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## **SANTOS EMP EP 161 submission**

The Arid Lands Environment Centre (ALEC) is Central Australia's peak community environmental organisation that has been advocating for the protection of nature and ecologically sustainable development of the arid lands since 1980. ALEC actively contributes to the development of energy and resources policy through regulatory reform, written submissions, community education and advocacy within the community. In addition, ALEC has had close engagement with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory handed down by Justice Pepper (Pepper Inquiry) and its subsequent implementation.

ALEC welcomes the opportunity to comment on SANTOS' Environment Management Plan ST03 EP 161 (EMP). ALEC strongly opposes the SANTOS EMP and its proposal to hydraulic fracture five wells at EP 161. ALEC considers SANTOS' proposed actions to have the potential to cause a significant impact to the environment. If SANTOS have not self-referred the EMP, ALEC considers it essential that the Minister for the Environment refer SANTOS' EMP for Environment Impact Assessment (EIA) under s.50 of the *Environment Protection Act 2019* (EP Act).

Our submission focuses on cumulative impacts, scientific uncertainty, groundwater dependent ecosystems (GDEs) and regulatory separation.

### **1. Cumulative impacts**

The Pepper Inquiry emphasised that strong safeguards are needed to prevent 'exploration creep' from occurring.<sup>1</sup> Exploration creep is when a large number of wells are drilled and fracked under the conditions of an exploration licence. To overcome exploration creep, the Pepper Inquiry clearly stated that emphasis be placed on the assessment of cumulative impacts. Exploration creep is understood to be when a large number of wells are drilled and hydraulic fractured under the conditions of an exploration licence. To overcome exploration creep, the Fracking Inquiry clearly stated that emphasis be placed on the assessment of cumulative impacts.

Schedule 1 s.3(2)(b) of the *Petroleum (Environment) Regulations 2016* clearly states that EMPs must report cumulative impacts.<sup>2</sup> The Pepper Inquiry was clear in the intended outcome from a greater focus on cumulative impacts, stating:

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<sup>1</sup> Scientific Inquiry into Hydraulic Fracturing in the Northern Territory *Final Report*, p.413-414, p.451.

<sup>2</sup> *Petroleum (Environment) Regulations 2016*, p.35

“The Panel has therefore recommended strengthening the Petroleum Environment Regulations to explicitly require the Minister for Resources, when considering whether to approve an EMP for an exploration activity, to consider the cumulative effects of onshore shale gas activities in the region.”<sup>3</sup>

Instead of assessing cumulative impacts ‘in the region’ as stated in the Pepper Inquiry, SANTOS has assessed cumulative impacts of developments only at EP 161. In a document of 195 pages, SANTOS places little emphasis on cumulative impacts, despite it being a key priority within the Pepper Inquiry. SANTOS’ EMP should be assessed in conjunction with other shale gas activities in the Beetaloo Sub-Basin and larger McArthur Basin. By isolating their impacts to their own operations, SANTOS is incorrectly interpreting the meaning of a cumulative impact.

SANTOS acknowledges that their EMP will increase the Northern Territory GHG emissions by 2.5%. Recommendation 9.8 of the Pepper Inquiry made it clear that any increase in GHG emissions at the Beetaloo Sub-Basin is an “unacceptable” risk.<sup>4</sup> The recommendation ensures “that the NT and Australian governments seek to ensure that there is no net increase in the life cycle GHG emissions emitted in Australia from any onshore shale gas produced in the NT”.<sup>5</sup> To date, there is no clear plan for how recommendation 9.8 will be implemented and GHG emissions offset.

Currently, no shale gas activities in the Beetaloo Sub-Basin/ McArthur Basin have been referred to the NT EPA to undergo an EIA. SANTOS’ EMP comes after Imperial Oil and Gas have applied to frack seven wells in the region. It is vital that activities which have the potential to cause significant impact to the environment, be subject to the full and comprehensive EIA. If SANTOS is not referred to undergo a comprehensive EIA, it is setting a poor precedent on the interpretation of cumulative impacts by the Environment Minister and the Northern Territory Environment Protection Authority (NT EPA). It is vital that the recommendations by Justice Pepper are upheld, so the Northern Territory Government maintains its licence to regulate in the eyes of the public.

## **2. Scientific uncertainty - lack of baseline data**

The Beetaloo Sub-basin and larger McArthur basin are regions with extremely limited baseline data. They are greenfield petroleum resources and this is reflected in the available datasets.

The Strategic Regional Environment and Baseline Assessments (SREBA) is a key structure of the Pepper Inquiry recommendations and involves the completion of 6 baseline studies advised to occur over a 3-5 year period. After the completion of the SREBA, this baseline data and additional scientific information, will enable a Final Risk Assessment to be conducted. This will determine whether the shale gas industry in the Beetaloo Sub-Basin is viable.

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<sup>3</sup> Scientific Inquiry into Hydraulic Fracturing in the Northern Territory: Summary of the Final Report, p.48.

<sup>4</sup> Scientific Inquiry into Hydraulic Fracturing in the Northern Territory: Final Report, 2018, p.240.

<sup>5</sup> Scientific Inquiry into Hydraulic Fracturing in the Northern Territory: Final Report, 2018, p.239.

EP 161, the site of SANTOS' proposed new fracking activities lies outside of the Beetaloo Sub-Basin. The SREBA has primarily been conducted within the Beetaloo Sub-Basin, with research also completed in the Beetaloo GBA extended region. EP161 lies outside of both of these boundaries in the McArthur Basin. It is a region with extremely limited existing data. It remains unclear what conclusions will be transferable to EP 161 from the SREBA. Where findings and conclusions are not transferable, ALEC holds concerns that baseline data from the SREBA will enable development outside of those research boundaries such as at EP 161.

The SANTOS EMP also relies heavily on desktop research to understand potentially significant impacts. There is very limited existing research conducted for this region. Reliance upon desktop data, in a region which has limited to no existing data across various environmental, social and cultural factors is deeply concerning. The potential impacts can't be emphasised in a risk matrix, if the data does not exist. An EIA is essential to ensure a comprehensive analysis of the development site is conducted.

### **3. Groundwater dependent ecosystems**

SANTOS' EMP overly simplifies the potential impacts its development may have upon GDE's. SANTOS makes two different claims around GDEs, the first states "there are no terrestrial or aquatic GDEs identified within the Project Area".<sup>6</sup> and the second says that "there is a low potential for terrestrial GDEs and aquatic GDEs in the Project Area".<sup>7</sup> It remains unclear why there is variation in their claims.

SANTOS makes these claims while excluding preliminary research from the SREBA by Rees et al (2020) for the CSIRO, which showed high aquifer connectivity and widespread distribution of stygofauna in the Beetaloo Sub-Basin.<sup>8</sup> Through the presence of *Parisia unguis* across the Cambrian Limestone Aquifer, including the Gum Ridge Formation. Instead, SANTOS rely on desktop research to make their claims as evidenced on page 108.<sup>9</sup> This is a hugely insufficient analysis from the proponent. It is essential that an EIA occurs so that greater understanding of GDEs at EP 161 can occur. There is currently insufficient baseline data to support the claims that there are "no aquatic GDEs identified within the Project Area". It is poor scientific research to make these judgements, and it is certainly not evidence of best scientific practice.

It is integral that this project is referred to the EIA, otherwise it sets a poor precedent around environmental reporting in EMPs.

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<sup>6</sup> Environment Management Plan: McArthur Basin Hydraulic Fracturing Program NT Exploration Permit 161, p.108.

<sup>7</sup> Environment Management Plan: McArthur Basin Hydraulic Fracturing Program NT Exploration Permit 161, p.112.

<sup>8</sup> Characterisation of the stygofauna and microbial assemblages of the Beetaloo Sub-basin, Northern Territory.

<sup>9</sup> Environment Management Plan: McArthur Basin Hydraulic Fracturing Program NT Exploration Permit 161, p.108.

#### **4. Regulatory separation and well operation management plans**

ALEC remains seriously concerned that well operation management plans (WOMPs) still remain the responsibility of the Department of Industry, Tourism and Trade (DITT). WOMPS are a critical area that has the potential to cause significant environmental impacts. Regulatory separation was a cornerstone of the Pepper Inquiry. Recommendation 14.34 states:

“That prior to the grant of any further exploration approvals, in order to ensure independence and accountability, there must be a clear separation between the agency with responsibility for regulating the environmental impacts and risks associated with any onshore shale gas industry and the agency responsible for promoting that industry”.<sup>10</sup>

It is vital that the Department of Environment, Parks and Water Security (DEPWS) regulates all the environmental impacts and risks associated with shale gas developments.

#### **5. Further analysis**

Please refer to Protect Country Alliance’s (PCA) submission for further analysis on corrosion, chemical use, biodiversity risks, open air wastewater tanks and social licence. ALEC is a member of PCA and endorses their submission.

Alexander Vaughan - Policy Officer

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<sup>10</sup> Scientific Inquiry into Hydraulic Fracturing in the Northern Territory *Final Report*, p.431.