

Supplementary Submission to the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory

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Healthy planet, **healthy people.**

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DEA is an independent, self-funded, non-government organisation of medical doctors in all Australian States and Territories. Our members work across all specialties in community, hospital and private practices to prevent and address the diseases - local, national and global - caused by damage to our natural environment. We are a public health voice in the sphere of environmental health with a primary focus on the harms to health from pollution and climate change.

DEA has already made a comprehensive submission and provided additional information in a further submission to the Inquiry, and these are now in the Submission library (numbers 96 and 477).

The intention of this brief supplementary submission is to provide additional evidence on the genesis of bubbling in the Condamine River, as was discussed at a community forum held by the Inquiry in Alice Springs in August 2017.

Research by the CSIRO interprets this as a natural phenomenon. However the CSIRO data can also incriminate unconventional gas mining as the cause of the bubbling, in which case the safety and health impacts of CSG mining are more serious than currently recognised.

We refer to CSIRO fact sheet "Methane seeps in the Condamine River"¹ which states:

Hydraulic fracturing is unlikely to be the cause of bubbling in the Condamine River because to date there has been no hydraulic fracturing by the CSG industry in these production fields.

and:

CSIRO research has found no evidence that these seeps have any adverse environmental impact on the plant or animal life of the river and its surrounding. To date, there is no public health or safety risk caused by the methane concentrations measured in the area of these or any other seeps in the Surat Basin that CSIRO has measured.

We submit

1. Bubbles in Condamine River are *natural* only in the sense that the gas has followed the path of least resistance to the waterway after disturbance to the coal in the Walloon Basin. We contest the claim from the CSIRO report that the gas was unrelated to CSG and therefore natural.

2. Contrary to the CSIRO report that levels of methane in the Condamine River are so low that they are not a threat to environmental and public health, we make the following points;-

Firstly, all fugitive emissions of methane contribute to climate change which is the greatest health risk humanity faces. In Australia they are poorly measured and likely to account for an important part of our greenhouse emissions.²

Secondly, it is not possible to conclude that small amounts of methane do not carry health and safety risks, for this ignores the precautionary principle for long term adverse impacts in relation to the possibility that the escaping methane is accompanied by biologically toxic compounds derived from coal seams.

Our insecurity regarding the CSIRO evidence also relates to why CSIRO did not undertake any measurements and investigation until early 2015, three years after the bubbling was first reported. However thereafter gas seepage escalated three fold after flaring and has declined recently.¹ These variations indicate that long term monitoring is required before conclusions can be drawn on the volumes of gas leakage.

The CSIRO (GISERA) report suggests that increased gas release in 2015 may be due to increased river flows, but documented flooding of the Condamine River in 2013 did not appear to increase gas release.³ Once again, the lack of knowledge and inconsistent reporting demands a precautionary approach.

Finally, we note that the CSIRO (GISERA) report indicates that there are gas wells five to six kilometers from the leaks, while a media release from Origin Energy states that there are four gas wells within one kilometer of the leak.⁴ Overall these differences in detail point to overall uncertainty about the issue and the need for precise monitoring and reporting.

In conclusion we hold to the view expressed in our earlier submissions that the exploration and extraction of unconventional gas in the NT, including the use of hydraulic fracturing, be subject to an indefinite moratorium until health risk assessments of procedures and chemicals have been undertaken on an industry wide basis.

References

¹ GISERA Gas Industry Social and Environmental Research Alliance. 2017. "Methane seeps in the Condamine River fact sheet." CSIRO, accessed 16 Oct 2017. <https://gisera.org.au/news/methane-seeps-in-the-condamine-river-fact-sheet/>

² Lafleur D, Forcey T, Saddler H, Sandiford M. 2016. A review of current and future methane emissions from Australian unconventional oil and gas production. Melbourne Energy Institute, Melbourne. Accessed 29 Oct 2017 http://energy.unimelb.edu.au/_data/assets/pdf_file/0019/2136223/MEI-Review-of-Methane-Emissions-26-October-2016.pdf

³ ABC News. 2013. "Downpour puts Qld's Darling Downs on flood alert." ABC, accessed 16 Oct 2017. <http://www.abc.net.au/news/2013-03-02/qld27s-darling-downs-on-flood-alert/4549610>

⁴ Origin Energy. 2012. "Media Release: Condamine River Gas Seepage Believed to be Naturally Occurring." Origin Energy, accessed 16 Oct. <http://products.originenergy.com.au/news/article/asxmedia-releases/1394>