

## Submission on Additional Information Supplied by DPIE and Santos

### The Author

In my original submission, I briefly described my background and experience. For the purpose of this invited response, I provide additional details of my professional experience relating to waste management.

I am a professional engineer who commenced working at the former SPCC (now EPA) in 1977. Between early 1990's till I left the EPA in 2005, I was an environmental regulator in the Sydney region. For many of those years, part my role was the regulation of Sydney's western and northern landfills including the Eastern Creek, Belrose Waste Services sites. I was part of the team that development the waste classification guidelines and the requirements for solid waste landfills. My experience in landfilling activities, led to me being involved with changes to the waste legislation.

From 2006 to 2012, I worked as an environmental engineer in the Sydney Rail network. One of my responsibilities was the classification, transport and disposal of liquid and solid wastes from the Maintenance Centres. This included negotiations with Sydney Water on trade waste agreements.

### Comments on the additional information Santos, DPIE and Waste management

The further response provided by DPIE to the management of salt waste is totally inadequate. It could be likened to saying that the waste generated by all residents and businesses in Sydney will be managed according to the waste management hierarchy. This response is very generalized and provides no information on who will be responsible and how they will exercise that responsibility to protect the environment from harm caused by the salt waste. (I accept there is a possibility that some form of reuse etc may eventuate.)

### Solid Waste Landfill requirements

Santos and DPIE both claim that local "landfills" can legally accept the salt waste for disposal. The language used by both Santos and DPIE is not technically correct under the Solid Waste Landfill Guidelines and the POEO Act licensing regime. The local sites have approval to dispose of waste by application to land. This is the same type of licence as for irrigation of treated effluent or the application of biosolids. A search of the EPA's public register shows none of the local waste sites are licensed as a solid waste landfill. Historically, this distinction was made by the EPA so that the standards for solid waste landfills were retained to higher levels of risk management. The typical Council operated sites were licensed for application of waste to land because the risk management structures in place at these sites did not satisfy the requirements for a solid waste landfill as specified in the Guidelines. Neither Santos nor DPIE has addressed this distinction nor has any case been made as to why the special case should be extended to the salt waste to be generated by Santos.

At the day-to-day level and if approved, salt waste would be transported for land application daily. Immediate covering of the waste with compacted clay would be needed to manage the generation of saline leachate from rain events. This is because if the salt waste were mixed in with putrescible waste, bacterial breakdown would be severely impacted. The usual practice of irrigating the saline leachate over the waste disposal area would inhibit regeneration of vegetation in completed fill areas. Salt waste would be incompatible with existing land application practices. The long term management of such sites would be highly problematic as it is likely to require close supervision to ensure no pollution of waters takes place.

The option of Santos disposing of salt waste at many application to land sites would cause all such sites to manage the saline leachate issue. The risk of multiple sites becoming legacy waste dumps suggests that salt waste should only be permitted at only one or two sites not disposed of at multiple sites. Based on the claim that the salt waste would be classified as “solid waste” then all of this waste should only be permitted to be disposed of at a new landfill constructed to satisfy the solid waste landfill guidelines. If this requirement is not imposed, Santos is being granted exemption from the current waste requirements. The DPIE claim “dispose of all waste at appropriately licensed waste facilities” is misleading as Santos intends to dispose of salt waste at facilities that would need a special exemption to dispose of this waste. The claim that Santos would be required to pay the “full cost” is rejected as the proposed arrangement necessitates the granting of a special exemption for salt waste to be disposed of by “land application.”

In consideration of ESD, DPIE claims that “all wastes associated with the project would be properly managed and either reused or disposed of in a safe and sustainable way.” This claim is not supported by the facts. The drilling fluid liquid waste has not been classified. The processing of the waste has not been described. There is a possibility that drilling fluid treatment and/or storage may trigger a requirement for this activity to be licensed under Clauses 41 or 42 of Schedule 1 under the POEO Act. The question of what constitutes a “premises” needs to be addressed as transporting of this waste is proposed. The requirements for licensing of transporters must then be addressed. No information has been provided of the classification of 72kL/month of “treated” drilling fluids. No information is provided about whether this waste would be acceptable for disposal as “trade waste” or the location of a liquid waste treatment facility licensed to receive such waste. For this reason, the claim of sustainability made by DPIE is not supported by information supplied in the EIS nor the additional information. A trade waste agreement with a local council does not equate to a sustainable outcome without environmental review.

The coal derived solid waste has not been subject to environmental assessment as outlined in my submission. This waste has not been classified under the Guidelines therefore its disposal cannot be determined under the waste legislation. DPIE has not provided any grounds for its blanket claim that the disposal of this waste will be performed in a safe and sustainable way without having any factual information provided on its chemical composition and waste classification. Just as the case for the salt waste, the determination of its waste classification is integral to determining its safe disposal.

[REDACTED]

The explanation made by Santos that the incident notification protocol was sufficient and would ensure the regulator was notified does not reduce the risk of pollution of waters caused by CSG construction activities in particular. I was involved with the regulation of the Camden CSG project during its construction. I do recall our field inspectors issuing multiple infringement notices to the

operator for pollution of waters as a result of mismanagement of drilling fluids. The regulator is faced with a significant travel time delay between notification and arriving at the site then gaining access. This provides the operator with much opportunity to influence the investigation. The need for real time video footage and internet monitoring data is necessary to enhance regulatory responses.