The Hon. Chris Hartcher MP
Minister for Resources and Energy
Govenor Macquarie Tower
Level 37, 1 Farrer Place
Sydney NSW 2000

30 April 2012

Dear Mr Hartcher

Re : Draft Code of Practice for Coal Seam Gas exploration- Public consultation

The formulation and adoption of the above Code of Practice is to be applauded. However, for such a Code of Practice to be effective and achieve the objectives it is designed for, it needs to be defined in legislation or regulation making it a mandatory requirement. It also needs to be enforceable with penalties for minor breaches and significant penalties for more serious breaches or deliberate non compliance.

Mining companies are commercial organisations motivated by profit and unless adequately regulated will undertake their activities to achieve their own goals and objectives. It has been shown that these tend to be to the detriment of the environment, population and even government.

Whilst mining companies will be happy to sign up to a code of practice, unless it is mandatory and there are significant financial or other penalties, they have little incentive to comply with the code if it impacts on their primary aim of mining CSG.

The largest and most respected multinationals are concerned about costs and this ultimately results in decisions being taken for the wrong reason . The recent BP disaster is a case in question. It is therefore paramount to have adequate legislation and regulation in place.

Self regulation and complying with guidelines does not offer adequate protection to either the environment or landholders and the local community. Mining companies in America have treated land owners and the community as the enemy and have developed strategies to frustrate and circumvent them. They have also shown little regard for the environment and have used 'bully boy' tactics of isolating land owners, requiring confidentiality agreements for compensation payments and because of the lack of adequate regulation and the push for independent energy requirements have been able to rape the land and poison water supplies.

As new and better regulations are developed they should also apply to all current and future operations, not just those under new licenses. If you exclude existing licenses you are basically undermining your raison d'être for implementing the new regulations. As well as exposing the environment to unacceptable levels of risk by not including existing licenses.

The way the current code of practice has been drafted places all the control with the explorer/mining company, giving the landholder and other interested parties little or no control over the process. I will address some of these more specifically below.

The draft as it is currently framed is too one sided towards the mining companies. A good analogy would be a policy that allows athletes to undertake their own sample and drug tests. I think you would agree that the policy would be ineffective.

The draft policy contains a lack of adequate independent testing and involvement of third parties in the processes. It fails to include adequate checks and balances on an industry which could cause catastrophic consequences for the environment and the health of all the citizens of New South Wales.

The draft policy mentions chemical used in exploration and fraccing. Why has the word fraccing been used as opposed to the more recognised fracking and Hydraulic fracturing?

Hydraulic fracturing is highly contentious and significantly increases the risks from CSG mining which far outweigh any economic benefit. If chemicals used in this process find their way into bores, aquifers and ground water you are condemning thousands of members of the population to developing tumours and other related illnesses. Such risks outweigh any economic considerations.

Do you want to be the Minister who will in future be known as the person responsible for allowing this to happen and not taking action to prevent it?

The risks of CSG mining undertaken without hydraulic fracturing are still significant, but if an economic case has to be made it would be far preferable to allow CSG mining but ban Hydraulic Fracturing.

The use of any chemical toxic to humans or aquatic life should be banned in CSG mining. I have attached a report from Endocrine Disruption Exchange which gives an analysis of the potential health effects of some of the products and chemicals used in natural gas operations.

The draft Code attempts to address the issue of compensation to the land holder which is laudable. However, the draft completely fails to address the loss of land and property values of those impacted by CSG mining.

It is likely that a farm that has been subject to extensive test drilling or production drilling would be unsellable. The same would apply to residential property. It is unlikely a home owner would be able to sell their property if it is in sight of a gas well or there is CSG mining or a well close to the property. If a land holder or property owner wish to sell their land or property to the explorer at the market value before exploration was known, the exploration/mining companies must be obliged to buy them out.

Most gas extracted is destined for export at commercial prices. There is no viable justification for these companies to make profits to the detriment or at the expense of farmers or citizens of New South Wales.

GSC is also marketed as a source of clean energy. However, recent research for the US National Oceanic and Atmospheric Administration has found that leaking from US gas drilling sites is double the expected amounts raising questions over the use of gas as a low emission fuel. Small extra amounts of methane can make a significant difference to climate change because it is up to 100

times more potent that carbon dioxide. This is an additional factor which should be considered and may need to be addressed by the Code of Practice when dealing with best practices.

With regard to specific pages of the Code I would make the following comments and suggested changes for your consideration:

Page 3

This should include a requirement for the explorer to provide a copy of the Code with their initial first contact. This will enable landholders to more fully understand the obligations of the explorer and their own rights.

The "explorer should be willing to reimburse all reasonable legal cost" Should state "must reimburse"

Compensation. As discussed above. Current wording is inadequate as it talks of compensation for "part of their land"

"Explorerer must keep landholders informed of progress and variations in exploration activities." Code is too vague and needs to be more specific.

"Explorers must provide specific details of all chemicals....." Code needs to specify when information must be supplied. Code should also include a requirement for the explorer to display adequate chemical identification labels at the site showing the entire chemical in use. Chemicals and products toxic to humans and aquatic life should be banned in CSG mining/exploration.

The explorer "should offer" to document the status of existing bores.... "results should" The Code needs to make it compulsory for the explorer to document the status of existing water bores and supply the land holder with the information.

The Code need to allow the property owner to be able to have an independent analysis of water bores at the explorer's expense.

The Code needs to include some independent review/scrutiny and independent testing by relevant agencies and government bodies of water bores and aquifers during the course of exploration and extraction to ensure the integrity and quality of the water.

The "explorer should" provide the land holder with a certified analysis of any drill cuttings..... Again this should say "must provide".

The explorer "should" establish community consultation.... Again "must establish".

Explorers will be required to provide certain information relating to their activities to the local council.... Code needs to be more specific and state what information.

CSG companies required to hold a water access licence if their activities take ground water at a rate of more than three mega litres per year. The code needs to require all exploration companies or drilling companies to hold a water access licence because they could use a number of different

subcontractors on a site who individually did not take the three mega litres but who should still be regulated.

All CSG explorers will be required to abide by this Code of Practice. As stated above the Code needs to be mandatory with penalties for non compliance. The code should also state that the explorer is also responsible for ensuring all its contractors and subcontractors comply with the code.

The code states that explorers must lodge a "substantial security deposit" How is this determined? Is it so much per proposed well? What is substantial? If an explorer damages an aquifer or a town's ground water bore field will it cover the cost of providing an alternative supply?

If the deposit is repaid, after obligations have been met, what happens if an old and previously sealed well is found to have leaked?

I attach a report from America – How Gas Wells Leak. This report makes for alarming reading and suggests that if a well starts to leak from the outside of the casing there is no effective way to repair it. It also states that the probability of polluting a shallow water well with methane is greater than 50% if the gas well is within 1,000 metres of the water well. Drilling can also pollute groundwater with drilling fluids.

The proposed code of practice and the desire to establish a best practice framework for CSG needs to address the issues and concerns raised in this report.

Page 4

The code refers to best practice and uses the term guidelines for CSG activities. If you require best practice the way to achieve it is by regulation and rules and procedures which must be followed. The code needs to state clearly that the "guidelines " are mandatory.

The Code states " before actually commencing drilling the explorer will "usually" prepare a review of environmental factors.... Surely this should be undertaken before any drilling?

Page 5

Pits or sumps may be excavated to hold drilling water containing potassium chloride and a biodegradable polymer..... The code needs to specify maximum size and standards of construction to prevent escape and contamination of groundwater.

Page 6

Whilst some of the concerns about fraccing and the chemicals used have been raised above, I would reiterate the main points - Such as fraccing should be banned. No toxic chemicals should be allowed to be used. I would add the following in relation to the details on page 6.

The Code needs to specify what, if any, chemicals are approved for fraccing. It must not be up to the explorer to decide.

Although you have banned the use of BTEX. I would refer you to the attached briefing paper from the National Toxins Network – Hydraulic Fracturing in Coal Seam Gas Mining: the Risks to our Health, Communities, Environment and Climate.

There is clearly a need for stringent regulation and controls required on the use of all chemicals used in the fraccing process.

The code must require the explorer to obtain written authority from the Department for all additives they propose to use and not the requirement "explorer should also place details of any additives they may use .... on the Departments website"

Page 8

The requirement to contact landholders needs to include neighbouring properties which could be affected by the exploration, even though it may not be directly on their land. There needs to be an access agreement with neighbouring properties if they are likely to be impacted by the exploration or if horizontal drilling from another property enters their boundary. That landowner should then have the same rights as if the well was drilled on his/her land with regard to the Code of Practice.

Item f) Compensation addressed above.

Item g) Dispute resolution. The code needs to specify by whom and to what level of satisfaction.

Acceptable noise levels and times. Again acceptable to who? The Code needs to specify unacceptable noise levels and time periods.

Page 9

All worded from the explorer's perspective. Points need to include "with agreement of the landholder and or acceptable to the landholder".

If landholder is not satisfied with explorer proposals for cuttings, explorer must remove them from the land.

With reference to legal cost, the explorer will reimburse as opposed to "should be willing to reimburse"

Page 10

How can landholder be responsible for the management of chemicals over which they have no control?

Issue of neighbours with round the clock drilling covered above.

As this code is looking at best practice, is drilling within 200m from a house acceptable? Surely this minimum requirement requires review. What person would consider this fair or reasonable? It would make life unbearable for the owner/family and have a serious effect on both their health and mental wellbeing. This is not a third world country and as such reasonable standards of decency and fair play should be applied.

With regard to water monitoring, this has been covered above. Explorer “should offer” to be replaced with must undertake. Also need to allow for independent testing, including involvement of Local Council and water authority.

What is regular water monitoring? Is 3 monthly appropriate?

Monitoring should continue after the lifetime for at least the next decade to ensure no subsequent leaks or failures.

The wording “explorers may “agree to reimburse... for independent water expert... Should change to “explorer must” Also “test which should be conducted” change to “must be conducted”

The word “blending” with regard to water needs to be defined and qualified.

Page 11

Landholder “should “be provided a certified analysis of drill cuttings. Replaced with “must” If landowner does not agree to bury cuttings, explorer must remove from the landowner’s property and dispose of at a proper disposal site.

Page 12

Community consultation “should “occur before any access agreement. Again “must”

Would also suggest Code of Practice includes requirement for explorer to publish in local paper that local consultation is about to commence giving details of the process and proposed exploration activities. The advert should also ask if the community want a community advisory committee to allow open discussion, and how to request it. This could take place at the minimum 6 month notice period when the explorer is required to notify the local council. (Page 13).

Page 14

Whilst the Government has stated it has put in place initiatives to address water and food security, those for water outlined in the Code are totally reliant on the CSG companies to undertake the baseline assessments and assess the potential impact of CSG on water resources.

This process lacks adequate checks and balances. Such assessments should include the involvement of independent agencies, including water authorities as well as approved scientific experts. The cost of these independent oversights to be borne by the explorer.

All CSG companies undertaking exploration or production need to hold a water access licence, irrespective of the 3 mega litre per year rule for the reasons stated above.

With regard to disposal of CSG water, the Code of Practice needs to include the requirement for salt and chemicals to be removed before reuse for such beneficial reuse as dust suppression.

Included in the Code there must also be stringent independent testing of water quality before reinjection into an aquifer.

The issue of salt disposal from reverse osmosis needs to be addressed in the Code. This is a major issue in Queensland which has not been adequately addressed.

How long can water be held in temporary ponds or dams before they are regarded as evaporation ponds which are banned?

The Code needs to specify what "stores in approved fashion" entails so that landholder knows what is acceptable.

Page 15

Why only include exploration projects of more than five wells under the strategic agricultural lands? Drilling one well could damage an aquifer. Surely all project on strategic agricultural land should be subject to approval under the aquifer interference regulations?

Standards for well construction for fraccing. See comments above. Is it necessary to allow fraccing as most gas could be obtained without this technique?

Fraccing also uses far greater volumes of water and produces more contaminated waste water, again another reason for banning this technique.

Who will monitor if there is any connection between the aquifer? Who will monitor the standard of the well construction? There have already been instances of poor well construction in NSW and the government was not advised at the time. Even if you have well defined standards who will ensure that the standards are adhered to? This is not addressed in the Code.

Discontinued wells must be sealed completely from the bottom to the top using cement plugs. This could be read to mean a cement plug at the bottom and one at the top. Or is it intended to be one continuous plug from the bottom of the well to the top? It needs to be clear.

It should be borne in mind that casings will degrade over time which may allow leakage. This issue needs to be addressed in the Code.

The policy does not address the issue of drought or areas under water restrictions. CSG activities should not be allowed in such areas whilst drought conditions exist or water restrictions are in force.

Page 16

With regard to what if something goes wrong? The Code states" the chance of an incident occurring is remote". This statement would appear to be factually incorrect as there has already been instances of wells leaking gas in Australia and incidents in NSW. If the government is relying on this statement of fact, its policy is potentially flawed and it has potentially underestimated the risks associated with CSG. Please also refer to attached report "why wells leak".

The policy talks about the development of a world's best practice well integrity standards, which will be mandatory for all CSG activity. If this has yet to be developed, why is CSG being allowed in the State without this standard in place? The Chief Executive of Woodside recently conceded that the

coal seam gas boom may have got ahead of the regulators and the community. (SMH 17-18 March 2012)

Are the government putting at risk Sydney's water catchment?

The requirement to lodge a substantial security deposit. The policy needs to define "substantial" and how would this cover damage to an aquifer or water supply that may not become apparent for many years after the land has been rehabilitated and the deposit refunded?

Code of Practice should be included in legislation with penalties for non compliance as stated above and apply to all new wells from its effective date, not just new licences.

Page 17

Policy needs to include random testing for drugs and alcohol for all workers involved in CSG. Just banning them will not be effective. Would suggest at least twice per year.

Landholder needs to be able to request access to drill site and land used by mining company to undertake inspection.

Camp sites should also be at least 400 metres from landowners home or that of neighbours.

The use of community support and sponsorship should not be used as bribery to obtain consent.

To conclude it has been stated that there must be a balance between environmental concerns and the coal seam gas industry. Whilst this may be the case any assessment must be conducted utilising proper risk management techniques using the must up to date knowledge and data. That said many of the risks and hazards of Hydraulic fracturing are still unknown and may take many years to come to light.

If the wrong decisions are taken for short term commercial reasons or to support electricity generation and prices, the long term consequences will be that Australia ends up with a poisoned water supply, unable to feed a dying population.

It is imperative that the decisions are made for the right reasons and that adequate safeguards are included. Get it wrong and the consequences are dire for us all.

l look forward to receiving your observations on the points raised and hope the above comments are useful and taken into consideration when finalising the draft Code.

Yours sincerely

Ian Lord
On behalf of Our Land Our Water Our Future

CC: The Hon. Jeremy Buckingham, MLC
Australian Broadcasting Corporation - Four Corners