

Jane Munday - 13 April 2019

Subject	<b>DENR - Consultation Form - 683102</b>
From	noreply@denr.nt.gov.au
To	WebAdmin DENR
Sent	Saturday, 13 April 2019 10:32 AM

### Contact details

First name: Jane  
Surname: Munday  
Country: Australia  
Postcode: 0804

Stakeholder type:

### Feedback

Activity you are providing feedback on: McArthur Basin 2019 Drilling Program EP161

Category type: Economic, Social and cultural

If other, please specify:: I am commenting as a social and cultural impact assessment professional, also in my capacity as a PhD student and lead author for the proposed social, cultural and economic guidance note for the SREBA

Comments: While I recognise that social, cultural and economic impacts and opportunities are less significant at the exploration stage, I suggest the following should be addressed in the Santos Environmental Management Plan. It is inappropriate to use West Australia's narrow definition of 'the environment' when the project is in the Northern Territory. Unlike other States, WA confines impacts to social, cultural and economic 'surroundings' to those linked to biophysical impacts (ie disturbance to the natural environment and physical disturbance to cultural heritage). As noted by the recent Independent Scientific Panel Inquiry into Hydraulic Fracture Stimulation in Western Australia report (2018), this does not capture many adverse or beneficial effects on people and communities from projects. Indeed, this is borne out by the narrow scope of the EMP's potential social, cultural and economic risks, which are confined to amenity issues: Table ES-2 Summary of risk assessment Environmental Value Risk Sources Vehicle and plant movements generating dust Vehicle movements and drilling activities at night, including flaring generating light Noise and vibration from project activities Use of groundwater for project activities Vehicle and plant movements within the activity area disturbing stakeholders Vehicle movements and drilling activities / equipment use at night Plant and vehicles carrying weeds from outside the Project Area Project activities spreading weeds inside the activity area Ignition sources from plant and machinery, including flaring The transporting of weeds on project vehicles is a social or economic risk only if it is linked to impacts such as reduced enjoyment of the environment or lost

pastoral productivity. The EMP also restricts the definition of cultural impacts to cultural heritage, with no discussion of broader cultural issues in the archaeological cultural heritage report. Although the likely risk of other social, cultural and economic benefits or detrimental disturbance may be low, all potential impact pathways should be discussed (eg movement of workers, how many will live in the proposed accommodation camp, what code of behaviour will apply to drilling crews) and an explanation given of why the 17-week campaign is unlikely to generate substantial positive or negative effects. The definition of 'environment' used in this EMP is not in line with:

- the Northern Territory EPA's Guidelines for the Preparation of an Economic and Social Impact Assessment (2013)
- The Environmental Assessment Act (EA Act, 1982) (unsatisfactory as it is) defines 'environment' as 'all aspects of the surroundings of man including the physical, biological, economic, cultural and social aspects' without the limitation contained in Western Australia's guidance note
- the EPBC Act 1999, which defines the 'environment' as: (a) ecosystems and their constituent parts, including people and communities; and (b) natural and physical resources; and (c) the qualities and characteristics of locations, places and areas; and (d) heritage values of places; and (e) the social, economic and cultural aspects of a thing mentioned in paragraph (a), (b) and (c);
- Australia's Ecologically Sustainable Development Strategy (1992);
- more comprehensive conceptualisation of 'social, cultural and economic' impacts in other States (see NSW and Queensland in particular, where Santos also operates)
- national and international best practice standards, including the International Association for Impact Assessment (IAIA)'s Principles (2003) and Guidelines (2015), International Finance Corporation's Performance Standards, World Bank or IPIECA standards;
- the leading practice framework or 'rigorous' regulatory standards proposed by the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory Final report (2018) and agreed to by the Northern Territory Government;
- a proposed Technical Guidance Note for the social, cultural and economic component of the SREBA (Strategic Regional Environment and Baseline Assessment) due to be released shortly;
- public expectations. Stakeholder engagement


Given the stakeholder engagement records have been removed from the Appendices, in the interests of transparency, a summary report should cover issues raised by stakeholders.

Attachments:

No file uploaded

Privacy:

# Jane Munday - 15 April 2019

<b>Subject</b>	<b>DENR - Consultation Form - 683258</b>
<b>From</b>	noreply@denr.nt.gov.au
<b>To</b>	WebAdmin DENR
<b>Sent</b>	Monday, 15 April 2019 9:24 AM
<b>Attachments</b>	 190413-Fee dback-on-...

## Contact details

First name: Jane  
Surname: Munday  
Country: Australia  
Postcode: 0804

Stakeholder type:

## Feedback

Activity you are providing feedback on: McArthur Basin 2019 Drilling Program EP161

Category type: Social and cultural

If other, please specify::

Comments: This replaces feedback sent on 13 April with a pdf version

Attachments: 190413-Feedback-on-Santos-EMP.pdf, type application/pdf, 208.8 KB

Privacy:



13 April 2019

### Feedback on Santos Environmental Management Plan

While I recognise that social, cultural and economic impacts and opportunities are less significant at the exploration stage, I suggest the following should be addressed in the Santos Environmental Management Plan.

It is inappropriate to use West Australia's narrow definition of 'the environment' when the project is in the Northern Territory.

Unlike other States, WA confines impacts to social, cultural and economic 'surroundings' to those linked to biophysical impacts (ie disturbance to the natural environment and physical disturbance to cultural heritage). As noted by the recent *Independent Scientific Panel Inquiry into Hydraulic Fracture Stimulation in Western Australia* report (2018), this does not capture many adverse or beneficial effects on people and communities from projects. Indeed, this is borne out by the narrow scope of the EMP's potential social, cultural and economic risks, which are confined to amenity issues:

#### Table ES-2 Summary of risk assessment Environmental Value Risk Sources

- Vehicle and plant movements generating dust
- Vehicle movements and drilling activities at night, including flaring generating light
- Noise and vibration from project activities
- Use of groundwater for project activities
- Vehicle and plant movements within the activity area disturbing stakeholders
- Vehicle movements and drilling activities / equipment use at night
- Plant and vehicles carrying weeds from outside the Project Area
- Project activities spreading weeds inside the activity area
- Ignition sources from plant and machinery, including flaring

The transporting of weeds on project vehicles is a social or economic risk only if it is linked to impacts such as reduced enjoyment of the environment or lost pastoral productivity.

The EMP also restricts the definition of cultural impacts to cultural heritage, with no discussion of broader cultural issues in the archaeological cultural heritage report.

Although the likely risk of other social, cultural and economic benefits or detrimental disturbance may be low, all potential impact pathways should be discussed (eg movement of workers, how many will live in the proposed accommodation camp, what code of behaviour

Social research and  
impact assessment

Facilitation

Communication strategies

Community consultation





will apply to drilling crews) and an explanation given of why the 17-week campaign is unlikely to generate substantial positive or negative effects.

The definition of 'environment' used in this EMP is not in line with:

- the Northern Territory EPA's *Guidelines for the Preparation of an Economic and Social Impact Assessment* (2013)
- The *Environmental Assessment Act* (EA Act, 1982) (unsatisfactory as it is) defines 'environment' as 'all aspects of the surroundings of man including the physical, biological, economic, cultural and social aspects' without the limitation contained in Western Australia's guidance note
- the *EPBC Act 1999*, which defines the 'environment' as: (a) ecosystems and their constituent parts, including people and communities; and (b) natural and physical resources; and (c) the qualities and characteristics of locations, places and areas; and (d) heritage values of places; and (e) the social, economic and cultural aspects of a thing mentioned in paragraph (a), (b) and (c);
- Australia's *Ecologically Sustainable Development Strategy* (1992);
- more comprehensive conceptualisation of 'social, cultural and economic' impacts in other States (see NSW and Queensland in particular, where Santos also operates)
- national and international best practice standards, including the International Association for Impact Assessment (IAIA)'s Principles (2003) and Guidelines (2015), International Finance Corporation's Performance Standards, World Bank or IPIECA standards;
- the leading practice framework or 'rigorous' regulatory standards proposed by the *Scientific Inquiry into Hydraulic Fracturing in the Northern Territory* Final report (2018) and agreed to by the Northern Territory Government;
- a proposed Technical Guidance Note for the social, cultural and economic component of the SREBA (Strategic Regional Environment and Baseline Assessment) due to be released shortly;
- public expectations.

### Stakeholder engagement

Given the stakeholder engagement records have been removed from the Appendices, in the interests of transparency, a summary report should cover issues raised by stakeholders.

Jane Munday

Social research and  
impact assessment

Facilitation

Communication strategies

Community consultation



# Dennis Venning - 6 May 2019

<b>Subject</b>	<b>DENR - Consultation Form - 690167</b>
<b>From</b>	noreply@denr.nt.gov.au
<b>To</b>	WebAdmin DENR
<b>Sent</b>	Monday, 6 May 2019 4:22 PM

## Contact details

First name: Dennis  
Surname: Venning  
Country: Australia  
Postcode: 0860

Stakeholder type: Community

## Feedback

Activity you are providing feedback on: McArthur Basin 2019 Drilling Program EP161

Category type: Social and cultural

If other, please specify::

Comments: To whom it may concern, There are a number of issues I believe need to be addressed before the proposed activities can commence. There is little evidence that the sociocultural environment is being adequately considered under the risk management plan presented; the name of the traditional owners (the Gudanji) is never mentioned in the document. This lack of evidence is exacerbated by the complete removal of Appendix I from the attached Appendices, which supposedly details what has been communicated to relevant stakeholders. There is thus nothing to suggest that attempts have been made to implement Hydraulic Fracturing Inquiry 11.6: That in collaboration with the Government, Land Councils and AAPA, an independent, third-party designs and implements an information program to ensure that reliable, accessible, trusted and accurate information about any onshore shale gas industry is effectively communicated to all Aboriginal people who will be affected by any onshore shale gas industry. That the program be funded by the gas industry. The lack of consultation with stakeholders is further emphasised by vague "further engagement" that Santos apparently commits to before works begin; it is inappropriate for this EMP to be approved without these consultations taking place and the contents of what is communicated being made available to the public, as recommended by the inquiry. Thank you for your time.

Attachments: No file uploaded

Privacy:

# Private Submission - 7 May 2019

<b>Subject</b>	<b>DENR - Consultation Form - 690515</b>
<b>From</b>	noreply@denr.nt.gov.au
<b>To</b>	WebAdmin DENR
<b>Sent</b>	Tuesday, 7 May 2019 9:55 PM

## Contact details

First name: Name withheld  
Surname: Name withheld  
Country: Australia  
Postcode: 0836

Phone number:

Stakeholder type: Community

## Feedback

Activity you are providing feedback on: McArthur Basin 2019 Drilling Program EP161

Category type: Flora and fauna, Chemicals, Climate change, Economic, Regulation and compliance, Social and cultural, Traffic and roads, Waste, Water, Weeds, Well integrity

If other, please specify::

Comments: I want my NT protected against fracking and all unconventional gas mining. Our environment should be kept pristine. We have a 2.2 billion tourism industry and this should not be put in jeopardy by a mining company who can and will walk away from any hazards. There is no economic gain that can be put above our water quality.

Attachments: No file uploaded

Privacy: Tick this box if you wish for your name and contact details to be treated as confidential. While the department will use their best endeavours to comply with your request, you are advised that your complete submission may be disclosed in accordance with the Information Act 2002 and if otherwise required by law.

# Private Submission - 8 May 2019

<b>Subject</b>	<b>DENR - Consultation Form - 690835</b>
<b>From</b>	noreply@denr.nt.gov.au
<b>To</b>	WebAdmin DENR
<b>Sent</b>	Wednesday, 8 May 2019 7:29 PM

## Contact details

First name: Name withheld  
Last name: Name withheld  
Country: Australia  
Postcode: 0836

Phone number:

Stakeholder type: Community

## Feedback

Activity you are providing feedback on: McArthur Basin 2019 Drilling Program EP161

Category type: Flora and fauna, Chemicals, Climate change, Economic, Regulation and compliance, Social and cultural, Traffic and roads, Waste, Water, Weeds, Well integrity

If other, please specify:: Tourism


Comments: The NT people do not want fracking! You do not have a mandate to frack. We already have concerns for our water. The tourism industry is worth 2.2 billion per year. Why would anyone visit the NT if it is not pristine.

Attachments: No file uploaded

Privacy: Tick this box if you wish for your name and contact details to be treated as confidential. While the department will use their best endeavours to comply with your request, you are advised that your complete submission may be disclosed in accordance with the Information Act 2002 and if otherwise required by law.



# Gerard Nicot - 8 May 2019

<b>Subject</b>	<b>DENR - Consultation Form - 690613</b>
<b>From</b>	noreply@denr.nt.gov.au
<b>To</b>	WebAdmin DENR
<b>Sent</b>	Wednesday, 8 May 2019 9:17 AM
<b>Attachments</b>	 Santos-NT-EP-161-co...

## Contact details

First name: Gerard  
Surname: Nicot  
Country: Australia  
Postcode: 6026  
Stakeholder type: Business

## Feedback

Activity you are providing feedback on: McArthur Basin 2019 Drilling Program EP161  
Category type: Flora and fauna, Regulation and compliance, Traffic and roads, Waste, Water, Weeds, Well integrity, Other  
If other, please specify:: Fire Management; Emergency response; Risk assessment tables; Environment Emergencycontact list  
Comments: See attached  
Attachments: Santos-NT-EP-161-comment.docx, type application/vnd.openxmlformats-officedocument.wordprocessingml.document, 25.8 KB  
Privacy:

## Santos NT EP comment – April 19

The Santos ep161 drilling emp is a very interesting document to read and it is obvious that Santos did some solid research on the actual environment of the region and near their planned activity area. The document also demonstrates the impacts and risks associated with activity but, in my opinion, that demonstration is generic and not specific enough to that particular project and I will attempt to prove my point by capturing some of their commitments and challenging Santos into developing a more localised approach to the impacts and risks and provide the public not only with better information but also better demonstrate to that public Santos's capabilities and commitment.

- Appendix A

I cannot see a description of the fence and pits in regard to protecting the wildlife. Fencing around a sump should be designed to stop large and small animal to enter the sump. In the eventuality an animal falls into the sump several escape routes should be in place inside each the sump so that the animal can climb back up.

it is likely that Protestors will impact that operation. That subject could be outside the emp but I have seen dead dingo and fox thrown over the fence by protestors to get a nice photo and I am curious about the fencing being only temporary and no information about management of protestors, if any, who will not hesitate to invade the site (drill and camp) and potentially create outcomes detrimental to the environment, the workforce, Santos' reputation and the oil industry.

Could Santos present impact/ risk and eventually elimination of those risks?

- Drilling

The first 300 to 400m are challenging to drill. The formations are like a sponge and drill cutting cannot be brought back to surface. Santos is indicating that water will be used to drill that section, but water is often not a good medium to clear the drill cuttings and often drilling mud is injected in the hole to assist water with the drilling / cleaning process and be able to continue drilling ahead successfully. Drilling mud will therefore enter the aquifer.

Once the section is drilled and the 13 3/8 conductor is in place cement will be pumped around that conductor. Cement will follow the same way than the water and will very unlikely reach surface. It is possible that the 20" conductor has been "shaken" during drilling and Santos could be in a situation where a significant length of the 13 3/8" casing is unsupported by cement and with a potentially weak conductor. A potential risk is an unstable drill site area under the drilling rig footing. A more likely risk is a wellhead sinking under the additional weight of the next string of casings ( 9 5/8" and 5") or potentially moving up when performing the DFIT.

Considering the formations are like a sponge, air and water are present in the aquifer and with no cement around the conductor, corrosion of the conductor will exist over the life of the well – 20 to 30 years - and eventually hydrocarbon could enter the aquifer.

Could Santos present impact/ risk and eventually elimination of those risks?

- Traffic Management

This paragraph is not capturing the drilling package- camp and rig- potentially more than 100 trailers over a short period and it is that package that will create the most disturbance to local traffic during the initial mobilisation and later, demobilisation.

The Carpentaria highway from Daly Water to approximately the junction of the dirt track going to the Inacumba drill site is as wide as 3 lanes before narrowing to 2 lanes. Beside normal vehicles, regular heavy haulage exists on that HWY. The drilling package (camp and rig and other material) will be delivered by road trains , either single, double or triple, and a high-density traffic will exist over a short period.

Section of the HWY near the track entrance is constructed to support moving vehicles and may not support a repeated stop and start of road trains entering/exiting the track and the possibility of the HWY seal surface near the track entrance becoming slightly rolled and permanently affecting normal traffic exists.

It is possible that the local public will like to know that the heavy traffic is safe for the gas pipeline buried under the entrance of the dirt track.

Could Santos provide a description and suitability of the junction, impact / risks/ management of that high -density period with local traffic, school bus hour if any, and other comments above?

- Airstrip

Crew change tends to mean twin engines and in good practice such an airstrip refers to the RFDS construction standards. A visual landing on a dirt airstrip is slightly different for the pilot than one on a seal airstrip.

Would that airstrip and the transport company be audited to confirm both are suitable to ensure a safe operation?

- Waste Management

Appendix A sump spoil volume usable could be easily questioned by the public.

Could Santos provide some explanation of their method to estimate those volumes?

Again, Santos did an excellent piece of educating the public in estimating the volume of rain water that could impact their operation.

Santos commitment: All drilling operations will occur outside the wet season, including the removal and transfer of all residual drilling fluids, if required. No residual drilling fluids will be stored in open pits or tanks during the wet season.

Referring to table 3.1 indicative schedule, a start by end of July will bring the drilling and evaluation well into the wet season and Santos commitment above is a big one that can be easily challenged. Also, removal and transfer of sludge from open pits is a mini project within the project and an emp should cover that mini project and that mini project is almost impossible to implement once the dirt access track is soaked with rain water.

Santos commitment: A minimum of 1m freeboard will be maintained in all pits that contain drilling fluid throughout the dry season. This is conservative, given the 90-day AEP is 0.321 m. This adequately considers the potential overtopping risk due to potential wind and wave action.

In the eventuality the sumps are still full and a cyclone travels east to west from the gulf of Carpentaria to the Bonaparte gulf by crossing below Darwin I doubt the 1 m freeboard will provide enough storage volume to stop an overflow.

Could Santos present impact/ risk and eventually elimination of the risk of overflowing sumps?

- Weeds Management

It is certain that Santos is educating the public on local toxic weeds with all their research work. In my opinion they could explain better their processes to physically reduce the presence of weeds. Missing in the document is the description of the activities dedicated to ensuring all vehicles and equipment will be weed free prior to entry onto the property. For examples, how are they going to wash down the trucks and the different component of the drilling package -drilling rig and camp, where the wash station will be located and description of that station, how will they manage and dispose of the waste created by the washing.

It appears that the weeds control will exist only when coming inside their operating area but not when coming out. They are indicating a presence on site of up to 25 weeks, regular weekly traffic

will exist, and should the spawning season of the local weeds happen during that period why should all those seeds be moved outside Santos area of activity.

Could Santos clarify why the weeds management is ignored at the end of activity when all the equipment will be demobilised?

Table 3.6 is indicating the operational traffic.

Could Santos precise if this regular traffic will be subject or not to a weed management process every time they are going in and out the Santos area of activity?

- Fire Management

Again, a lot of research work and educating the public. The public has raised their concern about fire originating from a drilling operation which, in my opinion, is strange because drilling means hydrocarbon and fire does not mix well with oil or gas. On the other hand, almost every time I have been driving in the NT, I drove inside smoke or along a fire near the road. In my opinion there is a lot more chance that the Santos operation will be affected by an incoming bush fire rather than starting one.

In my opinion the emp fire management section does not demonstrate well enough to the public the Santos and their drilling contractor's management prevention measures. For example they could show a rig and camp lay-out indicating the location of all the different fire extinguishers and a description of those extinguishers/ location of smoking area/ Description of rapid intervention fire unit/ Permit to work for any hot work/ management of the hot work area/ regular on site training/ no flaring during operational phases/ fuel tank location/ fire breaks

Concerning incoming bush fire: description of fire breaks near camp and drilling site ( it takes 3 min for a mining camp unit to be completely destroyed by fire) / is the pile of shrub created by the site construction a big heap that will attract a 30m high flame or managed other-wise/ what would be the emergency procedures – survive - should a bush fire come to the sites, bush fire management plan / bush fire warning system.

Santos should demonstrate that they have procedures in place so that everybody will survive a bush fire.

- Emergency Response Plan

Considering that this emp is the only document seen by the public I think that Santos could expand on the content of that ERP plan to demonstrate that they have solid procedures in place to cover fire risk, oil spill, emergency activation, emergency exercises, personnel evacuation, emergency response preparation, protestor management.

- Risk assessment tables

Like most of this emp the content is, in my opinion, generic and not specific enough to the location of Santos activity. For example, the speed limit of 80 km/hour applies to any dirt road anywhere in Australia but more particularly to a compacted, long time and even gazetted existing dirt road. Is that speed appropriate to Santos operational access dirt road, not only for dust control but also to ensuring a safe movement of trucks, personal vehicles, fuel trucks and others on a 6m wide new dirt track?

Those tables are capturing an initial risk ranking and, after mitigations have been implemented, a residual risk ranking to ALARP but as long as one activity exists, the incident/accident can still happen regardless of all the preventions and mitigations in place for that activity. Those tables never capture the response management to an accident/incident should it occur.

In my opinion, a paragraph in the emp should exist capturing 2 or 3 major accident events and for each event, Santos to demonstrate to the public their detailed emergency response procedures

specific to those. For example, how do they manage a trailer full of mud chemicals ( powder and liquid) or the fuel delivery truck that has capsized and created a spill or a road accident with a crew change vehicle and multiple casualties and starting a fire.

Santos could also mention to the public that a mock live exercise will be conducted prior to start drilling operation.

- Contact list

Why an environmental emergency contacts list is not attached to that emp?

Wishing Santos a successful project and full support from the public

END

# Private Submission - 8 May 2019

<b>Subject</b>	<b>DENR - Consultation Form - 690820</b>
<b>From</b>	noreply@denr.nt.gov.au
<b>To</b>	WebAdmin DENR
<b>Sent</b>	Wednesday, 8 May 2019 5:05 PM

## Contact details

First name: Name withheld  
Surname: Name withheld  
Country: Australia  
Postcode: 2480  
Stakeholder type: Community

## Feedback

Activity you are providing feedback on: McArthur Basin 2019 Drilling Program EP161  
Category type: Flora and fauna, Chemicals, Climate change, Regulation and compliance, Social and cultural, Waste, Water, Well integrity

If other, please specify::

Comments: Fracking and fossil fuels create known environmental damage and dangers, as recognised now in the Rocky Hill Coal Mine decision NSW, that as an approving government agency you must accept some legal responsibility for, and consider that legal precedence. As of today, GRL will not be appealing that decision. The science is clear that the use of fossil fuels to generate energy, causes known damage to the atmosphere through carbon emissions. Fracking has not been assessed adequately over long enough time frames in regard to pollution of water systems, thereby potentially creating negative environmental and human health impacts. Yours sincerely, Susan Wallace.

Attachments: No file uploaded

Privacy: Tick this box if you wish for your name and contact details to be treated as confidential. While the department will use their best endeavours to comply with your request, you are advised that your complete submission may be disclosed in accordance with the Information Act 2002 and if otherwise required by law.

# Private Submission - 8 May 2019

<b>Subject</b>	<b>DENR - Consultation Form - 690829</b>
<b>From</b>	noreply@denr.nt.gov.au
<b>To</b>	WebAdmin DENR
<b>Sent</b>	Wednesday, 8 May 2019 6:48 PM

## Contact details

First name: Name withheld  
Surname: Name withheld  
Country: Australia  
Postcode: 0800

Phone number:

Stakeholder type: Community

## Feedback

Activity you are providing feedback on: McArthur Basin 2019 Drilling Program EP161

Category type: Flora and fauna, Chemicals, Climate change, Social and cultural, Waste

If other, please specify::

Comments: It is my understanding that fracking is undoubtedly get harmful to the environment; including our water. Poisoning our earth is not the way.

Attachments: No file uploaded

Privacy: Tick this box if you wish for your name and contact details to be treated as confidential. While the department will use their best endeavours to comply with your request, you are advised that your complete submission may be disclosed in accordance with the Information Act 2002 and if otherwise required by law.

# Margaret Bloor - 8 May 2019

<b>Subject</b>	<b>DENR - Consultation Form - 690832</b>
<b>From</b>	noreply@denr.nt.gov.au
<b>To</b>	WebAdmin DENR
<b>Sent</b>	Wednesday, 8 May 2019 7:04 PM

## Contact details

First name: Margaret  
Surname: Bloor  
Country: Australia  
Postcode: 2770  
Stakeholder type: Community

## Feedback

Activity you are providing feedback on: McArthur Basin 2019 Drilling Program EP161  
Category type: Flora and fauna, Chemicals, Climate change, Social and cultural, Waste, Water, Weeds, Other  
If other, please specify:: The whole issue of FRACKING.  
Comments: I have worked with Companies big and small. They do as they please when they please. Nothing is done to them if they do the wrong thing. I have no intention of ever giving my approval to FRACKING anywhere in Australia or anywhere else on this Damaged Planet of ours. I think it is a disgrace anyone with an Education would not know or realise FRACKING is the most Dangerous thing that we can do to our only home, EARTH. It is a SIN which ever way you look at it. There is Karma. Yours sincerely, Margaret Bloor.  
Attachments: No file uploaded  
Privacy:



# Private Submission - 8 May 2019

<b>Subject</b>	<b>DENR - Consultation Form - 690837</b>
<b>From</b>	noreply@denr.nt.gov.au
<b>To</b>	WebAdmin DENR
<b>Sent</b>	Wednesday, 8 May 2019 7:59 PM

## Contact details

First name: Name withheld  
Surname: Name withheld  
Country: Australia  
Postcode: 3550  
Stakeholder type: Community

## Feedback

Activity you are providing feedback on: McArthur Basin 2019 Drilling Program EP161

Category type: Chemicals

If other, please specify::

Comments: No Fracking NT , Why are we even doing this , how utterly disrespectful of the traditional owners culture . Where is the Union. lets see the MSDS , Where are the Hygenists reports on each chemical or substance and the potential reactions to mixed fracking cocktails any interaction with underground minerals etc. The public need to be informed as to what chemicals are being deliberately injected into the aquifers. And what chemicals workers are being exposed to. Materials Safety Data Sheets must be provided. Where is the fracking company's hygienists report ?  
<https://vic.cfmeu.org.au/.../150720-ohs-alert-hazardous...>  
<https://www.legislation.nsw.gov.au/...>

Attachments: No file uploaded

Privacy: Tick this box if you wish for your name and contact details to be treated as confidential. While the department will use their best endeavours to comply with your request, you are advised that your complete submission may be disclosed in accordance with the Information Act 2002 and if otherwise required by law.

# Bronte Pigot - 8 May 2019

<b>Subject</b>	<b>DENR - Consultation Form - 690840</b>
<b>From</b>	noreply@denr.nt.gov.au
<b>To</b>	WebAdmin DENR
<b>Sent</b>	Wednesday, 8 May 2019 8:06 PM

## Contact details

First name: Bronte  
Surname: Pigot  
Country: Australia  
Postcode: 0812

Phone number:

Stakeholder type: Community

## Feedback

Activity you are providing feedback on: McArthur Basin 2019 Drilling Program EP161

Category type: Flora and fauna, Chemicals, Climate change, Economic, Regulation and compliance, Social and cultural, Traffic and roads, Waste, Water, Weeds, Well integrity

If other, please specify::

Comments: This plan is unsustainable and will destroy our precious ecosystem and threaten the environment. This plan should include all the information, including fracking details. They have failed to list the fracking chemicals. They have failed with land clearing information, waste details or well integrity planning. They have refused traditional custodians claim to land and threaten the safety of those who live in the areas of proposed sites.

Attachments: No file uploaded

Privacy:

# Private Submission - 8 May 2019

<b>Subject</b>	<b>DENR - Consultation Form - 690846</b>
<b>From</b>	noreply@denr.nt.gov.au
<b>To</b>	WebAdmin DENR
<b>Sent</b>	Wednesday, 8 May 2019 9:08 PM

## Contact details

First name: Name withheld  
Surname: Name withheld  
Country: Australia  
Postcode: 0850  
Stakeholder type: Community

## Feedback

Activity you are providing feedback on: McArthur Basin 2019 Drilling Program EP161  
Category type: Flora and fauna, Chemicals, Regulation and compliance, Social and cultural, Waste, Water

If other, please specify:

Comments: Fracking endangers our water and livelihood. Once contaminated there is no going back. This plan should include all the information, including fracking details. They have failed to list the fracking chemicals. They have failed with land clearing information, waste details or well integrity planning. How can the Minister be satisfied that Santos' activities meet the law? The Minister must ask for a new plan with all the details in one full plan.

Attachments: No file uploaded

Privacy: Tick this box if you wish for your name and contact details to be treated as confidential. While the department will use their best endeavours to comply with your request, you are advised that your complete submission may be disclosed in accordance with the Information Act 2002 and if otherwise required by law.

# Steve de Kretser - 8 May 2019

<b>Subject</b>	<b>DENR - Consultation Form - 690854</b>
<b>From</b>	noreply@denr.nt.gov.au
<b>To</b>	WebAdmin DENR
<b>Sent</b>	Wednesday, 8 May 2019 10:39 PM

## Contact details

First name: Steve  
Surname: de Kretser  
Country: Australia  
Postcode: 0810

Phone number:

Stakeholder type: Landholder/occupier

## Feedback

Activity you are providing feedback on: McArthur Basin 2019 Drilling Program EP161

Category type: Flora and fauna, Chemicals, Climate change, Regulation and compliance, Social and cultural, Waste, Water, Well integrity, Other

If other, please specify:: Fracking is unnecessary

Comments: This plan should include all the information, including fracking details. They have failed to list the fracking chemicals. They have failed with land clearing information, waste details or well integrity planning.

Attachments: No file uploaded

Privacy:

# Private Submission - 8 May 2019

<b>Subject</b>	<b>DENR - Consultation Form - 690857</b>
<b>From</b>	noreply@denr.nt.gov.au
<b>To</b>	WebAdmin DENR
<b>Sent</b>	Wednesday, 8 May 2019 11:48 PM

## Contact details

First name: Name withheld  
Surname: Name withheld  
Country: Australia  
Postcode: 0850

Phone number:

Stakeholder type: Community

## Feedback

Activity you are providing feedback on: McArthur Basin 2019 Drilling Program EP161

Category type: Flora and fauna, Chemicals, Climate change, Economic, Regulation and compliance, Social and cultural, Traffic and roads, Waste, Water, Well integrity

If other, please specify:: Fracking details

Comments: This plan should include all the information, including fracking details. They have failed to list the fracking chemicals. They have failed with land clearing information, waste details or well integrity planning. How can the Minister be satisfied that Santos' activities meet the law? The Minister must ask for a new plan with all the details in one full plan. Don't frack anywhere in the NT! The public are being ignored at the expense of short term monetary gain & greed with irreversible damage to our water & environment.

Attachments: No file uploaded

Privacy: Tick this box if you wish for your name and contact details to be treated as confidential. While the department will use their best endeavours to comply with your request, you are advised that your complete submission may be disclosed in accordance with the Information Act 2002 and if otherwise required by law.

# Marlene Hodder - 9 May 2019

<b>Subject</b>	<b>DENR - Consultation Form - 690868</b>
<b>From</b>	noreply@denr.nt.gov.au
<b>To</b>	WebAdmin DENR
<b>Sent</b>	Thursday, 9 May 2019 6:48 AM

## Contact details

First name: Marlene  
Surname: Hodder  
Country: Australia  
Postcode: 0870  
Stakeholder type: Landholder/occupier

## Feedback

Activity you are providing feedback on: McArthur Basin 2019 Drilling Program EP161

Category type: Climate change, Social and cultural, Water

If other, please specify::

Comments: I am concerned about the effect the proposed fracking industry will have on our invaluable environment and water sources. I have lived in the Northern Territory for decades and I deeply appreciate the uniqueness of the land and its natural inhabitants. Fracking puts the NT at risk of environmental degradation with untold consequences that would be difficult to mitigate. We cannot take unprecedented risk with our water. The Northern Territory is in financial crisis at the moment but we need more creative and imaginative ways to grow our economy and progress, not risky ventures that might boost our economy in the short term but would have untold and irrevocable detrimental consequences.

Attachments: No file uploaded

Privacy:

# Graeme Sawyer (Protect Country Alliance) - 9 May 2019

Subject	<b>DENR - Consultation Form - 691266</b>
From	noreply@denr.nt.gov.au
To	WebAdmin DENR
Sent	Thursday, 9 May 2019 4:09 PM

## Contact details

First name: Graeme  
Surname: Sawyer  
Country: Australia  
Postcode: 0810  
Stakeholder type: Community

## Feedback

Activity you are providing feedback on: McArthur Basin 2019 Drilling Program EP161

Category type: Flora and fauna, Chemicals, Regulation and compliance, Social and cultural, Waste, Water, Weeds

If other, please specify::

Comments: On behalf of Protect Country Alliance, we are very concerned with this Santos EMP and the exclusions throughout the plan. Firstly, any EMP needs to be assessed against the finalised Code of Practice for onshore petroleum activities. Yet this code has yet to be finalised and completed. This should happen first, before this EMP can be adequately assessed. An EMP must include required information under the Petroleum (Environment) Regulations, yet this EMP misses critical sections of that regulation. It is inadequate that this plan does not include the Well Operations Management Plan (WOMP). Critical detail about how the construction of the well, drilling, DFIT, fracturing, monitoring, well abandonment should be considered together in the one EMP, as the activities are completely interrelated. The biodiversity impacts of the proposal are unacceptable, particularly the risk to birdlife from open sumps, tanks and waste ponds. The desktop analysis for species surveys and biodiversity work is inadequate and needs to be more on ground, specifically targeting places and pathways that will be impacted. In a remote area such as this, desktop survey is never going to be adequate because of the lack of studies across the area. This can only be described as data deficient and so any decisions based on it are suspect. The precautionary principle in the regulation requires a more detailed response to biodiversity. For such a risky process as fracking there should be an undertaking to try to clarify some of these issues. The Code of Practice for Petroleum Activities in the Northern Territory sets out the mandatory requirements for management plans for wastewater and spills. The Code states that an EMP for a petroleum activity must include a Spill Management Plan (SMP). The Appendix H page 5 Spill Management Plan is vague and requires more information. There is very little

information on leak reduction or how response to risks will play out operationally. Throughout the report there are general comments that do not actually provide much evidence about what will actually happen when situations arise. Further, we note that an EMP may only be submitted for approval after the interest holder has carried out stakeholder engagement. We are concerned that the interest holder may not have provided full information about the hydraulic fracturing process as part of their obligation to give each stakeholder information about: (i) the regulated activity the interest holder proposes to carry out; and (ii) the location (or locations) where it is proposed to carry out the activity; and (iii) the anticipated environmental impacts and environmental risks of the activity; and (iv) the proposed environmental outcomes in relation to the activity; and (v) the possible consequences of carrying out the activity to the stakeholder's rights or activities; (cl 7, PER). The risks need to be as low as reasonably practical and acceptable - yet there is no information about the full range of activities that this part EMP is designed to enable. This Santos EMP simply doesn't address all the matters in the code or the regulations. According to this regulated activity, the Minister has to be satisfied that it meets requirements. This includes the chemicals used and the wastewater management plan - this is all a legislated requirement. Santos must demonstrate how they are meeting all the code elements for their full activity. In light of the less than adequate information, and the key components of the hydraulic fracturing operations missing from this plan, we recommend the Minister enacts the power of the Petroleum (Environment) Regulations Division 2 to request more information and issue a resubmission notice for a full EMP by Santos. Because of the inadequate information some of the items are unable to be answered. EG details of biocides.


Attachments:

No file uploaded

Privacy:



# Alexander Read (ALEC) - 9 May 2019

<b>Subject</b>	<b>DENR - Consultation Form - 691290</b>
<b>From</b>	noreply@denr.nt.gov.au
<b>To</b>	WebAdmin DENR
<b>Sent</b>	Thursday, 9 May 2019 4:38 PM
<b>Attachments</b>	 SANTOS-Mc Arthur-Ba...

## Contact details

First name: Alexander  
Surname: Read  
Country: Australia  
Postcode: 0870  
Stakeholder type: NGO

## Feedback

Activity you are providing feedback on: McArthur Basin 2019 Drilling Program EP161

Category type: Regulation and compliance

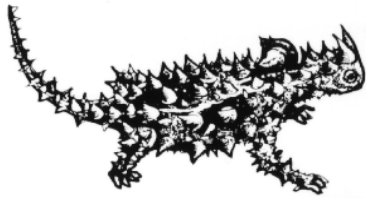
If other, please specify::

Comments: See submission attached. Our comments are seeking clarification on the approval process under the PER and the piecemeal approach to releasing EMPs for the activities on that permit area.

Attachments: SANTOS-McArthur-Basin-Drilling-Program-ALEC-Submission.pdf, type application/pdf, 162.4 KB

Privacy: Tick this box if you wish for your name and contact details to be treated as confidential. While the department will use their best endeavours to comply with your request, you are advised that your complete submission may be disclosed in accordance with the Information Act 2002 and if otherwise required by law.

# Arid Lands Environment Centre, Inc.



Office 90 Gap Rd, The Gap  
PO Box 2796 Alice Springs  
Mail NT 0871 Australia  
Phone +61 (08) 8952 2497  
Fax +61 (08) 8953 2988  
E-mail [info@alec.org.au](mailto:info@alec.org.au)  
ABN 50 100 640 918

---

## McArthur Basin Drilling Program 2019 Environment Management Plan ALEC Submission

The Arid Lands Environment Centre (ALEC) is central Australia's peak environmental organisation that has been advocating for the protection of nature and ecologically sustainable development of the arid lands since 1980.

ALEC is engaged with the regulatory reform required to implement all 135 recommendations from the Final Report of the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory. While we maintain that there is no acceptable risk posed by the industry, our comments are provided on this Environment Management Plan (EMP) to ensure legal compliance with the updated regulatory framework. In its current form the EMP falls short of full legal compliance with the required assessment process. The piecemeal approach to EMP publication also precludes the opportunity for a full assessment of the cumulative impacts of the proposal. This is not a suitable assessment process nor appropriate public participation and should not be repeated as prospective EMPs are developed.

### Activities

The EMP states that the activity: "may also include the impact monitoring borehole". We note that this is a prescribed activity under clause 5 of the *Petroleum Environment (Regulations)* (PER). Our question is firstly, will this EMP authorise that activity and secondly, if that prescribed activity is included in this EMP why were the civil works separated out into another EMP that is not available for public comment? On what basis is the proponent deciding whether this EMP will cover the impact monitoring bore?

The PER does not prevent a proponent from including multiple regulated activities in one plan, they should therefore be encouraged to submit plans that include all the relevant prescribed activities.

### Assessment and approval

It is disingenuous and confusing to provide separate EMPs outlining the environmental impacts and activities associated with hydraulic fracturing and drilling that can be anticipated to occur on the permit area.

The EMP in its current form provides a general overview of the prescribed activities, however it does not include enough information to fulfill the assessment process requirements. The PER mandates that the Minister must make a determination based on a full assessment of the environmental impacts of the proposal. This EMP does not provide the Minister with enough information to make an assessment that the risk is as low as reasonably practical and acceptable. This is because there is insufficient information contained in the EMP to address all the factors outlined in Schedule 1 of the Code of Practice.

The Draft Code of Practice requires the EMP to outline how it will implement requirements of the Code. The EMP does not clearly address mandatory or preferred requirements and does not provide specific information about the process for implementing those requirements. While the EMP states that: "the code of practice will be implemented" we submit that this hardly constitutes a clear implementation strategy. It is therefore non-compliant with the code and does not provide the Minister with all the information necessary

---

to make a determination under the PER. Additionally, it is doubtful that an EMP is able to be legally compliant with a code that is still in draft form.

### **Cumulative impacts**

The EMP is deficient in that it does not prescribe the complete list of matters relevant to the assessment process; especially cumulative impacts. By omitting any detail about land clearing and civil works the EMP is not compliant with Schedule 1, part 3(2)(b) as it does not allow for an assessment of the issues required to make a determination on the cumulative impacts of the activity in the permit area.

The EMP does not comply with Schedule 1 part 3(2)(b) as it has not included an assessment of the cumulative impacts ‘in conjunction with any other activities or events that occurred or may occur in or near the permit area for the regulated activity.’”


### **Conclusion**

The EMP needs to be resubmitted with additional approval information to enable compliance with the PER. In the alternative, the submission period should be extended to ensure that the Minister is given access to all necessary information, including how the Code of Practice will be implemented and the cumulative impacts of all the activities likely to occur on the permit area.

Furthermore, the process of separating out EMPs should not continue as it prevents public oversight of the full scope of activities. This forces the Minister to assess individual aspects of the entire activity occurring on the permit area without considering civil works or land clearing. This precludes a truly cumulative evaluation of the activity as required by the Fracking Final Report and the PER. Finally, the public has been denied an opportunity to be informed on the cumulative impacts of the prescribed activities.

The proponent should be instructed in the future to submit EMPs with multiple regulated activities within the one plan to provide for full public disclosure and participation. If this is not the case, then assessment decisions will not be based on the full range of activities occurring on a permit area.

# Naomi Hogan (Lock the Gate) - 9 May 2019

<b>Subject</b>	<b>DENR - Consultation Form - 691296</b>
<b>From</b>	noreply@denr.nt.gov.au
<b>To</b>	WebAdmin DENR
<b>Sent</b>	Thursday, 9 May 2019 5:01 PM
<b>Attachments</b>	 Lock-the-G ate-Sub-o...

## Contact details

First name: Naomi  
Surname: Hogan  
Country: Australia  
Postcode: 2000

Phone number:

Stakeholder type: NGO

## Feedback

Activity you are providing feedback on: McArthur Basin 2019 Drilling Program EP161

Category type: Flora and fauna, Chemicals, Regulation and compliance, Waste, Water, Well integrity, Other

If other, please specify:: compliance with regulations

Comments: Please see the attached submission.

Attachments: Lock-the-Gate-Sub-on-Santos-McArthur-Drilling-program-2019.docx, type application/vnd.openxmlformats-officedocument.wordprocessingml.document, 40.2 KB

Privacy:

9 May 2019

Minister for Environment and Natural Resources  
Department of Environment and Natural Resources  
EPA

By online form: <https://denr.nt.gov.au/environment-information/onshore-gas-in-the-northern-territory/environment-management-plan/consultation-form?activity=McArthur%20Basin%202019%20Drilling%20Program%20EP161>

Dear Minister Lawlor and Department,

**RE: Objection and comments with relation to Santos McArthur Basin 2019 Drilling Program EP161**

Lock the Gate welcomes the opportunity to make a submission on this Santos EMP.

By way of background, Lock the Gate Alliance is a national grassroots organisation made up of over 100,000 individuals and over 250 local groups who are concerned about unsafe or inappropriate mining. The mission of the Lock the Gate Alliance is to protect Australia's agricultural, environmental, and cultural resources from inappropriate mining and to educate and empower all Australians to demand sustainable solutions to food and energy production. Lock the Gate works across the NT and is committed to advocating for environmental and community health, and the productivity of local economies.

We are very concerned by the incomplete nature of the information available in this Santos EMP.

There are a number of examples where the EMP has failed to meet the tests under the Petroleum (Environment) Regulations.

We submit that the full extent of the environmental outcomes in relation to the activity cannot be known because the EMP fails to include all the information about their activity in full. It doesn't not fully outline their well operations, hydraulic fracturing, nor their waste storage and disposal.

The EMP fails to meet the principles of ecologically sustainable development, as they do not provide enough integrated information about the full extent of their planned activities. There is insufficient information to allow the decision-making processes to 'effectively integrate both long-term and short-term economic, environmental, social and equitable considerations'.

We also note that under the draft Code of Practice, a Well Operations Management Plan (WOMP) must be approved by the regulator for regulated well activities (such as drilling). The WOMP should be available to be considered as part of this EMP and the activities described. It is inappropriate not to have it available to consider as part of the EMP that list the other aspects of the drilling plans.

There were specific recommendations in the Fracking Inquiry around the need to consider the cumulative impacts of fracking activities (14.21, 14.19). This principle has not been followed for this EMP. The one EMP should outline the full extent of activities that interrelate to one another.

If this were a gas resource that did not require hydraulic fracturing to access the resource, it would be appropriate to leave out hydraulic fracturing from the one integrated EMP. But shale gas always requires hydraulic fracturing stimulation. The fracturing process is a critical component to any decision-making process. Will the drilled wells and the site they plan to prepare be appropriate for the specific high pressure hydraulic fracturing activities? It is impossible for the Minister to be satisfied this is the case, when no information of the hydraulic fracturing plan is provided.

The wastewater management plan is misleading as it states: 'No produced water or flow back fluid are to be produced as part of the proposed activities'. But that's only because this EMP is limited and stops short of describing the full range of activities that they are setting up this infrastructure for, which does include hydraulic fracturing and will create produced water and flow back fluid.

There is no clarity on drilling chemicals, with most on the list stated as 'contingency only'. These 'contingency' chemicals are listed because there is a possibility they will be used on site and down well. Therefore, there should be more information provided in the EMP about the chemical data sheets and health risks for the 'trade names' of the fluids listed.

The EMP is missing key information as required by Part 2 Division 1 of the Regulations in what must be submitted to the Minister for consideration. This included the details about any chemical or other substance that may be in, or added to, any treatment fluids to be used in the course of the activity; the environmental impacts and environmental risks of the activity; and the environmental outcomes in relation to the activity.

The EMP has a reliance on desktop type surveys and literature searches for a biodiversity report. These should have been cross checked with actual species surveys on the sites being impacted.

A key problem with undertaking fracking at these sites is the close proximity to natural drainage areas which flow into water systems and may be sensitive to pollution. Nothing in this plan outlines how the pollution could be caused, what the fracking chemicals and drilling wastes would be, and the impacts of such spills. This full information is required before a full understanding on the risks to the environment and biodiversity can be known and

considered.

The Weed plan is extremely vague.

The technical memorandum report by EHS to Santos for risks to groundwater from shale did not include consideration of any of the contingency drilling chemicals that could be used on site, nor the hydraulic fracturing fluids. Further, it modelled the mixing of drilling mud and cuttings with local soil, which is inconsistent with the waste disposal methods outlined in the Fracking Inquiry and the Petroleum (Environment) Regulations. It was written in 2017, before the laws were updated, and is inadequate to consider the risks for this shale gas exploration project.

As outlined above, we are concerned that the Santos EMP does not meet the requirements under the regulations.

We request that the Minister to ask for more information of Santos. We request an EMP that includes all the details of the activities that will be undertaken to enable Santos to access the petroleum resource they are after in this program.

This EMP can provide no certainty to the Minister about what is up for assessment here, when only part of the activity is represented.

We cannot see how the Minister could be satisfied that the plan meets the approval criteria under the regulations. The EMP only goes part of the way through activities. From this EMP, the Minister cannot understand the full scope of what is being proposed. The Minister cannot be satisfied that all the risks are understood.


We suggest the Minister issues a notice for resubmission as per Part 2 Division 2 Section 11 in the Petroleum (Environment) Regulations.

Thank you for your consideration of this feedback.

Yours truly,

Naomi Hogan  
Lock the Gate Alliance

# Katherine Marchment - 9 May 2019

<b>Subject</b>	<b>DENR - Consultation Form - 691300</b>
<b>From</b>	noreply@denr.nt.gov.au
<b>To</b>	WebAdmin DENR
<b>Sent</b>	Thursday, 9 May 2019 5:50 PM
<b>Attachments</b>	 SUBMISSIO N-SANTO...

## Contact details

First name: Katherine  
Surname: Marchment  
Country: Australia  
Postcode: 820  
Stakeholder type: Community

## Feedback

Activity you are providing feedback on: McArthur Basin 2019 Drilling Program EP161

Category type: Regulation and compliance, Waste, Water

If other, please specify::

Comments: Please accept my submission on Santos Environment Management Plan: McArthur Basin 2019 Drilling Program NT Exploration Permit (EP) 161

Attachments: SUBMISSION-SANTOS-EMP-2019.docx, type application/vnd.openxmlformats-officedocument.wordprocessingml.document, 16.1 KB

Privacy:



## SUBMISSION

Santos Environment Management Plan: McArthur Basin 2019 Drilling Program

NT Exploration Permit (EP) 161

Thank you for the opportunity to make a submission. I am president of a community group NT Baseline Testing dedicated to independent scientific testing in the NT. I am also a senior researcher for 1 Territory Party.

I would like to draw attention to a number of issues I have with this EMP.

1. The code of practice and regulations.

The Code of Practice: Petroleum Activities in the Northern Territory (Northern Territory Government, 2019) has not yet finished going through the review process and there are a number of elements such as the loose language that makes this code far from adequate. It also does not follow the Inquiry recommendations such as Recommendation 7.12 that states that closed storage tanks must be used. Santos are proposing that they adhere to a code of practice that doesn't exist yet.

Code of Practice for the construction and abandoning Coal Seam Gas and petroleum wells and Associated Bores in Queensland Version 1, 1 (2018). Qld regulations are not enforceable in the NT so how can compliance be assured? Also what is Santos current record of non compliance in Qld?

Draft Guideline for the preparation of an Environmental Management Plan under the Petroleum (Environment) Regulations (draft Guidelines) (Northern Territory Government, 2019) – again non enforceable – the guidelines are draft only and subject to change.

2. Wastewater Management

The maps within the EMP clearly show that the planned ponds or Tanumbirini and Inacumba are located next to water courses. Tanumbirini is next to Bessie Creek which is fed at intervals by groundwater and also replenishes groundwater. The size of the ponds and the bunds indicate that there will be a significant change in the flow of water across the flood plain and into the creek as water flow will be impeded by the bunds. Santos has stated no impact on the riparian zone. They offer no evidence as to how they came to this conclusion in their risk assessment. However, large bunded ponds smack next to the creek will significantly alter the flow of water. How will this have no impact as Santos Claims.

The plans for open wastewater tanks are in direct contravention of Inquiry Recommendation 7.12.

There has been no mapping of potential impact zones for spills simply a statement that all spills will be contained on site. How can this be guaranteed when waste is to be trucked off the pad? There has been no mapping of the impact zones for airborne pollution including particulate matter. There are procedures for dealing with spills on the pad – what about the spills at the front gate which with my own eyes I saw was a regular occurrence in Qld.

Decommissioning the pits – cover them over with clean topsoil. Seriously is that clay base going to hold forever? How can they guarantee that there will be no leaching? Especially

when the pits are smack next to a creek. What are the chemicals being buried? Where is the organic content needed to be buried with the waste to help break it down and the correct plantings on top to draw out the toxins? What is the level of salt within the buried waste and what risk is it to the environment?

There is no mention of who the 3<sup>rd</sup> party licensed waste contractors are. How can we check or be sure of their bonafides if we don't know who they are? There is no provision of an agreement or understanding between 3<sup>rd</sup> party contractors that work on and off the drill site to back up Santos assertions in the EMP.

I note that their soil testing of drill cuttings include testing for radioactive elements as well as petrochemicals. Is the Katherine or Darwin (unspecified) licensed waste management facility able to cope with radioactive elements? Are either of these licensed facilities licenced to take radioactive waste? The shales in the NT have a high occurrence of NORMs so radioactive waste will be an issue as this material is brought to the surface.

### 3. Water

There is no provision in the EMP of the results from the groundwater monitoring nor estimates or otherwise of volumes of water expected to be used.

There is no provision of information on groundwater levels or groundwater volumes in the gum ridge CLF aquifer. There has been no study of groundwater stygofauna. Santos says there is no groundwater ecosystems because the creek is ephemeral yet have provided no study of stygofauna within the groundwater they are monitoring or intend to use.

Throughout the EMP there is a paucity of relevant data with which to make an informed decision. There are a lot of assertions and estimates that are not backed up by evidence

Yours Sincerely  
Katherine Marchment  
NT Baseline Testing  
2/32 Margaret Street  
Stuart Park NT 0820

# Gil Greig - 9 May 2019

<b>Subject</b>	<b>DENR - Consultation Form - 691301</b>
<b>From</b>	noreply@denr.nt.gov.au
<b>To</b>	WebAdmin DENR
<b>Sent</b>	Thursday, 9 May 2019 6:10 PM


## Contact details

First name: Gil  
Surname: Greig  
Country: Australia  
Postcode: 4019  
Stakeholder type: Community

## Feedback

Activity you are providing feedback on: McArthur Basin 2019 Drilling Program EP161  
Category type: Flora and fauna, Chemicals, Climate change, Social and cultural, Water  
If other, please specify::  
Comments: NO FRACKING  
Attachments: No file uploaded  
Privacy:

# Shar Molloy (ECNT) - 9 May 2019

<b>Subject</b>	<b>DENR - Consultation Form - 691304</b>
<b>From</b>	noreply@denr.nt.gov.au
<b>To</b>	WebAdmin DENR
<b>Sent</b>	Thursday, 9 May 2019 6:38 PM
<b>Attachments</b>	 ECNT-Submission-Mc...

## Contact details

First name: shar  
Surname: molloy  
Country: Australia  
Postcode: 0800  
Stakeholder type: NGO

## Feedback

Activity you are providing feedback on: McArthur Basin 2019 Drilling Program EP161  
Category type: Flora and fauna, Chemicals, Regulation and compliance, Waste, Water  
If other, please specify::  
Comments: Please accept our comments as per file attachment  
Attachments: ECNT-Submission-McArthur-Basin-2019-Drilling-Program-EP161.pdf, type application/pdf, 577.8 KB  
Privacy:



Onshore Petroleum Assessment  
PO Box 3675  
Darwin NT 0801

9<sup>th</sup> May 2019

Mode of delivery  
Online submission and file upload  
9<sup>th</sup> May 2019

Dear Sir/Madam,

## **Santos McArthur Basin drilling program 2019 (EP161)**

The Environment Centre NT (ECNT) is the peak community sector environment organisation in the Northern Territory, raising awareness amongst community, government, business and industry about environmental issues and assisting people to reduce their environmental impact and supporting community members to participate in decision making processes and action. ECNT welcomes the opportunity to comment the Santos McArthur Basin drilling program 2019 (EP161).

We provide the following submission in support of our assertion that under the PETROLEUM (ENVIRONMENT) REGULATIONS (PER) 2016 clause 11 (2)(b) the Minister should deliver a 'resubmission notice' as the approval criteria under clause 9 has not been met for EP161. We also request that any 'further information' requested by the Minister or a resubmission document be made public.

Under the PER this EP161 fails to meet the principles of ecologically sustainable development and we believe there is insufficient information to satisfy the Minister that the plan 'effectively integrate(s) both long-term and short-term economic, environmental, social and equitable considerations'. There is insufficient information provided on regulated activities and the cumulative impact of these activities.

The EP161 must also be assessed against the Code of Practice (the draft Code) for onshore petroleum which has yet to be finalised and completed. We assert that releasing this EP161 prior to the completion of the Code is inappropriate and undermines the concept of community 'consultation'. No EMP's should be approved prior to the release and enforcement of the final Code,

The following information is missing to satisfy the requirements under the PER and/or draft Code:

- Under the draft Code of Practice, a Well Operations Management Plan (WOMP) must be approved by the regulator for regulated well activities (such as drilling). The WOMP should be available to be considered as part of EP161 and it is inadequate that EP161 does not include a WOMP. Critical components including the construction of the well, drilling, DFIT, fracturing, monitoring, well abandonment should be considered together in the one EMP to assess the environmental risk, as these activities are completely interrelated.
- The PMST Report identified six birds, five mammals and one reptile that are listed threatened species that may occur within 10 km of the Project Area. There is not adequate detail for how the risk to these threatened species will be mitigated nor how the regulated activities and the project design have reduced the risk to 'as low as reasonably practical and acceptable'.
- The biodiversity impacts of the proposal are unacceptable, particularly the risk to birdlife from open sumps, tanks and waste ponds.

- It is unacceptable that land clearing details are not provided in EP161 to assess the risk and impact on flora and fauna.
- The Spill Management Plan (SMP) provided at Appendix H does not supply adequate information. A key risk with undertaking fracking is the close proximity to natural drainage areas which flow into water systems and may be sensitive to pollution. EP161 does not adequately identify pollution risks from possible fracking chemicals nor what the wastes may be or the impacts of such spills. This information is required before a full understanding of the risks to the environment and biodiversity can be known and considered. An assessment must be carried out as to whether any materials (solid or liquid) used in, or produced from, well activities could be considered to be, or to contain, hazardous chemicals or those that may cause environmental harm. The outcomes of this assessment must be described in the spill management plan, as outlined in Part C of the draft Code.
- The Rehabilitation Plan does not adequately provide 'specific environmental outcomes and performance standards'.
- The Wastewater Management Plan is misleading as it states: 'No produced water or flow back fluid are to be produced as part of the proposed activities'. But that's only because this EP161 is limited and stops short of describing the full range of activities that they are setting up this infrastructure for, which does include hydraulic fracturing and will create produced water and flow back fluid.
- The technical memorandum report by EHS to Santos for risks to groundwater from shale did not include consideration of any of the contingency drilling chemicals that could be used on site, nor the hydraulic fracturing fluids. Further, it modelled the mixing of drilling mud and cuttings with local soil, which is inconsistent with the waste disposal methods outlined in the Fracking Inquiry and the Petroleum (Environment) Regulations. It was written in 2017, before the laws were updated, and is inadequate to consider the risks for this shale gas exploration project.
- There is no clarity on drilling chemicals, with most on the list stated as 'contingency only'. Yet clearly they are listed there as there is a possibility that they will be needed, Therefore, there should be more information provided about the chemical data sheets and health risks for the 'trade names' of the fluids listed.
- We are concerned that the interest holder may not have provided full information about the hydraulic fracturing process as part of their obligation to provide each stakeholder with adequate information of regulated activities.

We assert that EP161 does not adequately provide information for the Minister to be satisfied that the plan meets the approval criteria under the PER or requirements of the draft Code.

We suggest the Minister issues a notice for resubmission and the updated EMP be made available for public comment.

# Pauline Cass - 10 May 2019

Subject	<b>DENR - Consultation Form - 691370</b>
From	noreply@denr.nt.gov.au
To	WebAdmin DENR
Sent	Friday, 10 May 2019 9:38 AM

## Contact details

First name: Pauline  
Surname: Cass  
Country: Australia  
Postcode: 0836  
Stakeholder type: Community

## Feedback

Activity you are providing feedback on: McArthur Basin 2019 Drilling Program EP161  
Category type: Flora and fauna, Chemicals, Climate change, Economic, Regulation and compliance, Social and cultural, Traffic and roads, Waste, Water, Weeds, Well integrity

If other, please specify::

Comments: I request that the Santos EMP for their McArthur Basin 2019 Drilling Program EP161 be rejected, and Santos resubmit their EMP once the amendments to the NT Water Act and the Code of Practice: Petroleum Activities have been finalised and implemented. To approve this EMP before these vital legislative changes have been made would make a mockery of the NT environmental protection laws and destroy any remnants of trust that Territorians have in our environmental protection and legal systems. Yours Sincerely, Pauline Cass

Attachments: No file uploaded

Privacy:

# Heidi Jennings - 10 May 2019

Subject	<b>DENR - Consultation Form - 691412</b>
From	noreply@denr.nt.gov.au
To	WebAdmin DENR
Sent	Friday, 10 May 2019 11:00 AM

## Contact details

First name: Heidi  
Surname: Jennings  
Country: Australia  
Postcode: 0838

Phone number:

Stakeholder type: Community

## Feedback

Activity you are providing feedback on: McArthur Basin 2019 Drilling Program EP161

Category type: Flora and fauna, Chemicals, Climate change, Economic, Regulation and compliance, Social and cultural, Traffic and roads, Waste, Water, Weeds, Well integrity, Other

If other, please specify:: This application should be delayed until the fracking recommendations, water legislation and code of practice has been correctly amended and implemented.

Comments: This application is not accepted at this time, until the fracking recommendations, water legislation and code of practice has been correctly amended and implemented. \*Waste water- waste water should be stored in sealed containers as recommended in the Fracking inquiry recommendations. \* fit and proper person- still required \* Fracking recommendations where to be implemented prior to hydraulic fracturing occurring. \*Perf gun is explosions -will damage the pipe and underground explosion may cause seismic activity the underground ecosystem Will be affected \* concrete slab's or pipes being left? \*Drilling should be done under NT regulations \*seismic activity data should be available for the area. \* 100 m or 1000 m this is not specified clearly -are they Fracking for gas or oil, or for gold and other minerals.? -The depth need to be specified to what product they are trying to find? \*Flora and fauna- with the mess clearing the industry requires will take out areas of flora and fauna are of the NT. \*Chemicals- chemicals should not come in contact with the ground or surface water, waterways, rivers or streams nor be reinjected into aquifers or ground water systems. ~ these chemicals should be stored in a sealed container; used or un-used, so as not to affect the environment. \*climate change- These high risk extraction techniques will create more... And contribute to climate change. \*economic - The NT economy will not benefit from these activities as it is being produced for overseas. \*regulation and compliance- if the industry were to follow the fracking inquiry recommendations. \* social and cultural -



This high risk extraction technique is not welcomed socially and it will have an impact on cultural Community and affect the health of many Territorians. \*traffic and roads - The industry should be paying for road infrastructure and maintenance for the heavy vehicles, not the taxpayer. \*waste - All waste from the petroleum activities should be treated as waste and contained in sealed containers. \*water - The water in the NT needs protecting -water ways, rivers ,streams, creeks, Formations and aquifers in the Northern Territory have some inter connection. The waterways in the Northern Territory are still not fully understood.- This was a message from water resources. The water in the Northern Territory is already over allocated. \*well integrity - The industry needs to monitor and insure the will integrity of all Wells weather introduction abandoned and plugged. \*other -seismic activity- Will occur and affect the underground ecosystem. \*The NT is experiencing lack of rain and recharge to aquifers rivers and waterways cannot be guaranteed. The basic human right to clean fresh water must be adhered to. It is imperative that this application is not accepted at this time, until the fracking recommendations, water legislation and code of practice has been correctly amended and implemented.

Attachments:

No file uploaded

Privacy: