

fracking inquiry

From: sam phelan [REDACTED]
Sent: Sunday, 25 February 2018 1:01 PM
To: fracking inquiry
Subject: Final Submission
Attachments: Fracking Inquiry Submission Feb 25th 2018.docx

Please find my final submission to the inquiry.
Thanks for your work. Good luck over the next busy month.
Kind Regards,
Dr Samantha Phelan.

Fracking Inquiry Submission Feb 2018

Dear Justice Pepper and panel,

Thanks again for the opportunity to submit to this inquiry. Hopefully my contribution can help protect the exquisite uniqueness of the Territories culture, people, landscapes, flora, fauna, water, air and existing employment pathways.

In many instances in the document to date the word “acceptable” is used in relation to risk mitigation. The subjective nature of this word needs to be considered carefully in a scientific document.

I would contend that if you were a pastoralist who would like nothing more than the ability to veto these companies from your land that the panels version of “acceptable “ would be very different from your own.

If you were living on a low lying Torres Strait Island, with global warming driving sea levels rises, what an “acceptable methane emission “ for any extractive industry may also differ significantly from what a gas company or panel member with a long history involvement with the gas industry may see as “acceptable”.

And as a Katherine resident, a veterinarian and a mother raising 3 young Territorian women, what I consider “acceptable risks” are not those contained in this document to date.

By now none of this is new information and so I will jump to the areas in which I have some professional expertise and remaining concerns.

1. Flora and fauna survey and monitoring

Your document recommends the implementation of flora and fauna surveys and ongoing monitoring of vulnerable species once an area is earmarked for production.

This overlooks the simple fact that if a gas company, with all the survey tools at their fingertips, invests in a series of exploration wells, that by definition that area is earmarked for production subject to a commercial flow being established.

As such country suitable for on shore gas – more than is defined by simply having gas in shale underground – needs to be considered in relation to flora, fauna, water etc. PRIOR TO EXPLORATION ever taking place.

I listened to the toxicologists presentation in Katherine in the final round of hearings, discussing the human health implications of living near the volatiles produced by gas flaring etc. I noted a safe well distance of 1.7 km from human habitation, and this made me wonder what consideration has been given to native animals and cattle living in these potential gas fields?

Will an Animal Health Risk Assessment also be required? Or do we conveniently implement an animal version of Terra Nullius and condemn many animals to living and succumbing to well-documented illnesses that effect humans living in and around gas fields? I can assure you toxicology across species overlaps frequently and I would assume that many birds and mammals would experience similar ill effects to humans exposed to these toxins.

If we assume a final productive well spacing of 2 km, and assume every well will need the ability to flare, then every square meter of the land within a gas field would be unacceptable for human habitation. Yet each animal that lives, nests and burrows, eats from and swims through these gas fields will be exposed to the same “unacceptable” toxins that humans are protected from. And this will continue for the best part of the next 40 years – hundreds of generations for a great many of these animals. How much genetic and endocrine damage will be evident in these animals in 40 years time I wonder? How many of these chemicals have the potential to bio accumulate in an ecosystem?

I spoke to an Aboriginal man from the Childers Region of Qld only yesterday, who described his old hunting grounds in that area “ a dead zone” since the arrival of onshore CSG gas. I can see the same would apply in the NT throughout these shale gas fields and the thought saddens me deeply. These animals have a right to their homes, and as humans I believe we need to become duty bound to protect the remaining biodiversity of our planet.

From a veterinary stand point the definition of what areas are suitable for gas extraction must be based on adequate flora and fauna surveys conducted by a SREBA type body long before exploration is permitted and must be conducted over sufficient timeframes to allow for migration patterns of transient fauna, particularly nesting birds, to be adequately assessed.

To imagine *in an NT context* that a large gas company will be asked to halt production to protect a nesting ground of a rare migratory bird once a commercial flow is found, flies in the face of what Territorians have been repeatedly standing up and saying to you in various ways throughout these hearings.

This statement applies to all independent baseline data collection.

By definition baseline data must be collected at the baseline i.e. prior to any hydraulic fracturing taking place. The baseline data informs what areas may be appropriate to consider fracking in. Just because there is underlying gas does not give the assumption of “appropriate to frack”.

Baseline data is not baseline data if it is collected after 3 years of exploratory drilling and fracking in a region, plain and simple.

2. Water holding facilities

I have recently heard talk that gas companies are unhappy about the inability to utilize evaporative ponds for flowback water. I need to reiterate in writing, the words I spoke at the 2nd round of hearings in Katherine in 2017.

In an arid environment animal worlds revolve around water (something as Australian humans we should also appreciate a little better!). Water determines who lives where in an arid ecosystem. I remind you of the Barkly tornado like murmuration of birds I provided as evidence in the 2nd round of hearing in Katherine in 2017.

To think for one minute that an open evaporative pond, accessible to birds, reptiles and small mammals is an acceptable storage facility for highly toxic and concentrating wastewater is ludicrous.

Yet in the NT to date this is the chosen method of dealing with highly toxic water. As a veterinarian in Gove in the 1990s I would routinely treat all sorts of animals who had drowned in or been poisoned by the red tailings dam water there. The tailings dam is still there.

When you are the vet that has to put down yet another exquisite fish eagle with red stained plume and ulcerated mouth and oesophagus from exposure to tailings water the reality of “exposure to toxic water” is not simply words on a page. “Skull flat” in Tennant Creek that I referred to in the 2nd round of hearings also bears testimony to the long-term effect of poorly managed tailings dams in the NT

The animals that would access the open evaporative ponds, and the land thereafter deserve our most rigorous protection. Under no circumstances should companies be able to utilise open evaporative ponds.

3. Waste water handling

The integrity of the gas companies has been questioned in regards to their handling of wastewater in many submissions.

Local knowledge has also repeatedly highlighted how companies will legally or illegally dump “unacceptable” contaminants into NT waterways to prevent exorbitant costs of removal toxic residues/tailings etc. from mine sites.

Given that so many questions have been raised as to where the wastewater from previously fracked wells in the NT has gone to, is it possible for the inquiry to request and verify this information (from an independent source rather than gas company records)? As members of the public it is impossible to track this water disposal and many of us have tried. The powers and privilege of the inquiry may facilitate this process.

If wastewater can be manhandled in Gloucester NSW, then let me count the ways it can be manhandled between Elliott NT and Mt Isa or NSW.

Given tank storage is recommended for flowback, evaporation will be removed from the flowback quantity variables. There is therefore the ability for every drop of flowback water to be independently monitored. I feel this is critical in preventing illegal dumping of contaminated wastewater, with its subsequent effect on aquatic ecosystems and all land dwellers that also rely on surface water.

4. Decreasing monitoring requirements linked to historical compliance.

The notion that if a company acts well it will be less scrutinized over time denies what Territorians have been saying to you throughout these hearings. The vulnerability of the NT to poor practice has been highlighted to you ad infinitum in this inquiry.

Our geographic isolation, poor legislative framework, low population and low levels of remote education leave us a vulnerable as those whose lands were decimated in Brazil when the BHP tailings dam collapsed recently. I would suggest that if that mine were in NSW every step would have been taken to ensure the dam wall was solid. I would also suggest that the NT is far more like Brazil than it is like NSW when it comes to regulation and company perception.

As such any watering down of any independent monitoring over time is simply fool hardy.

5. Origin Energy doctored document

As a veterinarian I am familiar with scientific paper publication and academic fraud.

When I spoke at the final round of hearings I was unaware of what had occurred with the Origin well casing image provided to the inquiry. The evidence had only been presented to the inquiry the day before. I had heard a small radio news snippet but had been unable to focus above cooking dinner and kids homework.

I understand that Origin provided you with detail of the deformed well casing prior to this doctored image being provided, but as far as I am concerned doctoring a photo for scientific publication, without direct acknowledgement of that doctoring at the time is fraudulent.

For a scientific inquiry to accept shareholder perception as a valid reason for doctoring an image in a scientific paper diminishes the validity of any science provided by gas companies in the document and sadly therefore also diminishes the validity of the whole.

To maintain the integrity of the inquiries document I believe that an independent assessment of what occurred in the well casing, the potential reasons for the

failed 12th frack, the economic potential of that well now and the subsequent unfolding of events need to be addressed in the final document.

6. Social License

When I first spoke to Santos representatives in around 2012 they were very clear that they needed social license to operate in any area. Since that time APPEA and its associated companies have worked very hard to gain this social license, which to date has been a failure across the NT. I believe this has been made clear in submissions to the inquiry.

I feel panel discussion and recommendations around the need for or lack of social license are warranted given division in our communities on this issue is now clearly evident and will only increase if the moratorium is lifted.

Thanks for your time.

Regards,

Dr Samantha Phelan BVSc (Hons)

23/2/18