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To: info@frackinginquiry.wa.gov.au
Subject: Submission for Independent Scientific Inquiry into Hydraulic Fracture Stimulation (Fracking) in W.A
Date: Sunday, 18 March 2018 10:48:25 PM

My name is Grant Creagh. I'm a cereal and livestock producer between Dandaragan and Badgingarra. Our livestock enterprise depends on 3 bores 200 metres deep which supply crucial stock and household water during the summer months. The water is of good quality and suitable for stock and human consumption. A few years ago Transerve Energy held a meeting at the Dandaragan Community Centre to inform the community on their proposal to extract gas unconventionally from the Dandaragan Deep Well (hydraulic fracturing). Transerve was engaged by Alcoa to look at extracting the gas from the Dandaragan Deep Well. This gas would supply the needs of Alcoa for the next 30 years. About 50 gas well heads would be required to extract the gas and they could drill 8 km horizontal from each well head. Our water bores would be close to this footprint. Representatives from Transerve had a sample of gas well casing to show us what would be used to facilitate fracking from 4 kms underground. Each piece of casing would be 13 metres long and about 300 pieces joined to go down the well hole.

The casing is manufactured from steel and cement.

My concern is corrosion and failure of the well casing.

Our bores on the farm were drilled in the 1970s and lined with steel bore casing. This casing lasted about only about 15 years before it corroded through. The water is very corrosive. PVC pipe is now used to line the bore holes as it doesn't corrode.

Our early cement tanks were made of cement and steel reinforcing. These tanks lasted about 10 years before the permeable nature of the cement let the water corrode the steel reinforcing and the tank would disintegrate.

Plastic tanks are now used.

The steel and cement casing used in fracking would be subject to the same corrosive forces that our surface tanks and bores are exposed to. The water is slightly acidic and contains salt. Metal + acid gives salt + Hydrogen gas. With the well casing corroding and subject to 12000psi it's a recipe for disaster.

A gas representative told me in a reply to a letter I wrote to the West Australian Newspaper that the Yarragadee Aquifer was useless because it was salty. If the Yarragadee Aquifer is salty then any well casing going through it will corrode quicker.

A few years ago traceable water was put into an aquifer west of Moora. This water was detected at Cervantes 100 km away. If water is contaminated during fracking of the Dandaragan Deep Well it could contaminate every aquifer from Moora to Cervantes.

Anyone or organisation allowing fracking in WA should be held accountable if any water supply is contaminated. Regulation has to state contaminated water has to be replaced.

When I asked Transerve if they would replace my water if they contaminated it they just said I would have to prove it was contaminated by them.

I have engaged an environmental company to analyse all our bore water. This is an independent body that can prove if any water contamination occurs.

Regulation needs to be by an independent body, not self regulation by the gas companies. At the moment some of the government bodies that would be responsible for drawing up regulation work in the Alcoa building in Booragoon. This is a conflict of interest and gives no confidence to people who may be affected by fracking if it proceeds.

Fracking can not go ahead because the expected life of the wells is 30 years. If the water corrodes the well casing after 10 years our aquifers are in trouble. Regulation cannot mitigate this threat.

There is also seismic activity. During the Meckering earthquake in 1968 many water boreholes were destroyed. (as far west as Dandaragan.)

In 2013 we had on our farm a flash flood. 50 mm in 10 minutes. Fences and dams were washed away. Any surface ponds associated with fracking could be washed away during flash flooding and contaminate large parts of the environment. You cannot regulate against corrosion, seismic activity or flash flooding.

Regulation that needs to be implemented if fracking goes ahead include making people and organisations involved with fracking accountable for water contamination and replacing contaminated water.

All chemicals used in the fracking process have to be disclosed before use.

All groundwater in the areas fracked have to be tested every few months by an independent body.

An independent body has to implement the regulations and not self regulation by the gas companies.

Anyone that says fracking is okay uses the words low risk, highly unlikely and negligible that any contamination will take place. No one is stupid enough to say 'no risk'.

Therefore there is a risk of contaminating our water aquifers if fracking is allowed.

Grant Creagh

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Sent from my iPhone