

NGP Waste

I object to the Narrabri Gas Project because it will produce a huge amount of waste.

- up to 37.5 gigalitres (GL) of produced water over the project at a rate of up to 10 megalitres (ML) a day
- 840,000 tonnes of salt from the produced water, around 33,600 tonnes each year
- unknown quantities of constituents of potential concern (COPCs)
- 1.1 million cubic metres (m³) of rock and coal based drill cuttings contaminated with drilling fluids and (COPCs)
- drilling fluid and containers (drilling fluid chemicals are unknown due to commercial in confidence)
- plastic pond linings
- cement slurry

TREATED WATER

As a solution to their waste problem, Santos has been promoting its non-binding memorandums of understanding with companies to use their gas, provide jobs and put their waste to 'beneficial use'. New facilities proposed to be built at Narrabri are for the production of ammonia/fertilizer, bricks, plastics and Sodium Bicarbonate. These industries all use vast amounts of water. Treated water from the coal seam can be put to beneficial use during manufacturing and processing but the availability of treated water will be inconsistent. Where will the water come from for these industries when treated water is not available or later, when the coal seams have been depleted?

The beneficial use of treated CSG water for dust suppression, watering stock, rehabilitation, irrigation and release into Bohena Creek is not acceptable due to a lack of monitoring and compliance enforcement. Non-compliance for treated water reduces company costs substantially. Monitoring and enforcing compliance in this area is extremely costly. Any non-compliance will have enormous impacts on the environment over time and on human and animal health.

SALT WASTE

"apparent anomalies in data provided should be explained. Trace components and chemicals of possible concern in the salt will need to be monitored over the life of the project." NSW Government Assessment Report 5.9 Conclusion

The available data reveals a limited knowledge of the quantity, composition and therefore the classification of the salt waste. Subsequently, the proposed disposal method to a licenced landfill waste facility may need to change. Santos has had 9 years to collect data. Will the company ever reveal what they are bringing up from the coal seam and should we trust what they say?

The collection of data needs to be ongoing, and independently monitored, adding to the cost of the gas.

"Up to 840,000 tonnes of salt may be produced during the project, with around 33,600 tonnes produced each year." Para 52 NSW Government Assessment Report - Waste Management

The amount of salt has nearly doubled since the EIS was lodged in 2017.

"The salt would be stored in a covered interim storage facility while on site, before being transported off-site for beneficial reuse (if this is feasible and reasonable) or disposed of at a licenced waste facility. Santos would investigate potential beneficial reuse options for the material." Para 52 NSW Government Assessment Report - Waste Management

How long will the salt be stored in an interim storage facility - weeks, months, years?

The coal seam gas industry has been investigating the beneficial use of salt brought up from the coal seam since it started in Queensland. So far they have come up with the following solutions but as far as I know none have been implemented -

- soda ash
- baking soda
- commercial salt
- table salt
- concrete
- mine rehabilitation
- fertiliser
- bath salts

A study funded by the University of Queensland and the gas companies on the beneficial uses of salt from CSG are deemed commercial in confidence. <https://natural-gas.centre.uq.edu.au/project/beneficial-use-salt>

Approval of Stage 1 should not be given unless a tried and tested beneficial reuse has been found. Disposing of this waste in landfill will have long term costs to monitor and stop it leeching into the environment.

WASTE DISPOSAL IN LANDFILL

“The WEP found that the recovered salt would be comprised primarily of sodium carbonate and would be low in heavy metals and other undesirable components when compared to the EPA’s Waste Classification guidelines. Consequently, the salt is likely to be classified as general solid waste which can routinely be disposed of at one of the 11 licenced waste facilities within 150 kilometres of the site.” Page xiiii NSW Government Assessment Report - Waste Water Management.

A discrepancy exists between WEP findings and *“apparent anomalies in data provided”* as discussed above. The wording *“likely to be classified”* is not reassuring.

Many of the licenced facilities in the North West have a policy not to accept waste from outside their local government area. Santos needs to provide more data on the type of waste and the facilities that have the capacity and the licence to take it before approval for Stage 1 is given.

*“Narrabri Shire Council • Supports the project subject to strict conditions:
- requiring Santos to enter a VPA with Council involving the payment of \$14.5 million for community projects and road maintenance;
- prohibiting the disposal of salt at any local waste facilities; to be addressed in recommended conditions”* page 45 NSW Government Assessment Report Agency Advice.

As the Narrabri Shire Council will benefit with funds from Santos why will they not take the salt waste? Will the shire that takes the waste benefit? What if licenced waste facilities refuse to take the waste?

The Government’s assessment report referred to Conditions on this issue which are that a ‘Waste Management Plan’ is to be prepared in consultation with Council.

WASTE MANAGEMENT PLAN

Santos has had ample time to gather data to be able to complete a Waste Management Plan. Why is this Waste Management Plan not available now for public scrutiny? Will the people living in the local government area where their waste is dumped be given an opportunity to have their say on this?

“Rock-based drill cuttings from the construction of wells (approximately 400,000 m3) would be

buried on site or disposed of off-site at a licensed disposal facility. Coal-based drill cuttings (approximately 720,000 m³) would be temporarily stored on site in containers before being disposed of off-site at a licenced waste facility.” NSW Government Assessment Report Waste Management 54.

As all drill cuttings will be contaminated with drilling fluids and constituents of potential concern (COPCs), more stringent regulations should apply to them. How long will coal-based drillings be allowed to be “temporarily” stored on site?

“The brine generated during produced water treatment would initially be stored in brine ponds at Leewood, and ultimately concentrated and passed through a salt crystalliser to produce a solid salt product.” 51. NSW Government Assessment Report - Waste Water Management

Evaporation ponds are banned in NSW therefore the time for storing produced water and brine in ponds should be limited.

Treating the produced water by reverse osmosis and crystallising the salt requires enormous quantities of electricity. Will gas used to generate the electricity to process the gas be counted in the gas reserved for the state of NSW?

GOVERNMENT RECOMMENDATIONS

There are 70 wells in the Pilliga and data should be available from them if not, Santos is incompetent. The government recommendations that Santos “undertake a Produced Salt Beneficial Reuse and Disposal Study”, and to provide “a strategy for disposal of any produced salt that is not able to be beneficially reused” should be completed before phase one of this project is approved.

The NSW Government has been calling on Santos to provide this information for over a year. Now the government calls for “adaptive management” which is very risky. This shows they are incapable of standing up to Santos and the Minerals council and therefore are not competent to assess this project.

I hope common sense will prevail and you will not approve this project.

Annie Holcombe
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