

# **Narrabri Gas Project Community Consultative Committee**

## **Meeting 40 – September 2019**

### **Action Item 40.2\_Response to PFTP Questions to Santos September 2019 NGPCCC**

#### **Questions 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?

#### **RESPONSE:**

Santos endeavours to respond to questions it receives from CCC members in a timely manner and has responded to more than 300 detailed questions since the CCC first met in December 2014.

Compiling responses to these questions can take some time to ensure responses provided are accurate. We will look for ways to improve response times.

#### **Questions 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?

#### **RESPONSE:**

2a. Santos is required to undertake routine pump maintenance activities on all wells throughout their operational life to ensure ongoing efficient and safe operation of the wells.

Routine maintenance is an important part of Santos' operations and at all times Santos uses the best engineering techniques to ensure natural gas is extracted safely without harm to the surrounding environment.

2b. The last workover performed in Narrabri occurred in Q1, 2016.

Typical workover activities are considered standard maintenance and may consist of activities such as pump removal, wellbore clean out (should it be required), instrument installation / replacement and installation of a replacement pump. Average frequency varies across sites based on a number of factors specific to each well including completion type.

#### **Questions 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?

#### **RESPONSE:**

The frequency of weed hygiene inspections is determined on a risk basis according to vehicle movements. Inspections are carried by experienced Santos personnel in compliance with all activity relevant approval conditions and regulatory requirements.

## Questions 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.

### 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)

### RESPONSE:

Santos implements erosion and sediment controls across all its sites and these controls are regularly maintained. The mulch referred to in the question was created from Pilliga sourced timber and forms part of the erosion and sediment controls in place across our operations. These controls are consistent with the requirements of the Managing Urban Stormwater: Soils and Construction, Vol 1, 4th Edition (Landcom 2004) – also known as the Blue Book.

## Questions 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?

### RESPONSE:

Petroleum exploration and production activity in NSW must be conducted in accordance with a petroleum title issued under the *Petroleum (Onshore) Act 1991*, with Santos holding three types of licences for our current activities in NSW: Petroleum exploration licence (PEL), Petroleum assessment lease (PAL) and Petroleum production lease (PPL).

The purpose of exploration and appraisal activities is to locate areas where gas resources may be present and establish the quality and quantity of those resources. This gas is referred to as appraisal gas.

Gas extracted during exploration and appraisal activities is beneficially used in accordance with relevant regulatory requirements including those relating to the payment of royalties.

The Division of Resources and Geoscience website provides further information on petroleum titles in NSW at <https://www.resourcesandgeoscience.nsw.gov.au/miners-and-explorers/applications-and-approvals/mining-and-exploration-in-nsw/about-petroleum-titles>.

## Questions 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?

### RESPONSE:

Santos received three letters from Ms Evans during May 2017 at Santos offices in Adelaide, Narrabri and Gunnedah. A response to the matters raised in the letters was posted to Ms Evans on 15 May 2017. Santos received a further letter from Ms Evans in late July 2017 at our head office in Adelaide. A response to this letter was sent in August 2017.

Ms Evans visited the Santos stand at AgQuip in August 2017 and asked a number of questions about matters associated with the Narrabri Gas Project. Questions were responded to at that time, however one of the questions asked related to naturally occurring radioactive material (NORM) and Ms Evans was advised that the Santos staff in attendance at the stand at the time of her visit did not have the technical knowledge or expertise to provide a response to the question. Ms Evans was advised that if the matter had been included in her submission to the NSW Department of Planning and Environment in relation to the Narrabri Gas Project EIS, that it would be considered as part of the Response to Submissions process.

After AgQuip was completed, a copy of Ms Evans submission was accessed from the Department of Planning and Environment (DPE) website to check if the matter of NORMs had been raised in that document. It was noted that the submission included a number of comments and observations relating to NORMs. Santos provided a Response to Submissions to the Department of Planning and Environment in April 2018 which is publicly available from the Major Projects website at <https://www.planningportal.nsw.gov.au/major-projects/project/10716>. A copy of Ms Evans submission is also available at that link.

## Questions 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?

### RESPONSE:

Well pads across Santos' operations are constructed in accordance with strict regulatory requirements and are designed to minimise any impacts to surrounding vegetation. Regular inspections of our infrastructure, including wells pads, demonstrate the controls are working as intended.

## Questions 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?

### RESPONSE:

The NSW Government *Code of Practice for Coal Seam Gas Well Integrity* provides mandatory standards for well design and construction to ensure the environmentally sound, safe production of coal seam gas and the protection of groundwater resources. The Code of Practice also provides the regulatory framework for monitoring and maintenance of coal seam gas wells.

A copy of the Code is available from the Division of Resources and Geoscience website at <https://www.resourcesandgeoscience.nsw.gov.au/landholders-and-community/coal-seam-gas/codes-and-policies/code-of-practice-for-coal-seam-gas-well-integrity>

## Questions 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?

## RESPONSE:

The Chief Scientist's Independent Review of Coal Seam Gas Activities in NSW recommended the establishment of a Community Benefits Fund. This recommendation was adopted in the NSW government's 2015 Gas Plan.

The Division of Resources and Geoscience provided a presentation to the Narrabri Gas Project Community Consultative Committee in September 2019 with information on the administration of the fund. A copy of the presentation is available from <https://narrabrigasproject.com.au/community/consultative-committee/september-2019/>.

Further information on the Community Benefits Fund is available from the Division of Resources and Geoscience website at <https://www.resourcesandgeoscience.nsw.gov.au/landholders-and-community/coal-seam-gas/community/community-benefits-fund>.

Santos has committed to contributing up to \$120 million into a Community Benefits Fund over the life of the project if the Narrabri Gas Project is approved.

## Questions 10

The screenshot shows the NSW Planning & Environment website. The top navigation bar includes links for 'About us', 'Media & events', 'Contact us', and a language selector. The main navigation menu lists 'Miners & explorers', 'Investors', 'Landholders & community', and 'Resources Regulator'. The 'Landholders & community' section is expanded, showing sub-links like 'Your rights', 'Public comment', 'Coal seam gas', 'Exploration & mining', 'Opal mining', 'Fossicking in NSW', and 'Renewable energy'. The 'Coal seam gas' link 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 contains a download link for 'Exploration Code of Practice: Community Consultation (313 KB PDF)'. Below this, it states that exploration licences and assessment leases for all resources (prospecting titles) are granted with the objective of encouraging ecologically sustainable development, social responsibility and building economic wealth for the people of NSW. It then explains that this 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. This 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. Finally, it states that this 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?

## RESPONSE:

Santos meets all requirements for community consultation reporting, including annual reports regarding the Narrabri Gas Project.

The *Petroleum (Onshore) Act 1991*, Part 13 specifies the timing for release of information for reports and data. Annual Reports, including annual community consultation reports remain confidential while a petroleum title is in full force. Please also refer to the *Onshore Petroleum Reporting and Data Submission* guidelines 'Reporting Guidelines' available from

[https://www.resourcesandgeoscience.nsw.gov.au/\\_data/assets/pdf\\_file/0005/534776/Onshore-petroleum-reporting-and-data-submission.pdf](https://www.resourcesandgeoscience.nsw.gov.au/_data/assets/pdf_file/0005/534776/Onshore-petroleum-reporting-and-data-submission.pdf)

The NSW Division of Resources and Geoscience has a public, online archive that provides access to non-confidential reports associated with coal and petroleum licences. The database DIGS® (Digital Imaging Geological Systems) is available at <http://digsopen.minerals.nsw.gov.au/>

## Questions 11

In the Tintfield 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.

## RESPONSE:

The 'EPA Report' referred to is condition E1 of Environment Protection Licence 20350, which relates to the management of the Tintfield ponds, and for their upgrade. The EPL is published on the Narrabri Gas Project website at: [https://narrabrigasproject.com.au/uploads/2019/01/190109\\_EPL-20350-Variation.pdf](https://narrabrigasproject.com.au/uploads/2019/01/190109_EPL-20350-Variation.pdf)

## Questions 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 CO<sub>2</sub> concentrations in the region of the NGP and/or provide an average value and an indication of variability in CO<sub>2</sub> concentration, so that the WEP can comment on the potential impact of CO<sub>2</sub> 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 CO<sub>2</sub> 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).



Independent Review: Narrabri Gas Project

### 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



**RESPONSE:**

In a July 2017 media release Department of Planning, Industry and Environment (DPIE) advised that:

*Leading experts will deliver further independent assessment of the proposed Narrabri Gas Project...eight experts have been engaged to review Santos' Environmental Impact Statement and provide independent advice and recommendations to the Department.*

*The experts will provide advice on economic impacts, land-use safety hazards and risks, cultural heritage and social impacts. A four-member Water Expert Panel chaired by Professor Peter Cook from the University of Melbourne will advise on water-related impacts.*

*They will also consider issues raised in submissions made by the community, including expert reviews undertaken by or on behalf of special interest groups.*

<https://www.planning.nsw.gov.au/News/2017/Independent-experts-to-provide-advice-on-the-Narrabri-Gas-Project>

At the September 2019 Narrabri Gas Project CCC meeting a DPIE representative advised that they are progressing the Assessment Report for the Narrabri Gas Project, and that final advice from the various independent experts will be included with/attached to the Assessment Report. Santos will consider the final advice from independent experts when it is available.

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ENDS