

28 May 2024

Committee Secretary
Senate Standing Committees on Environment & Communications
Department of the Senate
PO Box 6100
Parliament House
Canberra ACT 2600

Submitted by email: ec.sen@aph.gov.au

Tamboran Resources Limited ('Tamboran') ('the Company') welcomes the opportunity to respond to additional information provided to the Senate Committee as part of the Inquiry into the Middle Arm Industrial Precinct ('Middle Arm').

Tamboran is the largest acreage holder and operator with ~1.9 million net prospective acres in the Beetaloo Sub-basin ('Beetaloo') of the Northern Territory, focused on the development low reservoir carbon dioxide ('CO₂') natural gas resources within its portfolio (EP 76, EP 98, EP 117, EP 136, EP 143, EP 161 and EP(A) 197).

Tamboran's vision is to support Australia's energy transition by investing in the development of low CO₂ unconventional natural gas resources in the Beetaloo and to become a Net Zero emissions gas producer for our equity share of Scope 1 and Scope 2 emissions when the Company initiates commercial sales of natural gas.

Whilst under no obligation to respond to incorrect allegations made, we appreciate the opportunity to respond in writing to ensure the Senate Committee is not misled by inaccurate information relating to Tamboran's operations.



1. Attachment 1: Additional Notes, Mr Daniel Tapp

i. Moroak Aquifer

Mr Tapp's statements on Page 1 of his submission regarding Mesoproterozoic aquifers in the region (Moroak and Bessie Creek sandstones) inaccurately assert that there will be cross-contamination in the region.

The chemical and physical properties of the Moroak Sandstone are known and considered during the design, construction, integrity validation, ongoing monitoring, maintenance and decommissioning of all our wells. These considerations were included in the *Scientific Inquiry into Hydraulic Fracturing in the Northern Territory* (eg. Section 5.3.2 and 5.4.4.5) and have been incorporated in the *Code of Practice: Onshore Petroleum Activities in the Northern Territory 2019* ('the Code').

There are three cemented casing strings, spanning over 1,000m isolating the Moroak Sandstone from the shallow aquifers. If the Moroak was unconstrained to flow, the hydraulic pressure at the base of the freshwater aquifers (The Gum Ridge) would exceed the pressure exerted by the Moroak fluid column.

Therefore, there is no identifiable risk of cross-connection even in the absence of casing of cement.

It is widely recognised that electrical conductivity sensors deployed in aquifers are often subject to drift through fouling or sensor degradation. This is easily identifiable and confirmed through field testing. As is the case in the instance outlined, Tamboran understands that field testing confirmed the salinity levels were the result of instrument failure rather than contamination.

ii. Flood Mapping

Mr Tapp's proclamation that there is no flood mapping for the Beetaloo region is incorrect. Tamboran has completed flood assessments as part of Environment Management Plan ('EMP') approvals. Flood mapping was also included in the *Scientific Inquiry into Hydraulic Fracturing in the Northern Territory* (e.g. Section 7.3.1.2).

iii. Public data of well completion & drill log reports

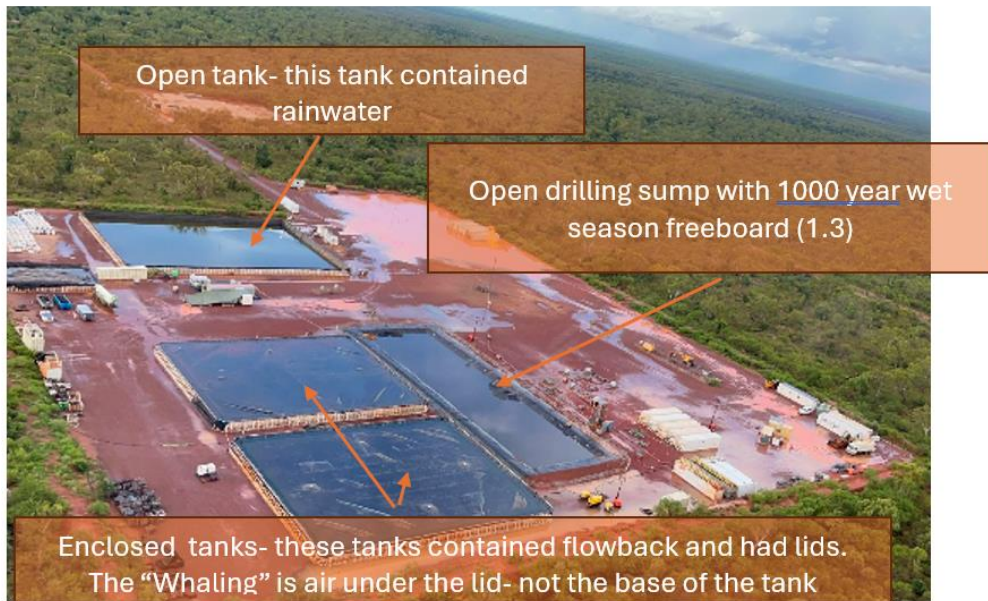
Mr Tapp's comment that well completion and drill log reports are not public is incorrect. Anyone can review well completion and drilling reports on the Northern Territory Governments Geoscience Exploration and Mining Information System ('GEMIS') website, within the Industry Reports collection covering Petroleum Wells: [GEMIS: Petroleum Wells \(PEX Wells\) \(nt.gov.au\)](https://www.nt.gov.au/gemis/petroleum-wells).

iv. Figure 2: Kyalla 117 N2

The image of the Kyalla 117 N2 well site in Mr Tapp's submission displays a series of enclosed tanks (2 with lids), an open freshwater tank (which was converted to a wastewater evaporation tank in May) and a drilling sump. The "whaling" is small volumes of air trapped



under the enclosed (covered) tank lids and not the pond base liner. No wastewater had been released from the tank. All power cables were designed to be able to accommodate being temporarily submerged.



v. Figure 3: Maverick 1

The picture shows a stormwater retention pond at the Maverick 1 site. The water collected was rainwater. Rainwater is tested prior to release to ensure it is not contaminated. Once tested, the water is pumped to the adjacent paddock.

Mr Tapp's comment that Tamboran was fined for storm water releases is incorrect. Tamboran has not released any contaminated stormwater and has not been fined for any stormwater releases.

2. Attachment 2: Additional Notes, Dr Samantha Phelan

i. Regional Community Support

We acknowledge concerns about community service provision and welcome the opportunity to clarify Tamboran's commitment to making a positive and lasting impact in the communities where we operate.

Tamboran takes great pride in our partnerships within the Territory, including with the Dolphins NRL team, the NBL1 Salties, the men's and women's Elliot Hawks AFL teams, local fishing competitions, colour runs, and various cultural activities. These partnerships enable us to provide programs and events that support regional development pathways for young Territorians.

We also note the potential for increased employment, training, education, and enterprise opportunities in the NT resulting from industry development. Economic modelling conducted by ACIL Allen for the NT Government indicates that the establishment of a gas industry in the



NT could generate up to 13,611 full-time employment opportunities, increase net real income for the NT by \$5.8 billion over the 25-year modelling period, and provide an additional \$3.7 billion in revenue for the NT Government over the same period. This would represent a 2.2% increase in the NT's recurrent revenue base, or more than 8% when excluding Commonwealth grants.¹

We look forward to continuing our engagement and supporting local communities in the Territory.

ii. Figure 2: Kyalla 117 N2

The Kyalla 117 N2 site was operating as per design. A bund is located around the site designed to prevent offsite releases of wastewater from storage tanks. All stormwater collected onsite is retained in the sediment basin (top right-hand corner of lease pad) and tested prior to release.

iii. Figure 3: Maverick 1V sump

The picture of the Maverick 1 sump shows drilling waste and water within the sump. There is no evidence of overflow.

iv. Figure 4: Maverick 1V Sediment Basin

The picture shows a sediment basin used to collect stormwater that falls on the Maverick 1 site during drilling wastewater storage. This water is tested and released (pumped) to the adjacent paddock if uncontaminated. Tamboran has never released contaminated stormwater.

v. Figure 5: Maverick 1 Sediment Basin

The picture shows a sediment basin used to collect stormwater that falls on the Maverick 1 site during drilling wastewater storage. This water is tested and released (pumped) to the adjacent paddock if uncontaminated. Tamboran has never released contaminated stormwater.

vi. Reportable Incidents

Any recordable and reportable spills are reported to the NT Government as per the statutory requirements. This includes quarterly for recordable incidents and within 2 hours for reportable incidents. Additional information is also provided as part of the Annual Environment Performance Report, which are also made publicly available.

¹ ACIL Allen Consulting, *The Economic Impacts of a Potential Shale Gas Development in the Northern Territory* (2017) 5 – 7.



Reports can be accessed on the NT's Department of Environment, Parks, and Water Security ('DEPWS') under 'Reportable Incidents' and in DEPWS Annual Environment Performance Report. Please see below:

- Recordable incident: [Recordable incident reports | Department of Environment, Parks and Water Security](#)
- Reportable incidents: [Reportable incidents | Department of Environment, Parks and Water Security](#)
- Annual environment performance report: [Annual environment performance report | Department of Environment, Parks and Water Security](#)

vii. Soil Testing

Dr Phelan has incorrectly commented that no baseline soil testing is required on site. Tamboran collects soil analysis as a part of the Land Condition Assessment ('LCA'). This forms part of the EMP process. Tamboran completes a baseline surface water sampling program in selected areas. It should be noted that there is very little permanent surface water bodies in the vicinity of Tamboran's activities.

viii. Water usage

Tamboran has not released any contaminated water. For verification, please refer to the Appendix, which contains a letter from the DEPWS. This letter confirms that there is no evidence of any contravention against the *Petroleum (Environment) Regulations 2016* (NT), nor the *Petroleum Act 1984* (NT).

Tamboran has also committed to a series of enhanced wastewater reporting as a sign of good faith to DEPWS.

ix. Implementation of recommendations from *Scientific Inquiry into Hydraulic Fracturing in the Northern Territory*

The NT Government has implemented all 138 Recommendations of the *Scientific Inquiry into Hydraulic Fracturing*. Additional information can be found here: [Hydraulic Fracturing in the Northern Territory](#).

x. Transport of Water

Whilst the transport of water to privatised water holding facilities falls outside the scope of the *Petroleum Act 1984* (NT), should an activity represent a significant risk to the environment, it would require referral under the *Environment Protection Act 2019* (NT) ('EP Act'). An EP Act referral would require public submission.

xi. Water Treatment Facility

Tamboran has no affiliation with the Hydrera Water Treatment Facility, and no fluids from Tamboran's operations have been sent to this facility to date.



xii. SREBA baseline studies

The independent hydrogeologist that Dr Phelan refers to was not independent and their report is discredited by the scientific experts within the NT Government water resources team.

The presence of gas bubbles at the Hot Spring Valley confirms that at the edges of sediment basins near the Mallapunyah fault. Natural faulting and fracture networks result in the connection of hydrocarbon and freshwater systems. This is a well-documented process across the planet.

The Hot Spring Valley area is not prospective for onshore shale production, given the area is structurally complex (difficult to drill horizontals within the target shales) and the Velkerri shale is absent. No impacts from onshore petroleum activities are anticipated.

xiii. Environmental Approvals

Tamboran is currently in the exploration and appraisal phase of its Beetaloo Basin project. Tamboran has existing NT environmental approvals under the *Environment Protection Act 2019* (NT) for our current exploration and appraisal activities. Under the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) ('EPBC Act') and the water trigger, projects are assessed when they are applying for approval covering development activities.

Resources and additional guidance on the EPBC Act are available on the [Department of Climate Change, Energy, and the Environment and Water \('DCCEEW'\) website](#).

xiv. Chemical Assessments

All chemicals that are utilised in hydraulic fracturing are known and approved under the Australian Industry Chemical Introduction Scheme ('AICIS'). Any use of these chemicals is subject to rigorous work place health and safety and environmental protection requirements.

The risks associated with managing both chemicals and wastewater are well known and were covered extensively as a part of the *Scientific Inquiry into Hydraulic Fracturing in the Northern Territory*.

Controls to manage chemicals and flowback have been mandated into the *Code of Practice: Onshore Petroleum Activities in the Northern Territory 2019* and include:

- Requirement for a chemical risk assessment to demonstrate the use of the chemicals do not represent an unacceptable risk to human health or the environment
- Requirement for secondary containment for all chemical storages
- Implementation of spill management plans
- Requirement to store all wastewater in enclosed tanks, unless being evaporated
- Freeboard requirements to prevent tank overtopping
- Requirement for all tanks to be double lined, with mandatory inspections
- Requirement for waste tracking and reporting requirements
- Groundwater monitoring requirements.
- Prohibition of release of flowback to surface and ground waters



- Mandatory flowback reporting and publishing requirements.

The risks associated with activities is well known, with controls in place to prevent the impact to the environment and communities.

xv. Comparison clarification – Solar Farm

Whilst the figures utilised by Dr Phelan to compare solar farms and gas projects are inaccurate, the comments highlight the use of multiple wells per pad as an effective way to access the resource and minimise environmental disturbance through significantly reducing the overall number of required well pads.



Appendix A: DEPWS Letter - Maverick 1



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20 September 2023

██████████
Environment and Approvals Manager
Tamboran B2 Pty Ltd (for Sweetpea Petroleum Pty Ltd)

File reference
NTEPA2023/0079-006-0012

via email ██████████

cc: ██████████

██████████

██████████

Dear Mr ██████████

Re: SWP4-3 Maverick 1 revocation of inspector instruction

I refer to the inspector instruction issued to Sweetpea Petroleum Pty Ltd (**Sweetpea**), on 14 June 2023 (Ref: NTEPA2023/0079-006-0001), following an allegation of an unlawful discharge of contaminated wastewater from sediment basins on the Maverick 1 well pad into the surrounding environment.

An inspector instruction was issued in accordance with section 88(3)(b) of the *Petroleum Act 1984* (as in force 14 June 2023) and required Sweetpea to “immediately cease any offsite discharge of stormwater from any onsite sediment basin”.

The Department of Environment, Parks and Water Security (**DEPWS**) has completed an investigation into the allegation and confirm that no evidence of a contravention against the *Petroleum (Environment) Regulations 2016 (the Regulations)*, nor the *Petroleum Act 1984*, was identified.

Notwithstanding, in correspondence received on 28 July 2023, Sweetpea has voluntarily committed to implementing the following management strategies to mitigate any potential adverse environmental impact during future offsite stormwater releases, including:

1. Replacement of the stormwater discharge pipework from sediment basin 3 with new pipework;
2. Collection of ‘first flush’ water samples from sediment basin 3 and the associated stormwater release point for laboratory analysis of analytes listed in section C.8 of the *Code of Practice: Onshore Petroleum Activities in the Northern Territory (the Code)* (excluding dissolved gases and radionuclides) prior to offsite discharge¹;
3. Installation of a motion-activated camera at discharge point locations; and

¹ It is noted that circumstances may arise whereby an offsite release of stormwater is required prior to receipt of laboratory results to preserve the integrity of site infrastructure. In such situations pH and EC values will be collected and laboratory results received as soon as possible and forwarded to DEPWS.



4. Ongoing commitment to the wastewater and stormwater management measures detailed in the approved plan (EMP SWP4-3).

In addition, under regulation 36(3)(d) of the Regulations, prescribed records include records of emissions and discharges into the environment. As such, records of first flush discharges are considered prescribed records, and are therefore required to be kept in accordance with regulation 36(1). In order to satisfy DEPWS that there continues to be no environmental harm associated with discharge of stormwater from the sediment basin 3, DEPWS requires Sweetpea to provide records via email at Onshoregas.DEPWS@nt.gov.au as follows:

1. Records of monitoring of daily Bureau of Meteorology (BOM) rainfall to inform first flush water sample collection dates from the commencement of the Wet Season (as defined by the Code as being 1 October) until the first flush rainfall event occurs;
2. The proposed date of first flush sample collection from sediment basin 3 and associated discharge point; and
3. The first flush water sampling results, chain of custody documents, GPS sampling locations and any photographic evidence taken during first flush sampling within 3 days of laboratory receipt.

DEPWS considers implementation of the additional management measures detailed above, will mitigate any potential adverse impact during future offsite stormwater discharge. The inspector instruction issued on 14 June 2023 is revoked from the date of this letter.

Should you have any queries in relation to the content of this letter please contact me on 8924 4214 or via email at Onhsoregas.DEPWS@nt.gov.au.

Yours sincerely

Inspector pursuant to section 87 of the *Petroleum Act 1984*