Review of Coal Seam Gas activities in NSW
Meredith Stanton to: csg.review 26/04/2013 04:12 PM

History: This message has been replied to and forwarded.

Mary O'Kane
NSW Chief Scientist

Chief Scientist Review of coal seam gas activities in NSW

Please find attached my comments on above review as a word document.

M Stanton_CSG Review NSW_Chief Scientist.doc

M Stanton_CSG Review NSW_Chief Scientist.doc

sincerely,

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To:
Mary O'Kane
NSW Chief Scientist

Chief Scientist Review of coal seam gas activities in NSW

As a landholder for 35 years in the Clarence Valley, NE NSW it seems little is being done to monitor and survey the local impacts to community health, or other environmental and social effects caused by Coal Seam Gas exploration in NSW.
I have reached this conclusion from online research and talking to community members fighting approval of CSG in northern NSW, as well as talking to families whose health has been effected by bore water contamination in Metgasco's drilling areas.

Please visit northern NSW and investigate where Metgasco has been operating since 2007 and the company has failed to report water contamination issues or to compensate people effected.

Local families and communities are having to fund expensive water testing to confirm water contamination issues. The same families can no longer use their bore water and must install alternative water supplies at their own expense. (I personally know a family with young children, at Rappville, whose health, water and lifestyle has been negatively effected by coal seam gas operations. Everyone in the household is suffering varying degrees of illness. One of their dogs has died from methane exposure near the creek and a second dog was narrowly saved by quick action, but only after realising there was something wrong with their water after expensive tests were carried out. This family has lived in ignorance of their water being contaminated since 2009 and the well at issue is within 11km's of their residence - Metgasco - Wyan-Rappville E01).

Where is the EPA? Why have these issues not been investigated? Why is it that Metgasco did not report the contamination? And how will these families be compensated?

1. Environmental Impacts

The most fundamental risk management strategy must be the creation of strict no-go zones for farmland, water resources and important bushland.

There appears to have been very little government regulation or oversight of drilling activities near to residences, water resources and threatened species habitat. Minimal baseline testing has occurred and now that evidence of impacts, like methane migration is coming to light, we are seeing that monitoring procedures have been particularly poor, with local people noticing environmental changes, but unsure whether to voice their (mis)-understandings of events because of a lack of verifiable information.

The NSW government has put the cart before the horse in approving coal seam gas exploration. The detrimental effects on families and water supplies in northern NSW near Casino and Kyogle have not been reported by the gas company and public concern has been pushed aside with the use of NSW police intervention to aid the invading gas company.

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.

I have a number of concerns regarding coal seam gas mining in NSW:

1. CSG mining represents a serious threat to water resources due to:

1. The potential for drawdown and contamination of groundwater aquifers, including potential for major cumulative impacts on the Great Artesian Basin.
2. The pollution of surface water systems from 'waste' water, leading to serious reductions in water quality.
3. The use of large volumes of water for drilling and fracking in water systems that are already over-allocated, such as the Murray-Darling Basin.
4. The location of CSG wells on sensitive floodplains and in water catchments.

Coal seam gas exploration in NSW has had a number of detrimental impacts on water quality, vegetation, wildlife and human health. A few examples:

> Discharge of treated 'waste' water by Eastern Star Gas into a creek in the Pilliga; location of CSG wells on the floodplain at Casino; methane contamination of bore water at Rappville and Dobies Bight near Kyogle; exploratory drilling near Woronora Dam in water catchment areas of Sydney and the Illawarra; drilling near the Tomago sandbeds water catchment area in the Hunter.

2. CSG mining represents a serious risk to human health:

1. Due to potential contamination of water used for human consumption and agricultural production with chemicals used in drilling or fracking as well as those present in the coal seam.
2. From leakage of toxic methane and other gases during gas production and migration of methane into water supplies.
3. Through poor management of chemicals and use of toxic chemicals without full disclosure, particularly during fracking and drilling.

Examples:
Air and bore water contamination at Dobies Bight and Rappville, near Casino.
The recent foamy discharge from a well at Camden; methane leaking from gas pipelines and a water drain in the Pilliga and from well-heads at Casino; methane bubbling from the Nepean River.

3. CSG mining produces vast quantities of waste that represent a serious environmental risk:

1. Management of waste water is highly problematic and leads to environmental degradation where storage, leakage, spillage and discharge occurs.
2. Treatment of waste water results in the production of a highly concentrated 'brine' by-product, that is extremely difficult to dispose of without causing harm.

Examples: Spillage of waste water leading to extensive tree death in the Pilliga; deliberate discharge of saline water leading to pollution event near Broke; native animal deaths at drill ponds in the Pilliga. A CSG well fire that burned for several days polluting the air and due to prevailing winds, blew across a residential area near Rappville (the bore water in this area has also been contaminated).

4. CSG mining represents a major threat to natural areas:

1. It leads to extensive clearing and fragmentation of native bushland and threatened species habitat and increases the risk of catastrophic bushfires.
2. It represents a major threat to wetland systems, even distant ones that are hydrologically connected.
3. It transforms major vegetation remnants, refuges and corridors into industrial zones
4. Even protected areas and public lands are not safe – CSG mining can occur in areas bordering National Parks, and is permitted in State Conservation Areas and State Forests.

Examples: Pilliga CSG mining will clear at least 2,400 hectares and fragment 85,000 hectares of public lands, including State Forests and State Conservation Areas; at Putty drilling is planned next to the World Heritage-listed Wollemi NP; at Poggy,

drilling is occurring on an inholding in Goulburn River NP; in north-west NSW, Travelling Stock Routes are targeted for drilling and gas pipeline infrastructure; in the north-east, a pipeline is proposed through the World Heritage-listed Border Ranges NP.
(An unconfirmed Metgasco CSG well fire near Rappville in 2009-10 is also cause for concern and needs official investigation. It was attended by the Bungawalbin RFS and a number of local people were eye witnesses to the event, which allegedly flared for a number of days - not consistent with the 8 hour controlled flarings reported by the company).

5. Other major environmental problems with CSG mining include:

1. The complete failure of remediation, even at the exploratory phase – such as at Casino where drill ponds had not been remediated and in the Pilliga where there has been no rehabilitation of well-pads.
2. The fact that regulatory processes, including assessment, approval and compliance, are all drastically inadequate – this was evident in the approval of the Gloucester AGL project without details about what it entailed, and the lack of resources or political will to enforce compliance in the Pilliga.
3. Coal seam gas (CSG) is a fossil fuel and a significant source of greenhouse gas pollution. It generates more than 40 times the amount of greenhouse gas per unit of energy generated than solar or wind. Coal seam gas will make a major contribution to global warming, particularly when fugitive emissions and liquefaction prior to export are fully considered.

There is a need for comprehensive independent scientific studies to assess the risks and impacts of coal seam gas extraction and production. An urgent need for comprehensive baseline monitoring of air, groundwater, community health and fugitive emissions (which may also impact on global warming).

Impacts in Queensland and overseas.
1. Experience from Queensland: significant problems with leaking wells; impacts on groundwater evidenced from drops in bore levels; growing social discord; an exploding well at Dalby; major impacts on natural values near Gladstone; alienation of farmland and clearing of bushland.
2. Experience from overseas: regular fires associated with CSG wells, pipelines and facilities; chemicals used in fracking shown to be toxic to humans; systematic contamination of groundwater with methane; increased incidence of earthquakes after fracking.

An article highlighting the need for monitoring and further independent studies.
Published in The Conversation
26 April 2013, 6.42am AEST
Earthquakes and coal seam gas

By Isaac Santos, Damien Maher and Douglas Tait
http://theconversation.com/earthquakes-and-coal-seam-gas-13707

2. Social Impacts.

The CSG industry is funding an expensive advertising campaign to sell their business to the community and refute health concerns. They tell us there are great benefits to extracting coal seam gas across NSW. The unfortunate reality is the profits will go to a few, while the adverse impacts of gas field development could last for generations, leaving our grandchildren with many complex environmental problems that cannot be repaired and which lower the quality of life for families in the Clarence and across NSW.

Many land owners will be targeted by gas companies for drilling exploration projects and under NSW legislation land holders have very few rights to prevent drilling on their land or prevent access for roads and pipeline construction. If the Clarence-Moreton Basin is fully developed for coal seam gas extraction the value of our land holdings will fall, the water could become unsafe for use, the air polluted and our rural landscapes scarred by a network of drill pads connected by pipelines and access roads. All this before the long term adverse effects of coal seam gas mining have been studied or assessed by the Federal scientific inquiry set up to research the potential impacts to rural landscapes.

1. CSG mining causes major social impacts:

1. Landholders face the prospect of losing control of their land, and property values are degraded and options for re-sale lost once exploration licences are issued.
2. The social fabric of communities is drastically weakened, with evidence that communities dominated by fly-in/fly-out workers show higher incidence of violence and crime, soaring rents and worsened mental health outcomes.

2. The rapid expansion the CSG industry looks set to have major economic impacts:

1. Food security is threatened by risks to groundwater and loss of arable land.
2. It is undermining economic diversity and leading to a skills shortage in other rural industries, and can lead to collapse of businesses unable to compete for staff.
3. It is likely to impact negatively on a whole range of other industries such as organic farming, tourism, vineyards and orchards.
4. It leads to important local infrastructure, such as roads, being run-down and damaged at a cost to the taxpayer.

Examples: Food security is threatened by CSG mining proposals on the Liverpool Plains, around Moree and Bellata, and the in Northern Rivers region; pipelines threaten to cause major erosion to self-mulching black soil plains around Mullaley; and CSG mining poses a threat to the vital hot springs tourist attractions from Pilliga to Moree.

3. Other socio-economic issues with coal seam gas mining include:

1. Royalties paid to the State create an expectation that projects will be approved, whilst failing to deliver sufficient funds to offset the impact of CSG.
2. Local Government and local communities are currently largely excluded from the planning process and public participation and legal standing is inadequate.

Renewable energy, coal seam gas and NSW energy needs.

1. Coal seam gas is not required to meet the future energy needs of NSW. Most gas in NSW is extracted for export, not to meet local energy needs.
2. There is a lack of information about the whole lifecycle emissions for CSG production. US studies suggests unconventional gas has huge fugitive emission impacts.
3. The only way to deliver energy security is to switch to renewable energy now, particularly solar thermal. There are vast solar thermal resources in the major areas where CSG is now proposed, such as Narrabri and Moree.
4. The massive expansion in coal seam gas production is delaying the transition to renewable energy alternatives.

I urge you to seek independent scientific information when preparing information brochures, as the gas industry has proven itself to be untrustworthy and lacking in concern for the environment and community health. Comprehensive health and water assessments must also be initiated.

Thank you for the opportunity to comment on this important community issue.
With great concern,

sincerely,
Meredith Stanton
26th April 2013