

BRIEF COMMENTS ON RESPONSE TO SUBMISSIONS FOR THE NARRABRI GAS PROJECT

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8 June 2018

These comments are concerned with fugitive emissions of methane likely to arise from the operation of the project. The first, general, observation is that it is surprising that both the EIS and the response to submissions treat this issue in such a cursory manner, given the prominence the issue has assumed in public debate about coal seam gas (CSG) over the past couple of years.

Perhaps the most important conclusion to be drawn from the debate is that it is essential to establish a baseline level of methane concentration in the atmosphere in the project area before drilling starts. Without such a baseline it is impossible to assess the significance of methane concentration measurements made after production has started. For example, it has been claimed that gas extraction in parts of the Queensland CSG fields has stimulated increased migratory emissions of methane. In the absence of an *ex ante* baseline it is almost impossible for the accuracy of such claims to be determined. The arguments about the levels of such emissions are unavoidably inconclusive and have, at times, become quite acrimonious. It is commendable that the proponent has commissioned *ex ante* background measurements of methane in air concentrations, which are reported as averaging 1.8 ppm, but with some much higher localised concentrations, including over 100 ppm “near farm bores” (EIS p. 18-4). We note that more recently these background measurements by the University of Adelaide have been supplemented by a study undertaken by CSIRO, under the auspices of GISERS.

What is not so commendable about both the EIS and the response to submissions is the legalistic reliance on adherence to current reporting guidelines to provide assurance that fugitive methane emission levels will be very low. Scientific understanding of fugitive methane emissions associated with CSG extraction is a rapidly evolving field. In such circumstances, to state that the assessment was in accordance with “relevant guidelines and determinations” and “with industry practice” is not an adequate response to the criticisms made in the submissions. The response reaffirms that “a leak detection and repair program, including monitoring of all well site infrastructure” will be established. This sounds much like the type of program appropriate to onshore conventional natural gas production facilities. It is certainly necessary, but may not be adequate for CSG production, which has been associated with claims that high levels of methane emissions have sometimes been detected in the vicinity of other types of activity, such as dewatering storage ponds.

Use of default average emission factors to provide assurance that fugitive methane emissions levels will be very low also ignores observations from other CSG and shale gas fields that a small number of wells may have very high emission levels. It is not clear that a leak detection program would invariably detect and identify such “super emitters”. Regular monitoring of ambient methane in air concentrations may be a better means of identifying such emission sources, if any. Given that baseline measurements of ambient concentrations of methane in air are in existence, the proponent should undertake to repeat such a measurement exercise at regular intervals or, preferably, establish continuous monitoring at a selection of strategic locations.