STOP CSG Blue Mountains

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SUBMISSION RE PELA 158 BY CEEMAC PTY LTD.

I make this submission on behalf of Stop Coal Seam Gas Blue Mountains, (SCSGBM), a community environment group with approximately 400 members in its information network. Most are resident in the area, with a few in Sydney and other parts of New South Wales. SCSGBM is affiliated with the Lock the Gate Alliance and the Nature Conservation Council.

SCSGBM strongly opposes the approval of PELA 158 in its entirety or any parts of it. I will firstly deal with issues relating in general to unconventional gas exploration and exploitation and then deal with issues specifically relevant to PELA 158.

I will refer in this submission to coal seam gas (CSG) as it is the resource most likely to be of interest to the applicant. However, the objection applies to all forms of unconventional gas as it does to petroleum.

Problems relating to the CSG industry in general

- Environmental Impacts

CSG wells are known to leak methane, especially over time as the concrete casing deteriorates. They can continue to leak years after production has ceased and the well has been plugged and abandoned. Researchers at Cornell University tested wells in the USA and claimed that 3.6% to 7.9% of the methane from shale-gas production escapes to the atmosphere in venting and leaks over the lifetime of a well and this would result in a higher climate impact than coal over a 20-year period (R.W. Howarth et al ("Methane and the greenhouse gas footprint of natural gas from shale formations." *Climatic Change Lett.*, doi:10.1007/s10584-011-0061-5, 2011) In Australia CSIRO researchers estimate emissions from CSG to be between 1.3-4.4% of gas production. (S. Day et al, *Fugitive Greenhouse Gas Emissions from Coal Seam Gas Production in Australia.* CSIRO, 2012)

Testing by Drs Isaac Santos and Damien Maher of Southern Cross University in the Tara gas field in Queensland revealed of 58 wells tested 26 were found to be leaking, some at flammable level. Concentrations of methane were found to be much higher in the atmosphere and waterways around Tara than in the Lismore area. (*Fugitive Emissions from Coal Seam Gas, Submission to Dept of Climate Change and Energy Efficiency*, 2012).

Methane is a significant contributor to global warming. Hansen et al. claim that Methane is the largest climate forcing agent other than carbon dioxide. (J. Hansen et al, "Climate change and trace gases", *Phil. Trans. Royal. Soc. A*, May, 2007)

Another potential cause of environmental damage is the waste water brought to the surface during fracking operations. Apart from the fracking chemicals themselves, naturally occurring elements found deep underground, which are quite safe if left in situ, when brought to the surface can be highly toxic. This point has been dramatically illustrated of late when the Environmental Protection Authority found that water leaking from a Santos waste water pond in the Pilliga had contaminated an aquifer with lead, aluminium, arsenic, barium, boron, nickel and uranium. The aquifer contained uranium at levels 20 times higher than safe drinking water guidelines. (S. McKeith, 'Highly alarming': O'Farrell government urged to 'tear up' Santos' coal seam gas agreement", *Sydney Morning Herald*, 8 March 2014)

- Health Impacts

Most chemicals used in fracking have not been assessed for their toxicity, persistence, or long-term health impacts, nor has the interaction between chemicals and other substances been examined. However, independent researchers are beginning to investigate the impacts. A report by researchers from the Australia Institute and The Social Justice Initiative found that potential health impacts associated with fracking chemicals are serious with risks including cancer, skin and eye irritation, respiratory problems and damage to the nervous, reproductive and endocrine systems. (J. Moss, A, Coram & G. Blashki, Is *Fracking Good for your Health,* Aus. Inst & Soc Justice Iniat., Nov. 2013)

In the US over 100 medical practitioners requested the Obama administration to halt construction of any new LNG terminals because of a growing body of evidence associating unconventional gas extraction with adverse health risks through exposure to polluted air, water and soil. (cited in C. Pash, "Australian Doctors have raised a Health Red Flag over Coal Seam Gas Developments", *Business Insider*, 3 March, 2014.) As an example, one US study found links to the rate of congenital heart defects in babies to how close they live to natural gas wells. (L.M. McKenzie et al, "Birth Outcomes and Maternal Residential Proximity to Natural Gas Development in Rural Colorado", *Environmental Health Perspectives*, 28 January, 2014.) Similarly in Australia, Doctors for the Environment have noted the symptoms being experienced by residents living

close to the CSG field in Tara, Queensland: headaches, rashes, nausea and vomiting, nose bleeds and eye and throat irritation and expressed concern at the possibility of serious illnesses yet to manifest. (*The Health Factor: Ignored by Industry, Overlooked by Government*, DFEA, College Park, 2013)

Problems relating specifically to PELA 158

The applicant

I. Ceemac Pty Ltd. does not appear to operate as a mining company. A little investigation would indicate that it is in all probability a shelf company opportunistically set up by Chris McPherson and is not much more than Mr. McPherson. The new NSW Minister for Resources, Anthony Roberts is cited as saying licences have been issued "willy nilly, blanketing NSW, many of them from $2 companies." He promised to take a hard line against these companies to ensure licence holders had good financial backing and insurance and were able to comply with regulations surrounding CSG exploration. "There is no space under myself or this government, for cowboy operators any more" Mr Roberts said. ("Minister concerned about CSG shelf companies", *NSW Country Hour*, ABC Rural,11/3/14.) Unless Ceemac can prove it is much more than just a shelf company, its application should be rejected as per instructions from the Minister.

There is currently no requirement for title holders to pay a realistic figure for bonds to cover the cost of rehabilitation work if required. The spill at the Pillaga site has cost the current owner of CSG operations there, Santos, around $40 million to only partially rehabilitate the site. These figures are not within the range of small operators. Licence holders would often enter into arrangements with other companies which would conduct drilling but an investigation by *The Australian* revealed a number of these companies also had tenuous financial positions. (Anthony Klan, "Little experience, little money but the gas minnows sure have a lot of land", *The Australian*, 30 September, 2013.) Large companies can get into major financial difficulty, (note Santos' Illawarra operation). Such risks for small operators are so much greater as are the risks to cut corners and cause huge environmental damage.

The area covered by PELA 158

2. The Application covers a large area of the Greater Blue Mountains World Heritage Area and large parts of four National Parks: Blue Mountains, Gardens of Stone, Wollemi and Turon. It also covers the Mugii Murum-ban State Conservation Area and areas of State Forest which are part of a long-standing reserve proposal (Gardens of Stone Stage 2) and have a range of environmental and heritage values either poorly represented or not represented in the World Heritage Area. It is against international best practice guidelines to mine within, or adjacent to, a World Heritage area, as stipulated by the International

Union for Conservation of Nature as well as the International Council on Mining and Metals.

3. The Greater Blue Mountains area is a designated World Heritage area of global significance for biodiversity conservation. Its ecosystems depend on a reliable supply of surface water and groundwater from aquifers. These water resources would be severely threatened by CSG exploration in the area.

4. The Blue Mountains local government area alone contains 10% of the listed threatened species in NSW. These include 14 birds, 16 mammals and 48 plants. The Wollemi National Park is host to the unique Wollemi Pine which is classified as Critically Endangered by the International Union for Conservation of Nature. The region, particularly Newnes Plateau, contains many magnificent examples of the Newnes Plateau Shrub Swamps, listed as an endangered ecological community under State and Federal legislation.

5. Relevant to its World Heritage listing, UNESCO notes that the Greater Blue Mountains contain primitive species of outstanding significance to the evolution of the earth's plant life.

6. Loss of World Heritage status could result if exploration and exploitation of CSG gas is approved in the area. The flow-on consequences of this and the actual despoliation of an area known nationally and internationally for its scenic and pristine beauty would be enormous. The tourism industry, a mainstay of the Blue Mountains economy, would suffer greatly. An extensive range of structured and unstructured recreational activities take place in the Greater Blue Mountains, (e.g. bush walking, caving, canyoning, bird watching, camping and photography, as well as nature education programmes for schools and nature conservation programmes for adults). Such activities are not compatible with either CSG exploration or exploitation.

7. Coal Seam Gas exploration and/or exploitation risks contamination of the water supply (see above). The area covered by this application plays a vital part as water catchment for river systems which ultimately supply Sydney, the Blue Mountains and Lithgow with water. The area also covers the headwaters of declared wild rivers which are important to the scenic beauty of the World Heritage Area.

8. Coal seam gas is a fire hazard and the Blue Mountains are already a fire prone area. CSG mainly comprises methane which is highly flammable and can be easily ignited by sparks or an open flame. Methane leaks are common. Once an area is fracked, gas can leak from many places over an entire gas field. Should it be commercially exploited, pressurised methane gas flowing through gas pipelines from the processing plants could explode and cause devastation in this high value conservation area. Such blazes can, of course, also endanger

residents in neighbouring towns. Recent fires in this area have put residents on high alert. Also fires generated from other sources could become an inferno if they burn into a CSG field.

9. We are repeatedly told that there will be no CSG exploration and/or exploitation in National Parks and the Greater Blue Mountains World Heritage Area. National Parks are protected under the National Parks and Wildlife Act. If this is the case, why permit an organisation to lodge a PELA? It is noted that hunting in National Parks was also proscribed but hunting is now permitted. An OCSG map - Petroleum Exploration Licence Application 158, Diagram X shows a hatched area labelled "Area available" with almost as large an area of National Park unhatched but still within the boundaries of PELA 158. A conversation with a staff member of OCSG revealed that CSG activity would not be permitted in the unhatched National Park area. This being the case there seems no reason for the applicant to be able to apply for this area of National Park, let alone be granted a licence. Even if excised from the application, the fact is that significant parts of the PELA cover areas which contribute to Sydney's, The Blue Mountains' and Lithgow's water supplies, and are critical to the values exemplified in the World Heritage Area. Also State Conservation Areas and State Forests do not have the supposed protections of National Parks and exploration would still be possible within these areas.

10. Included in this application are regions affected by the Coalpac Consolidation Project which the Dept of Planning determined should be refused because the impacts on the area's conservation values would be 'unacceptable'. The same evaluation should apply to this proposal.

11. Quality of life issues should also be prioritised in consideration of this project, particularly as they will greatly affect the residents of Cullen Bullen, and those who live near Newnes and in the headwaters of the Capertee Valley as this licence application completely covers those areas. Residents of the Mt. Victoria and Winmalee/Springwood areas could also expect increased noise, particularly from truck movements if CSG activity was to occur in the area covered by PELA 158 near their houses.

12. PELA 158 extends into townships within the 2 k. exclusion zone designated by the present NSW government. Of note is the former residence of Norman Lindsay, now a gallery and museum. Both the house and extensive grounds are of great historical and aesthetic value as well as being a significant tourist attraction. An interactive map to be found at http://stopcsgbm.net.au will demonstrate that this property is 1.23 k. from the closest PELA 158 border. Areas such as Winmalee, Faulconbridge, Blackheath, Mt. Victoria, Bell, Mt. Wilson, Mt. Irvine, Bilpin, Ben Bullen, Capertee, Cullen Bullen, Portland, Lidsdale, Wallerawang are towns that fall either within the PELA 158 boundary

or are within the 2 k. exclusion zone and should be automatically protected and excluded from such applications.

13. There is no social licence to explore for coal seam gas in the Blue Mountains. There has been enormous opposition to existing licences and residents in conjunction with the Blue Mountains City Council have declared the area a CSG-free zone. Blue Mountains MP, Roza Sage, has publically stated on numerous occasions that she is strongly opposed to CSG activity in the Blue Mountains.

Conclusion

The potential ecological, environmental and social impacts flowing from the granting of this application are so great as to make the rejection of this application imperative.

The current NSW Premier said

"I'd like to be able to wind the clock back, I'd like to be able to stop the former government granting exploration licences and approving CSG activities in many parts of the state, but I can't do that." ("NSW moves to limit coal seam gas plans", *The Australian*, 19 Febuary, 2013)

If the clock cannot be wound back, it can certainly be stopped.

JAN O'LEARY
Convenor,
Stop Coal Seam Gas Blue Mountains