

## Steve O'Donoghue

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**From:** David Boverman <David.Boverman@rfs.nsw.gov.au>  
**Sent:** Wednesday, 23 May 2018 11:42 AM  
**To:** Steve O'Donoghue  
**Cc:** Peter McKechnie; Mathew Smith (Region East); Alan Bawden; Michael Brooks; Corey Shackleton; Jeff Lucas  
**Subject:** FW: Response to Submissions Comments - Narrabri Cold Seam Gas Project

Hi Steve,

Thank you for the telephone conversation just now, and for going through our comments with me.

Accordingly, please find below our comments regarding the Santos response to our previous comments as follows.

### General

In their response to our comments, the proponent appears to not address the fire risks associated with the Pillage region from a first-principles approach and does not adopt risk management procedures that would significantly reduce the risk of fire impacting on the gas and coal resource.

When bush fires occur they are extremely difficult to control and extinguish.

The response indicates that there is heavy reliance on shutting-in procedures. The EIS and the RTS do not appear to address the issue of the CSG development providing a pathway for fire to the underground coal seam via the well heads. The documents do not appear to explore if this consequence is a likely risk and if so what would be the outcome if combustion of the coal seam would occur. There appears to be significant studies on both open and enclosed coal seam fires, with the outcomes that fires may be difficult to extinguish which also have a detrimental impact on neighbouring human populations. These surface openings into the underground coal seam(s) need to be further explored and addressed.

The proponent appears to not address the impact of flame and radiant heat exposure on CSG surface extraction and transport infrastructure, instead relying on well head 'shut off valves' and "acceptance that periodically facilities may be damaged by bushfire". The proponent also appears to rely on prescriptive limits for exposure and asset protection zones (ie reliance on compliance with the NSW RFS Telecommunications Towers Practice Note) rather than addressing the risk from a first-principles approach.

The proponent does not address the risk to fire fighters, with respect to managing and extinguishing a forest fire in the state forests. The gas extraction and transport infrastructure can increase the risk of the forest fire spreading and increase the level of danger to fire fighters, whether or not they are protecting the asset or not. This needs to be addressed by working with the NSW Rural Fire Service (NSW RFS) and also be addressed in the risk assessment and management process (the proponent simply says that fire brigade intervention need not occur).

The proponent needs to address the fire protection requirements for telecommunications towers based on a risk assessment and impact to safety if the towers become inoperable due to bush fires.

Finally, the proponent did not respond to the narrative at the end of the NSW RFS submission that stated that *"In essence, the EIS is considered to be short on detail with respect to bush fire impacts on the various components of the development proposal. It is important that the proponent can demonstrate vegetation clearing requirements to achieve suitable separation distance before any consent is granted."*

*As such the current document does not provide sufficient detail for a conclusive environmental impact assessment centred around vegetation clearing requirements. The proponent should submit detailed site plans for all infrastructure incorporating satisfactory vegetation management requirements."*

Accordingly, NSW RFS would reinforce that the following conditions be included in any approval granted unless agreement by the NSW RFS can be achieved otherwise.

1. Asset protection zones around all surface infrastructure shall be designed to:
  - a. Prevent flame contact to surface infrastructure during a catastrophic fire event;
2. All surface infrastructure shall be 'certified' by a practicing engineer, that it can withstand the radiant heat exposure for a catastrophic fire event.
3. Prior to development commencing the developer shall prepare, in consultation with the Narrabri District Fire Control Centre, a Bush Fire Management Plan. This needs to address both prevention and operational issues regarding bush fire protection and include a detailed risk management plan that forms the basis for the bush fire management plan.
4. Expansion of Westport Workers accommodation shall be to the requirements of SFPP developments i.e. 10kW/m<sup>2</sup>, Emergency Evacuation plan, and water supplies.
5. No gas flaring shall be undertaken on extreme and/or catastrophic fire weather days. Gas flaring infrastructure shall not exceed a radiant heat generation of 10k/W m<sup>2</sup> on any surrounding unmanaged vegetation and shall include no exposed naked flame and spark arresters.

**Specific Responses**

1. *All above ground gas extraction, transport, processing and ancillary facilities shall be located outside modelled flame length from potential forest fires;* - the proponent appears to dismiss the comment saying that protection is not realistic or necessary. This needs to be addressed in terms of risk: likelihood and consequence and include relevant scenario analysis.
2. *All gas extraction transport, processing and ancillary facilities shall be engineered to with stand the modelled radiant heat exposure. Proposed infrastructure shall be 'certified' by a registered and practicing engineer for that related field of work;* - the proponent appears to dismiss the comment saying that protection is not realistic or necessary. This needs to be addressed in terms of risk: likelihood and consequence and include relevant scenario analysis.

I hope that this communicates our concerns adequately. If you have any questions please let me know.

Kind Regards,  
David



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