

Questions from the Community to Santos to be presented at the September 2019 NGPCCC

Question 1

1a. Does the NGPCCC have a suggested turnaround time that guides when questions asked must be answered?

1b. Why is it taking so long for Santos to answer questions that were put to it by community representative to the CCC Tony Pickard in some instances 6 months ago?

I note a rather lengthy response by Santos in the "PEL238_Supporting_information_for_Revised_REF.pdf" to a submitter that referenced "Response". May I respectfully suggest that Santos put the same amount of energy into responding to important community questions in a timely manner?

Question 2

2a. When will Santos be required to perform workover functions on the existing wells?

2b. No workovers have been performed since 2015. Can Santos explain what workovers achieve and what the average industry frequency is on each well for these operations?

Question 3

3a. Can Santos NSW detail their Weed & Seed procedures that ensure their vehicles are free of weed seed?

3b. How often are these inspections conducted? Who completes the work?

Question 4

4a. Can Santos detail how they prepare for significant rainfall events?

In April 2019 the Pilliga forest was subject to a significant rain event that caused material (mulch, ballast) to leave Santos fenced lease areas and enter the forest. Berms did not work as they should in controlling this run off.

4b. Have the areas been cleaned up?

Locations where material leaving site was witnessed to occur.

1. Bohena 6: GPS Location: 30°32'12.52"S 149°37'16.02"E
2. Bohena 5: GPS Location: 30°32'12.22"S 149°36'0.46"E
3. Bohena 3: GPS Location: 30°32'44.28"S 149°36'38.24"E
4. Bibblewindi West wells:
General GPS Location: 30°37'27.89"S 149°36'21.80"E (All well pads visited in this series of wells had run off issues. Bunding where installed appearing to have failed in mitigating run off (BW24).
5. Bibblewindi East wells:
BW12: GPS Location: 30°39'57.66"S 149°38'56.96"E (Bunding/mulch/woodchip issue)
6. BW13: GPS Location: 30°39'46.85"S 149°39'5.26"E (mulch/woodchip issue)
7. BW19: GPS Location: 30°39'37.60"S 149°38'49.95"E (run off into gully)
8. BW21H: GPS Location: 30°39'17.95"S 149°39'7.69"E (run off down road)
9. BW29: GPS Location: 30°40'34.33"S 149°39'15.78"E (mulch/woodchip issue)
10. BW16: GPS Location: 30°40'3.16"S 149°39'30.14"E (mulch/woodchip issue)
11. BW18H: GPS Location: 30°39'47.60"S 149°38'41.26"E (mulch/woodchip issue)
12. Pipeline joining Bibblewindi East to compressor (Self Camp Rd)
GPS Location: 30°39'30.79"S 149°38'50.15"E (bunding/run off mitigation failure/mulch/woodchip issue)



Above: Bohena 6 – mulch has flowed across and off the site leaving the interior of the site bare



Figure 1 BW 22 mulch leaving lease area



Above: Bibblewindi 24 – coir log is failing to mitigate erosion and flow of material across the site



Above: Bibblewindi 12 – coir log is failing to mitigate erosion and flow of material across the site



Above: Bohena 3 – Example of material outside of enclosure, the seedling has died but the wire, plastic & bamboo remain



Above: Bohena 3 – abandoned material inside of enclosure

Question 5

5a. Can Santos give a comprehensive definition of “Appraisal Gas”?

5b. This is a term that Santos has been using in regards to their MOU with Perdaman and not one that the community is familiar with. How is it different from Beneficial Use and Exploration gas?

Question 6

Some time ago, in August 2017, a community member attended Agquip and spoke with Annie Moody regarding the issue of NORMs. Annie took notes and promised to reply by email with answers to the questions as she could not answer them herself. An email address was given to Annie and despite the community member twice following up via email with Annie Moody, the answers have still not been received.

6a. Is it common practice for Santos to ignore emails and community requests for information?

6b. When can the community member expect the answers?

Question 7

In 2010 the then regulator informed the then PEL238 operator that a number of ponds and pads were allowing rain/storm water to traverse the well sites and enter the surrounding areas of forest and private lands and that suitable measures must be taken to eliminate the problem. The Operator did some work to please the then Regulator.

The Dewhurst North (Dewhurst 22-25 including Dewhurst 6) gas field also had a problem with run-off rainwater entering and leaving the well pads, so much so that the Regulator required that Bunds on the high and low sides of all well pads were made a requirement. These were constructed as per the Regulators instructions.

Concerns centre around the very real possibility of pollution of the surrounding Forest and private lands with salts from any spilt produced water and other material from the partial and full rehabilitation being carried out, the carry-over of fertilizers and other non natural material, such as treated wood chips as found at all the Rehabilitation, into the Forest and Private lands which may cause an acceleration or deceleration of natural growth of the surrounding natural Pilliga Forest vegetation.

7a. Are these Bunds still able to perform the function for which they were intended?

Question 8

8a. With the recorded earth tremor of 2.4 last year between Baradine and Gwabegar what sort or what magnitude of an earth tremor their wells can sustain without some sort of damage being done to either the steel casing, or the outer cement seal in the case of both operational well and those that have been plugged and abandoned?

Could the answer include the degree of tolerated deflection of both the steel casing and external cement seal before damage to either's function is experienced.

8b. How are the gas well steel casing sections joined and are these joins leak tested prior to being lowered into the ground?

Question 9

As far as I understand the Community Benefit Fund is a Santos inspired item and is not compulsory nor is it a condition of project consent (correct me if I am wrong).

However, I and many others are curious about the new name "Gas Community Benefit Fund".

The fund was first called the 'Regional Community Benefit Fund' with an expected windfall from Royalties and government contributions in excess of \$300 million.

Next came the 'Community Benefit Fund' with a much less windfall amount.

Now we have a new name 'Gas Community Benefit Fund' with an expected windfall amount of around \$ 120 million.

9a. Will Santos explain and give reasons as to why there have been these name changes over the years, especially the last name?

9b. Will neighbouring Shires be able to access this Benefit Fund?

9c. Has Santos consulted with the neighbouring Shires concerning how this newly renamed Benefit Fund may benefit them in the future should those Shires host CSG operations?

Narrabri Shire Council has produced a Report, which was handed out and discussed at the July 2019 NGPCCC meeting, and later that month at the Monthly Council meeting. In that Report Narrabri Shire Council is proposing that they are the best body to administer the newly renamed 'Community Benefit Fund' to the 'Gas Community Benefit Fund'.

I have been asked to ask the following questions.

9d.a. Does Santos support the idea put forward by the Narrabri Shire Council and reinforced by a blog by Council on their FaceBook page, the Narrabri Shire Council is the best body to administer the newly renamed Gas Community Benefit Fund?

If so, will Santos give reasons?

9d.b. Should the Narrabri Gas Project be approved; How long after that approval will the newly named 'Gas Community Benefit Fund' start receiving the stated monies based on the Royalties payable and will this amount be suitable to distribute or use?

9d.c. As Santos has a position on the Administration Board, both under the existing guidelines as proposed by Narrabri Shire Council;

9d.c.i. What are the types of projects would Santos like to see the newly named 'Gas community Benefit Funds' monies spent on?

9d.c.ii. And, will these projects, to the best of Santos' intentions, benefit the whole of the population and towns that are located within the Narrabri Shire, and not just a few?

9d.c.iii. Would Santos consider the 'Gas Community Benefit Fund' monies being spent on developing such developments as infrastructure to the Narrabri Inland Rail Hub or on areas within the Inland Rail Hub itself?

Question 10

The screenshot shows the NSW Planning & Environment website. The top navigation bar includes links for 'About us', 'Media & events', 'Contact us', and a 'Select Language' dropdown. The main navigation menu has categories like 'Miners & explorers', 'Investors', 'Landholders & community', and 'Resources Regulator'. A sub-menu for 'Landholders & community' is open, showing options like 'Your rights', 'Public comment', 'Coal seam gas', 'Exploration & mining', 'Opal mining', 'Fossicking in NSW', and 'Renewable energy'. The 'Coal seam gas' option is selected, leading to a page titled 'Community consultation'. The page content includes a sidebar with links to 'The facts on CSG', 'Codes, policies & legislation', 'NSW Gas Plan', 'Aquifer interference policy', 'Community consultation', 'CSG well integrity', 'Coal seam gas fracture stimulation', 'Strategic regional land use policy', 'Improved Management of Exploration Regulation', 'Community', 'Information on petroleum titles', and 'Research, fact sheets, maps, videos & links'. The main content area is titled 'Community consultation' and features a download link for 'Exploration Code of Practice: Community Consultation' (313 KB PDF). The text explains that exploration licences and assessment leases are granted with the objective of encouraging ecologically sustainable development, social responsibility and building economic wealth for the people of NSW. It states that the exploration code of practice sets out mandatory requirements and provides title holders with related guidance regarding the expected performance for engagement in adequate, inclusive and appropriate community consultation in relation to the planning for, and conduct of, exploration activities under a prospecting title. The code serves two purposes: 1. it provides upfront information to the industry and the community, and 2. it sets out enforceable mandatory requirements related to community consultation. The code enables industry to: adopt a risk-based approach to ensure compliance with mandatory requirements related to community consultation, commit to measurable performance standards, monitor performance and take corrective action if outcomes are not being achieved, and keep and maintain relevant records of activities and/or actions. The approach allows title holders to adopt innovative solutions and best practice techniques to meet performance requirements.

I have attached the above because it clearly shows some requirements for Community Consolation.

10a. Has Santos provided the Annual reports regarding the Narrabri Gas Project CCC (NGPCCC)? And if so where can a copy of these Reports be found or will Santos supply the NGPCCC with full copies of all the past Reports?

Question 11

In the Tintsville Water Management Facility – Pond upgrade REF – Rev 2, dated August 2019 there is a Report by the EPA mentioned that has a time limit for implementation by Santos, of December 2019. As this REF was made publically available and comments from the Community were accepted, now closed, will:

11.a. Santos make publically available that EPA Report?

This request is being made in the interest of openness, social responsibility and keeping the Community informed as to the activities associated with the Gas industry in the Narrabri area.

Question 12

The following question is taken directly from the “WEP – Follow-up questions for Santos” document that was up on the old Major projects web site along with another, both of which have been removed from the site and not put back up on the Planning Portal site.

These follow-up questions (8 in total) were not answered in the Supplementary Response to Submissions.

12.a. Will Santos provide a publically available response to the Water Expert Panel follow-up questions? (a jpg. of page one is provided below).

Water Expert Panel - Follow-up questions for Santos

QUESTION 2 – GAS COMPOSITION

Previously, the WEP has asked for more information about gas composition. Santos has declined to provide further information on the grounds that “detailed spatial information of gas..... is commercial-in-confidence”. The WEP recognises the commercial issues and for that reason does not seek detailed spatial or compositional information. However, to address this issue, Santos should indicate the range of CO₂ concentrations in the region of the NGP and/or provide an average value and an indication of variability in CO₂ concentration, so that the WEP can comment on the potential impact of CO₂ on cements, equipment, well completions or monitoring or long-term liability, as appropriate. In addition, Santos should provide details of their planned procedures for cements, equipment, well completions or monitoring or long-term liability in the area of the NGP

The WEP requests that Santos provide further information on gas composition and its variability and further details on procedures used for design and construction to account for the CO₂ concentration range to be extracted.

QUESTION 7 - FAULTING

Previously, the WEP has posed questions to Santos regarding faulting because of possible implications to transmissivity and groundwater flow. Santos has indicated it does not believe there is any issue with faulting, based on its examination of many kilometres of seismic profiles. It would be useful if Santos would provide some examples of interpreted high quality seismic lines to illustrate why they are so confident that there is no potential for fault-related issues to occur in the area of the NGP.

The WEP requests that Santos provide further information that would better illustrate the nature and extent of faulting in the vicinity of NGP.

QUESTION 10 - PROCESS WATER BALANCE

Santos has provided a comprehensive response that draws on the *Produced Water Code of Practice* and gives appropriate *Trigger Action Response Points* and a description of how the storage facilities will be instrumented and operated. It is indicated that, based on Queensland experience, the expected percentage downtime of the reverse osmosis plant will be 5%. WEP will acknowledge that the 900 mm figure given in the original question is yearly rainfall. Table 4.2.2 of Appendix G1 of the EIS gives 406.9 mm as the maximum monthly rainfall recorded (not 330 mm as in the Santos response to the WEP). To assist the WEP in assessing the impact of such an event, it would be helpful to have available an estimate of the surface areas of the present and proposed produced water storage ponds.

The WEP requests that Santos provide details on the approximate surface areas of the current 4 x 150 ML and the proposed 2 x 150 ML production water storage ponds on the Leewood site in the full and 50% full conditions.

The other document removed is one by Arriscar engineering Solutions and makes comments with regard to the Risks Assessments and Risks associated with the Narrabri Gas Project.

12.b. Will Santos answer the comments made in the 12 page Arriscar Report? And will these answers be made available to the public via the Planning Portal site? (a jpg. of page one is provided below).

1 INTRODUCTION

Project: Narrabri Gas Project (NGP)
Review Stage: Initial Gap Analysis of Safety Risk Assessment in EIS (Principally Chapter 25 and Appendix S)
Review Ref. #: CRS No. 1
Review Revision #: 2
Review Date: 5 June 2018
Prepared by: Arriscar Pty Ltd

Scope of Review

The Secretary's Environmental Assessment Requirements (SEARs) for the NGP require that the Environmental Impact Statement (EIS) address **Public Safety** – including:

- an assessment of the likely risks to public safety, paying particular attention to potential bushfire risks, the potential for gas leaks, the transport, handling and use of any dangerous goods;
- a Preliminary Hazard Analysis (PHA) in accordance with Hazardous Industry Planning Advisory Paper (HIPAP) No. 6 - *Guidelines for Hazard Analysis* (DPE, 2011); and
- consideration of appropriate setbacks and/or asset protection zones for well heads, gas processing facilities and other infrastructure to manage risks.

The scope of this independent review was limited to these requirements, which are addressed in Chapter 25 and Appendix S of the NGP EIS. Safety aspects not covered by HIPAP No. 6 (e.g. including health risks from fugitive emissions, dam safety, etc.) were excluded from this review.

The land use safety planning risk criteria referred to in HIPAP No. 6 (And described in more detail in HIPAP No. 4 – Risk Criteria for Land Use Safety Planning) may be relevant to the consideration of setbacks and/or asset protection zones. Therefore, these considerations were included in this review.

Document(s) Reviewed

Title	Ref. #	Rev.	Date
Response to Arriscar Pty Ltd's questions on the Narrabri Gas Project	-	-	24-Apr-2018
Narrabri Gas Project, Response to Submissions	-	-	-
EIS for the NGP: Chapter 25 – Hazard and risk	-	-	31-Jan-2017
EIS for the NGP: Appendix S – Hazard and risk assessment	-	-	31-Jan-2017

Assessment Criteria (Acts & Regulations / Standards / Guidelines)

Title	Ref. #	Rev.	Date
Applying SEPP 33	DOP HAZ_002	-	Jan-2011
Assessment Guideline – Multi-Level Risk Assessment	DOP HAZ_003	-	Jan-2011
Environmental Planning and Assessment (EP&A) Act and Regulations	-	-	May-2017
HIPAP No. 4 – Risk Criteria for Land Use Safety Planning	DOP HAZ_007	-	Jan-2011
HIPAP No. 6 – Hazard Analysis	DOP HAZ_009	-	Jan-2011
HIPAP No. 10 – Land Use Safety Planning	DOP HAZ_013	-	Jan-2011
Locational Guidelines – Development in the Vicinity of Operating Coal Seam Methane Wells	-	-	May-2004

Mr A J Pickard

Delegate to the NGPCCC for People for the Plains and the wider concerned Community.

5th September 2019