

Submission to Inquiry into the impacts of mining in the Murray Darling Basin

To: Senate Standing Committee on Environment, Communications and the Arts

From: Environment and Property Protection Association

Chairman: Ian Hayllor

Background: The EPPA is an organisation of land holders that are very concerned at the way the coal seam gas (CSG) industry is rapidly expanding in the Northern Downs Area west of Dalby Qld. The negative impact that the CSG industry could have on our environment and future agricultural production has stirred local land holders into action. This group's charter is about highlighting our concerns to Government and lobbying them to ensure the industry does not have any long term impacts on our environment and livelihood.

Submission: The CSG industry has the potential to have significant impacts on environmental values, surficial and ground water flows and quality in the alluvial floodplains on the Darling Downs. The management of the CSG industry needs to be greatly improved in order to protect agricultural production in this area.

WATER

CSG mining activities are expecting to bring 2 – 3 million megalitres of water to the surface over the next 20 years. We have major concerns at the possible implications of this process. QCG state in their EIS that they will produce 1,200,000ML of associated water and Arrow and Origin are expected to produce similar amount.

The local community and farmers rely on the Condamine Alluvium for domestic, stock and irrigation. There are significant concerns held by local water users and some Government Hydrologists that the drilling of many thousands of gas wells through the Condamine Alluvium could cause leakage or contamination on a major scale. This would be catastrophic for local people and agricultural production. The gas companies say that there should be no impact on the Condamine Alluvium, this has not been independently verified and the damage may not be apparent for many years to come. The Condamine Alluvium is at present going through a waters resource planning process because it has been over allocated, irrigators are taking significant cut backs in allocation to get extractions to a sustainable level. Any draining of the Condamine Alluvium through poorly constructed bore holes, poor decommissioning of old wells, lowering of the water pressure in the coal seams and fractures through the layers separating the aquifers, would negate any of the benefits gained by the water planning process. The loss of this very valuable and necessary resource would have catastrophic consequences for families and food production in this area.

At present the CSG water is stored in numerous evaporation ponds up to 50 Ha in size, they hold many thousands of mega litres of water. EPPA has always held very serious concerns that these storages could leak into and contaminate shallow aquifers. The gas companies self monitor these storages but we have little faith in this process and believe independent monitoring should take place.

Irrigation ring tanks are at present being monitored for seepage by a Federal Government project and are recording losses of 1 to 3 mm/day in the good ones and up to 7mm/day in the poor ones. The same or similar construction methods have been used in both irrigation and evaporation dam construction so how can we believe that the evaporation ponds don't leak?

We understood from Government that all new evaporation ponds had to be lined with plastic to ensure no leaking but we are hearing reports that new evaporation ponds are being built but called storage ponds and are not being lined.

QGC stated at their EIS presentation that they would not be lining their storage and evaporation ponds.

EPPA attended the QCLNG EIS Presentation and have serious concerns about the impact on underground water reserves. Their presentation states potential impacts have been modelled for their gas fields that lie on the eastern portion of the Great Artesian Basin.

Findings:

- Minor-to-moderate impact on neighbouring bore users
- Limited inter-aquifer transfer from Precipice and Hutton aquifers
- Water quality changes are not likely
- Very low risk to inter-aquifer flows resulting from bore design or poor bore construction
- Negligible to insignificant impact to shallow aquifers

We are hearing reports that farmers stock and domestic bores are going dry and being redrilled by gas companies at their expense in the Roma area. This has been reported to some of our members.

Reports from the Powder River Basin in the USA state that its shallow aquifers have been drained as a result of CSG activity in the area.

Our organisation has very little faith in the modelling done by the CSG companies, and request the State Government legislates the following.

Comprehensive detailed independent monitoring and reporting of all potential impacts on ground water from CSG activities must be carried out before any further development

takes place. Independent ongoing monitoring must also take place throughout the whole production and decommissioning period.

One of the only positives for local land holders from CSG production is the water. This water must be utilised in a beneficial way in the area it is produced. The water would need to be treated to make it suitable for use in agriculture, this cost must be borne by the gas companies and viewed as a part of the cost of gas production. There is a number of irrigators in our area that would be more than pleased to access good quality irrigation water providing the whole water production cycle was sustainable.

The CSG water must be desalinated and made available for beneficial use, it would be extremely negligent of both the State Government and Gas Companies not to invest in the necessary technology to make this water an asset to the state.

SALT

Salt levels in this water are indicated to be between 2,500 & 7,500 ppm. This means several million tonnes of salt will be produced over the next 20 years. We are very concerned at the lack of any long term plan for the management of this salt. The potential for this salt to cause extensive environmental harm is extremely high. It could leach into ground and surface water, contaminating vast areas of the Northern Downs.

The State Government legislation on the long term management of the salt produced by CSG companies is totally inadequate.

The Qld Govt. Environmental Authority No. 150 217

Decommissioning:

- (c) Encapsulate any residual contaminated solids in situ by capping with an appropriate capillary break and with one metre of clay or similar impermeable material

Arrow Energy Limited Environmental Management Plan for Daandine Coal Seam Gas Project PL230:

3.7. Decommission

- Encapsulate all solids within a portion of the dam;

Arrow energy and QGC have both indicated to us at meetings that they will be using only a compacted clay layer to encapsulate the salt within the evaporation ponds. Soil engineers we have spoken to place little faith in this method of keeping the salt from leaching into the environment. We cannot allow this to happen in an area that feeds the MDB.

The salt must not remain in the environment at the end of the CSG production period. It must be either transport away or pumped back down to where it originated.

FLOOD PLAIN ISSUES

Poorly designed and managed developments could potentially concentrate water and cause erosion and sediment build up in creeks and rivers. Redirecting overland flow water could also reduce agricultural production in this area.

Compliance with Government legislation

Section 265 of the petroleum and gas act 2004 prescribes written reporting requirements of petroleum tenure holders to the office of the department within 40 after the end of the first year of testing for petroleum production or from when a royalty return is lodged. The report must include trigger threshold levels for the aquifers in the area; details of an underground water flow model to predict the drop in water levels in the area and in the aquifers predicted to be affected; details of existing water act bores predicted to be unduly affected either alone or in combination with the exercise of underground water rights of another petroleum tenure holder or taker of water necessarily taken as part of petroleum production; an estimate of when each of the bores will become unduly affected and details of monitoring program proposed to be carried out by the petroleum tenure holder. Further the CEO of the department has the right to accept or reject the underground impact report and in case of rejection, call for the lodgement of another within a certain time period.

Section 265 of the Petroleum and Gas Act 2004 requires that petroleum tenure holders lodge monitoring reports and review reports. The purpose of the monitoring report is to monitor the effects of the taking of ground water by the petroleum tenure holder. The review report compares the effect of the taking of the ground water with the predicted effect in the holders relevant water impact report to show whether the report continues to be appropriate and 2) amend the underground water impact report to on the first, third and fifth anniversary of the acceptance of the underground water impact report.

We are being told that CSG companies have not or are only now lodging their Underground Water Impact Reports, Monitoring Reports and Review Reports. For 5 years CSG companies have continued to operate without indicating what their activities will have on the underground water and the environment. Further the Department of Mines and Energy has failed to enforce its own statutory requirements that petroleum tenure holders prove they can operate without impacting on underground water and the environment.

EPPA has very serious concerns that this has been allowed to happen and fear what the future holds if CSG companies are allowed to ignore Government legislation.

Underground Coal Gasification (UCG)

Part of our area is subject to a UCG lease held by Linc Energy. UCG has the potential to cause significant subsidence which would severely damage the Aquifers and make prime farm land unsuitable for farming.

UCG must not be allowed where subsidence can cause damage to valuable natural resources.

Coal mining

The EPPA is not involved in coal mining projects but it strongly opposes mine development on prime agricultural land or land that has significant aquifers or recharge areas within it. Destroying prime land when there is 300 years supply of coal in QLD would have to be total stupidity. Food is becoming a scarce resource and productive land must be protected for future generations. The Dalby area cannot have its best farm land destroyed for ever by an industry that is only temporary in this area. The local towns need to survive once the coal and gas have run out.

Summary

EPPA is not opposed to CSG, UCG or mining, what we are totally opposed to is the destruction of natural resources in the process of accessing the energy resource.

Food production is needed forever and must not be forgotten in the headlong rush to access energy resources.

Careful planning, a well researched and resourced monitoring programme and a Government that looks to the long term sustainability of the states food production capacity and natural resources is needed. Queensland must not have long term negative impacts on the MDB and its capacity to produce food.