



Gingin Water Group Inc.



Gingin Water Group
www.ginginwater.org.au
PO Box 29
GINGIN WA 6503
Chairman Mr David Rickson

19 September 2013
Ms Margaret Liveris
Standing Committee on Environment and Public Affairs
GPO Box A11
PERTH WA 6837

Dear Ms Liveris,

RE: Inquiry into the Implications for Western Australia of Hydraulic Fracturing for Unconventional Gas

We, the Gingin Water Group, are a community based group that formed three years ago with the objective to proactively manage ground and surface water in our region. Our region has five out of the six largest vegetable growers in Western Australia, large beef cattle and sheep farms, horse studs, tourism and other rural activities. We also have the Yarragadee and Leederville aquifers below us that provide water for agribusiness and Perth drinking water. With more than 50 members we are an advocate for our community.

In our region we have two active conventional gas wells (Red Gully-1 and Gingin West-1; EP 389 area) and a production facility. The company operating these wells has stated publicly that they intend to do unconventional gas production under their current permit. We do not agree with hydraulic fracturing (fracking) in our community or in Western Australia and this is based on the intensive nature of the operations, the risks it poses to the environment and the track record of the oil and gas industry in WA, interstate and internationally.

Given that fracking has only been in operation for 30 years in the United States and less than ten years in the eastern Australian states, so far the subsequent social costs seem to outweigh the benefits of the gas sourced. In Western Australia there are sufficient supplies of offshore conventional gas that will meet markets for 300 years so there is no immediate need for this resource.

We represent our group members and their concerns. We ask that the inquiry recommends a moratorium on fracking until all our and the Western Australian community concerns can be resolved satisfactorily.

We address the Terms of Reference of your Inquiry and then raise other Issues below.

a) How hydraulic fracturing may impact on current and future uses of land;

Groundwater Consumption - very large volumes of water are required for each hydraulic fracture. It is reported that "approximately 49 million liters of water is required for each production shale gas well [although] the volume of water used is dependent on the characteristic of the formation being fractured" (Ref 1, US EPA 2012).

The Western Australian communities have to decide if other, specifically, agricultural industries are threatened due to the excessive consumption of this scarce resource.



Perth drinking water is drawn from the Yarragadee and Leederville aquifers, these aquifers will provide the water required for fracking (in our region), placing the potable and all other domestic water requirements for Perth residents at risk.

Groundwater Contamination - over 1,000 Chemicals have been identified by the USA EPA in the hydraulic fracturing products, these chemicals include known and suspected carcinogens. As the integrity of any well cannot be guaranteed for the life of the well (including production and well capping) leakage is probable. Along with the probability of spillages at the surface of the well and seepage from groundwater treatment ponds these present potential to contaminate ground and superficial water resources, effecting human health, wildlife and livestock.

Of seven hydraulic fracturing wells that have recently been drilled in the Dongara area of WA, there has been one well failure causing leakage and contamination has been identified. The spill was such that the Vegetable Growers Association is seeking legal action. It is clear that well failure and spillages do occur and this indicates that the Department of Mines and Petroleum (DMP) World's Best practice is not satisfactory. From speaking with hydrologists well degradation is not uncommon within twenty years of being drilled.

Benzene, toluene, xylene, phenols, naphthalene have all been used in the fracking process; these are known or suspected carcinogens, neurotoxins and possible teratogens (Ref 2). It is unacceptable that such chemicals are used in the process due to the risk to long-term human health and ecotoxicity.

The potential for such chemicals to pollute drinking water poses an unnecessary risk for human health and monitoring needs to address local communities to determine health impacts, including cancer clusters. Further the issue of compensation needs to be addressed by the community. If livestock are affected, provision is required for compensation to those affected.

The ecological impacts may be profound, affecting all wildlife including aquatic ecosystems; the community of Western Australia has the right to expect that that Government protects our environment. This includes farming land as well as nature reserves, with uncertainty of impacts, erring on the side of caution is expected by the community.

b) The regulation of chemicals used in the hydraulic fracturing process;

Very stringent regulations need to be in place to ensure that chemicals with the potential to harm the environment and human health are not used in fracking. Expert committees need to be set up to review all chemicals proposed for use and ban the use of chemicals deemed dangerous.

Such assessments fall outside the scope and knowledge of the WA DMP and Environmental Protection Authority (EPA).

c) The use of ground water in the hydraulic fracturing process and the potential for recycling of produced water;



Fracking will deplete ground water reserves and thus impact on all activities and functions that require this water. The DMP does not regulate access to water in this state. Changes to legislation need to occur that ensure stringent approval process and intensive monitoring of ground and surface water systems. There should be the provision for large fines and the suspension of all mining activities if contamination or significant depletion is identified.

Our group considers that the proposed two-year period of monitoring (post operation) is not sufficient, given the life of the chemicals used. Monitoring should occur until all wells can prove to present no risk. This monitoring should be transparent to the public.

Compensation should be provided to any communities that are presented with risk.

d) The reclamation (rehabilitation) of land that has been hydraulically fractured.

Land should not be reclaimed until all wells can prove to present no risk. Including groundwater treatment ponds and recycled water facilities are assessed.

Other Issues concerning the Gingin Water Group

These are further concerns that we would like to see the inquiry address:

1. Regulatory Process - The DMP acts to promote expansion of the gas industry (conventional and unconventional) as well as acting as the government approval agency for environmental and all other reasons. There is a direct conflict of interest in the two roles.

We understand that there is a Western Australian Draft Framework for unconventional gas approval process that the DMP has written and sought 13 government departments' input. The public has not had an opportunity to review this framework and given the controversy surrounding fracking this should be available for public comment.

To date the petroleum industry has had preferential legislation, and is less regulated than other types of mining. The final approvals rest with the minister and they have conflicting objectives in managing and regulating the industry. The current regulatory framework is inadequate to manage large scale fracking activities. There is no transparency in the current management and assessment of the industry. There is a need for independent environmental assessments.

From our experience the DMP does not seem able to regulate large scale activities particularly associated with a rapid expansion of mining activities. In our region, individual members have sought to obtain groundwater monitoring results and this has been refused by the company and not allowed by the DMP (see enclosed letters).

Another failure of the current regulatory process is the inadequacy of the fines and penalties that are insufficient to act as a deterrent and are only applied to relatively large spills. Contamination of aquifer water quality even by low concentrations of very toxic chemicals should require fines and termination of mining activities.



Another failure is the enforceability of the current Environmental Management Plans (EMPs) that appears to be non-existent.

Another failure is the current regulatory process is the public consultation requirement. The current operator in our region has failed to tell affected landholders of highly visible flaring activities and land tremors from conventional gas production.

2. Environmental Baseline Assessment - There is no transparency in what environmental baseline surveys are required for conventional gas operator proponents to undertake and there is no transparency in the results of any surveys. Will this apply to unconventional gas operations? This is raised as a key concern and inability to prove any impacts of fracking in the United States and in the East Coast of Australia. The lack of transparency has been our experience with the company operating in our region. Please find attached the letter that our member has sent requesting the water quality results and the corresponding letter refusing the results.

Other assessments are required. Specifically but not limited to a soil assessment prior to during and at the completion of mining activities. These processes should be transparent and independently assessed.

3. Landholders Rights - Current legislation forces landholders to negotiate with oil and gas companies to allow them on to their land, the same legislation does not apply to mining. This is not acceptable legislation and the landholders require the same protection as they do from the mining industry.

4. International and Interstate Industry Experience - The concerns of shale gas drilling and fracking have prompted the US EPA to do a very large survey and investigation over six states to assess the degree of water contamination and potential health impacts, which will be released in 2014. Further the European Union has undertaken a similar inquiry (to this inquiry) and has advised the risks are high to proceed with fracking (Ref 3 EU 2012). The NSW upper house inquiry findings also advised that further investigation is warranted before proceeding with permitting the industry (Ref 4).

With such precedents of problems in unconventional gas production the industry is not sufficiently developed to proceed with.

Conclusion

The Gingin Water Group considers that due to a contentious history on the east coast of Australia and in north America and with Western Australia not requiring the gas reserves in the medium term, it is prudent to call a moratorium on the industry until all issues are resolved.

Sincerely yours,

David Rickson, Chairman Gingin Water Group



Ref 1. US EPA EPA 601/R-12/011 December 2012 Study for the potential impacts of Hydraulic Fracturing on drinking water resources. Progress report 2012,

Ref 2. www.atsdr.cdc.gov/interactionprofiles/IP-btex/ip05-c3.pdf.

Ref 3. European Union, 2013 Potential Risks for the Environment and Human Health Arising from Hydrocarbons Operations Involving Hydraulic Fracturing in Europe

Ref 4 New South Wales. Parliament. Legislative Council. 2012 General Purpose Standing Committee No. 5 Inquiry into coal seam gas / General Purpose Standing Committee No. 5. [Sydney, N.S.W.] : (Report No. 35)