

Submission link

http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=7480

Mr. S O'Donoghue

Sir

I do not live in the area of the proposed expansion to the Vickery Coal Mine, however I do have grave concerns about what this project in combination with the other coal mines both open cut and underground, in the Gunnedah/Oxley Basin and the Santos Narrabri Gas Project, will have upon the groundwater of the Gunnedah/Oxley Basin.

This concern is partially based on Santos' 2014 EPBC Application most notably page 65 extract provided below":

Compared with the assessment conducted in accordance with the Significant Impact Guidelines for the Exploration and Appraisal Program, an assessment of the Project indicates that the duration and wider geographic extent of depressurisation of groundwater head within the coal seams and adjacent strata will cause a significant impact to the groundwater resources of the Gunnedah-Oxley Basin. However, due to the depth of the target coal seams, low hydraulic conductivity of the target strata and poor hydraulic continuity with overlying strata, the overlying groundwater features of greater sensitivity (Pilliga Sandstone, alluvium) are highly unlikely to experience significant impact.

And partly based upon the Department Of Industry (DPI) comment to Santos' Response to Submissions who expressed their concerns over a number of points including but not confined to Water Modelling, Water Monitoring – location, frequency and type off, Lack of baseline data both water and GWE's including Stygofauna, also the mention of "aberration" when information requirements, just to name a few.

It is my belief that the information provided in the Vickery Coal Mine Expansion EIS does not adequately cover the water and GWE including Stygofauna issues.

It must also be noted that Santos and GISERA have stated that the waters from the GAB will leak into the coal seams due to the depressurisation of those seams caused by the removal of the water's within the coal seams, thus creating a lower pressure area into which waters from both the coal seams and the GAB will flow. Add to this already known fact the water removed by the existing open and underground coal mines plus this one then there is a very big unknown with regard to the full effect that this proposed expansion will have on the natural and improved environment of the area as well as the whole region.

This then has a greater effect on the groundwater in areas higher up in the seams formation and the upper groundwater table upon which the local farmers rely.

There is reference in Santos' documentation and the Namoi Water Study to a direct link between the Namoi River and the GAB, there was also a study done that highlights the link between the Namoi River and the small artesian basin under the Maule's Creek area. Is there a small basin under this proposed expansion?

To me water, surface and groundwater, is the key issue as it affects so many people in the area from towns to grazing and cropping through to the irrigators local and downstream and as such adequate and acceptable groundwater knowledge gained over a period of time adequate to constitute a true base line is required and a updateable model built around this information which should be peer reviewed prior to any approval for this Expansion to go ahead.

Such parameters as groundwater quality, flow patterns (horizontal and vertical) in all geological levels from surface to the coal seam, all geology for at least 100 km radius in order to get a true picture of the groundwater flow rate (not as some EIS's have stated giving only one geological strata type and then only one quoted groundwater flow rate).

E.g. The unconsolidated Namoi Alluvium has a different groundwater flow rate to the shallow soils of the area which has a different groundwater flow rate to the consolidated sandstone which has a different groundwater flow rate to the

unconsolidated channels within that Sandstone and all of these have a different groundwater flow rate to the groundwater's contained within the coal seams.

Mixed into all this is the current and in some cases no information at all on GWE's and the Stygofauna, the locations and types of which are largely unknown.

Australia is a Dry Continent which is experiencing a long and hard drought in the North West of NSW. The effects upon groundwater from this mine could be the tipping point when added to the effects of the already approved coal mines of the region and the stated effects of the local CSG industry, which could completely alter all levels of the environment within the Gunnedah/Oxley Basin and beyond.

The questions around water security for all are too many, and I feel not adequately covered in any already provided documentation.

I also feel, especially in the light of the DPI response to Santos' RTS that the application for the IPC hearing should be delayed until all the NSW Government Departments have had a chance to comment on the Expansion RTS and the Vickery response to those comments and are made available to the public. This then will give everyone the opportunity to have all the information needed to provide an informed debate and as such make the decision process open and fairer.

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