleges the licence holder has not complied with the provisions of the *Petroleum (Onshore) Act 1991* or the conditions of the licence.
The report shows that:

- There is evidence of systemic and serious breaches of laws and regulations in the Pilliga Forest which have only been revealed as a result of community pressure.
- The NSW Government has repeatedly relied on inaccurate information provided by gas companies in their public statements instead of collecting their own information.
- Despite claiming to be undertaking a comprehensive investigation of coal seam gas operations in the Pilliga from early August 2011, the NSW Government failed to identify or act on the major breaches that were reported by environment groups after that date.
- The NSW Government response to any substantive public complaint is to 'announce' that it is investigating, but such investigations in many cases appear to be nothing more than a tokenistic request for gas companies to respond to the complaint.
- In fact, there have been up to seven different investigations 'announced' into coal seam gas The scope and nature of those investigations has not been explained to the community and there is no public transparency in relation to them.

The results of this investigation have still not yet been released to the public despite the O'Farrell promising to deliver a preliminary investigative report by March 2012.

In addition the Government has renewed the coal seam gas exploration licence when the investigation into the alleged breaches of the Petroleum (Onshore) Act 1991 is still not released.

We would like to invite the Chief Scientist and Engineer to the Pilliga to hear from local community members, independent ecologists and scientists on the impacts of the spills to the environment and the soils and groundwater.

Currently, Santos have been attempting to rehabilitate the site yet have been unable to do so in some areas where the soil has been removed to the clay layer and sent to land-fill and in other areas is displaying disturbing signs of a tar like substance and is yet to experience regrowth. We are currently waiting on soil samples from these areas to be analysed.

This Term of Reference states it 'will be informed by compliance audits undertaken by regulatory officers, such as the Environment Protection Authority and other government agencies', however this is a serious lack of compliance audits in NSW as the coal seam gas industry has been self-regulated and we hope that the chief scientist will take the opportunity to speak to the community and environmental organisations who have been working to monitor this industry.

2. *Identify and assess any gaps in the identification and management of risk arising from coal seam gas exploration, assessment and production, particularly as they relate to human health, the environment and water catchments*

There are many gaps in managing coal seam gas risks in NSW relating to human health, impacts to environmentally sensitive areas and threatened species and water contamination and the potential dewatering of aquifers including the lack of baseline data and on-going monitoring on health, water, air quality and fugitive emissions.

Human Health

It is concerning that there has been no coal seam gas health risk assessment in NSW. This was raised recently by South West Sydney Local Health District who called for a ''comprehensive assessment of potential risks to human health'' in relation to coal seam gas drilling in western Sydney and stated that “The human health risks, especially to people living within a few hundred metres of drilling sites, are unknown”.

We consider that coal seam gas approvals without this risk assessment, baseline testing, specific air quality guidelines and monitoring to be reckless and are calling for a must be a moratorium on coal seam gas until this study is completed.

There are major flaws in the State Government planning process with regards to preventing health impacts on communities from coal seam gas mining. Firstly, the planning process for coal seam gas exploration is a Review of Environmental Factors (REFs). These REFs are not open to the public are not submitted to the Department of Health for input and do not address the impacts of air pollution on human health. This is concerning as the exploration for coal seam gas is a very similar to process to production and results in air pollution. There is also no baseline study of residents, no recommended standards for air pollution and no monitoring. Given that there has been no comprehensive investigation by the NSW Health Department into coal seam gas, allowing coal seam gas to occur within built up residential areas such as Fullerton Cove (where 86 families live within a 2km radius of the proposed drilling) that may not be zoned 'Residential', is an extremely high risk activity.

Water

There must be independent hydrogeological studies of all proposed coal seam gas activities. Without these irreversible damage may be done to our groundwater and rivers with serious consequences for future water security.

The National Water Commission in their policy position stated that the risks to water from coal seam gas are:

- Extracting large volumes of low-quality water will impact on connected surface and groundwater systems, some of which may already be fully or overallocated, including the Great Artesian Basin and Murray-Darling Basin.
- Impacts on other water users and the environment may occur due to the dramatic depressurisation of the coal seam, including:
  - changes in pressures of adjacent aquifers with consequential changes in water availability

- reductions in surface water flows in connected systems
- land subsidence over large areas, affecting surface water systems, ecosystems, irrigation and grazing lands.

- The production of large volumes of treated waste water, if released to surface water systems, could alter natural flow patterns and have significant impacts on water quality, and river and wetland health. There is an associated risk that, if the water is overly treated, 'clean water' pollution of naturally turbid systems may occur.
- The practice of hydraulic fracturing, or fraccing, to increase gas output, has the potential to induce connection and cross-contamination between aquifers, with impacts on groundwater quality.
- The reinjection of treated waste water into other aquifers has the potential to change the beneficial use characteristics of those aquifers.

Yet despite these identified risks the applications for coal seam gas development often contain little more than a consultants statement that it is 'unlikely' for these impacts to occur without any data to support these conclusions.

Environmental Areas

Many coal seam gas developments are proposed for areas of critical habitat for State and Federally listed threatened species. There must be areas that are off limits to coal seam gas such as habitat for threatened species. In the Pilliga Forest where there is a local population of the Federally threatened species Koalas, the Pilliga Mouse and the South Eastern Long-eared bat ecologists have predicted that these fauna species may become locally extinct if mining is approved in the Pilliga Forest.

A report commissioned by the Wilderness Society Newcastle and the Northern Inland Council for the Environment "The Ecological Values of Pilliga East Forest and the Threats Posed by Coal Seam Gas Mining 2011-2012" finds that coal seam gas operations in the area to date have resulted in substantial clearing of vegetation resulting in habitat loss, fragmentation and degradation that have increased edge effects and facilitated invasions of introduced mammals, together with the pollution of streams, groundwater and soils.

The Koala populations in North West NSW may be at particular risk from coal seam gas. The Pilliga Forest is covered by a Santos coal seam gas exploration lease who have stated they with to drill 400 wells and their operations across the Liverpool Plains at Spring Ridge and Marys Mount are also known for their Koala habitat.

The spread of gas wells, tree kills from coal seam gas spills and increased vehicles through the Pilliga Forest will likely put extra strain on these already declining koala populations. The 2011 Senate Inquiry into koalas recognised the major threats to Koalas are habitat degradation, vehicle strikes and fire – all of which are likely to increase in the Pilliga Forest, Liverpool Plains and Gunnedah areas if coal seam gas mining proceeds.

It is also important to assess the impacts to the environment at both a local and regional scale. The Pilliga Forest has also been identified by the NSW Office of Environment and

Heritage as a key part of the Western Woodlands Way biodiversity corridor. The Western Woodlands Way is a large scale response to the serious and ongoing declines in biodiversity in the sheep-wheat belt of NSW and the most highly cleared region in NSW. This decline results principally from loss and fragmentation of native vegetation and will be exacerbated in the future by climate change.

3. *identify best practice in relation to the management of CSG or similar unconventional gas projects in close proximity to residential properties and urban areas and consider appropriate ways to manage the interface between residences and CSG activity*

Please refer to the response to Terms of Reference 2. We also recommend that best practice in CSG management should include a minimum 5km exclusion from residential zones, a minimum 2km exclusion from all residential dwellings, mandatory health impact assessments, and the right for communities to say no.

4. *explain how the characteristics of the NSW coal seam gas industry compare with the industry nationally and internationally*

The Queensland Government 'Strategic cropping land' policy has strategically placed highly productive cropping land off-limits to coal seam gas development in an attempt to ensure food security for the nation. Whilst this Queensland legislation is severely lacking in the areas identified as it ignores many other critical food producing industries, the NSW has failed to be strategic and is currently putting important food producing areas at risk such as the Liverpool Plains and Upper Hunter region.

Whist the NSW Government's 'Strategic Regional Land Use Plan', has mapped these important areas and coal seam gas reserves, it has failed to make strategic decisions about where mining should and shouldn't occur based on NSW's resources. Rather, they have left the entire state open to coal seam gas developments. This does little to inspire confidence that the Government is able to manage these resources to provide ongoing economic development, food and water security and environmental management.

With regards to important environmental areas the Strategic Regional Land Use Plan must afford important natural areas such as the Pilliga Forest outright protection due to its natural values and the irreparable damage that would occur if coal seam gas mining expanded across the forest. The areas that are under mining lease listed as Threatened Ecological Communities (TEC), Endangered Ecological Communities (EEC) or identified threatened aquatic ecosystems and species must also be afforded outright protection

5. *inspect and monitor current drilling activities including water extraction, hydraulic fracturing and aquifer protection techniques*

As per ToR 2, we would like invite the Chief Scientist to the Pilliga Forest to investigate examples of compliance failure with CSG.

6. produce a series of information papers on specific elements of CSG operation and impact, to inform policy development and to assist with public understanding. Topics should include:
    - operational processes
    - NSW geology
    - water management
    - horizontal drilling
    - hydraulic fracturing (fraccing)
    - fugitive emissions
    - health impacts
    - wells and bores
    - subsidence.

We would like to see that these information papers provide real data on coal seam gas proposals, including hydrogeological modelling and comprehensive baseline monitoring, rather than be limited to a literature review.

We also believe that the current Terms of Reference for this study needs broadening in a number of areas. In particular we would like the Chief Scientist and Engineer to:

- Commission rigorous independent scientific research to properly assess the risks of coal seam gas mining to our water, health, air quality, food producing land, threatened species and sensitive environmental areas.
- Identify best practice methods for baseline monitoring of health impacts, water resources, air quality, soil quality, and fugitive emissions.
- Identify strategic areas of NSW that should be off limits to coal seam gas, due to unacceptable risks and impacts.

Review the impacts of coal seam gas on agriculture and other affected industries such as tourism and manufacturing

Yours sincerely,

Prue Bodsworth BE. BSc. M Integrated Water Mgt.

The Wilderness Society Newcastle

Re: The Wilderness Society Newcastle Submission

Prue Bodsworth to: csg.review 26/04/2013 07:19 PM

History: This message has been replied to and forwarded.

In additon to my previous email please find attached a PDF version on my submission.

On 26 April 2013 19:06, Prue Bodsworth <prue.bodsworth@wilderness.org.au> wrote:

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> Should you have any questions regarding this submission please contact me on the details below.
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> Yours sincerely,
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> --
> Prue Bodsworth
> Community Campaigner
> The Wilderness Society Newcastle
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> www.wilderness.org.au/campaigns/coal-seam-gas

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Yours sincerely,

Prue Bodsworth BE. BSc. M Integrated Water Mgt.

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