Appendix A: Change notice – Regulation 22

Interest holder	Tamboran B2 Pty Ltd	**EMP Title**	Beetaloo W-1 Exploration Permit (EP) 117 (ORI8-2)	**Unique EMP ID**	ORI8-2	**Mod #**	1	**Date**	23 January 2025
Brief Description	Amendment of the offsite stormwater release criteria to provide consistency in stormwater discharge criteria across all Tamboran exploration and appraisal well sites.								
Geospatial files included?	N/A								

Does the proposed change result in a new, or increased, or potential or actual environmental impact or risk?	**If an INCREASE in the existing potential or actual environmental risk, is it provided for in the EMP?**	**Does the proposed change require additional mitigation measures to be included?**	**Has additional stakeholder engagement been conducted?**	**Does it require additional environmental performance standards and measurement criteria?**	**Does it affect compliances with Sacred Site Authority Certificates?**	**Does it affect current rehabilitation, weed fire, wastewater, erosion and sediment control, spill or emergency response plans?**	**Will the environmental outcome continue to be achieved, and will the impacts and risks be managed to ALARP and acceptable?**
No. There are no new or increased environmental impacts or risks. The revised discharge criteria have been discussed in the EMP and is evaluated to be ALARP and acceptable.	No No increased impact or risk with sufficient controls outlined in the EMP.	No. Existing mitigation measures are in place covering stormwater release.	No Stakeholder engagement is not required as this change is aligning with existing stormwater release criteria in recent EMPs.	No. Environmental performance standards within the existing approved EMP are sufficient.	No. Activity covered under the existing AAPA certificates C2020/003.	No. All management plans remain valid and appropriate.	Yes. Stormwater monitoring outlined in *Table 54: Environmental outcomes, performance standards and measurement criteria – Inland water environmental quality and aquatic ecosystems*, will be met.
Additional contextual information							

Interest holder	Tamboran B2 Pty Ltd	EMP Title	Beetaloo W-1 Exploration Permit (EP) 117 (ORI8-2)	Unique EMP ID	TAM2-3	Mod #	1	Date	23 January 2025

Current EMP text

3.15 Stormwater management

Table 9: Stormwater release and re-use limits

Monitoring parameter	Release limit	Limit basis
Electrical conductivity	1,300 µs/cm	Irrigation salinity values used due to the absence of adjacent watercourses, with the protection of soils the most relevant environmental Value (EV). The guideline was based on the irrigation water salinity ratings for moderately sensitive crops. (Sources from Table 9.2.5 of the ANZEC Guidelines (2000) Volume 3, Chapter 9, Primary Industries) Sodium adsorption ratio (SAR) of stormwater is anticipated to be low, well below <20. Receiving soils are sandy loam (as described in section 4.1.3), with SAR in irrigation water >20 permissible which will not increase the sodicity of soils (Sources from Table 9.2.6 ANZEC Guidelines (2000) Volume 3, Chapter 9, Primary Industries)
pH	6.5 – 9.5	Limit based upon the background surface water quality data[1] and Table 8.2.8 of the ANZECC Guidelines 2000 volume 2 Aquatic ecosystems – rationale and background information

[1] HLA 2005 report summarising the Beetaloo Basin Surface water quality monitoring completed for Sweetpea Petroleum

Amended EMP text

3.15 Stormwater management

Table 9: Stormwater release and re-use limits

Monitoring parameter	Release limit	Limit basis
Electrical conductivity	1,300 µs/cm	The proposed limit of 1,300 µs/cm was chosen as it aligns with the EC of the Gum Ridge formation (the main source of water used on proposed sites) and the ANZECC short term irrigation guideline value for moderately sensitive crops (Table 9.2.5 of the ANZEC Guidelines (2000) Volume 3, Chapter 9, Primary industries). The proposed EC limit is underpinned by modelling designed to assess the changing soil salinities and the potential for impact on the receiving vegetation types, including Eucalyptus, Acacia, Melaleuca species and native grasses which are common to the area. Many of these species have been shown to have a moderate to high tolerance to salinity. The results of the modelling indicates the maximum root zone salinity will be in the order of 1.6 dS/m (for a sandy loam) to 1.7 dS/m (for a clay). This is below the likely vegetation root zone salinity of the vegetation types in the area. Also, the sodium adsorption ratio (SAR) for the Gum Ridge Formation was calculated at 2, which when combined with the EC values, indicates that the release of stormwater based on the revised release criteria is unlikely to cause soil structural issues.
pH	5.2 – 9.0	The proposed minimum pH is reflective of observed regional rainfall pH levels, with pH levels of 5.24 observed at Daly Waters on March 20, 2024. Tamboran has observed pH levels on its enclosed tank lids and sediment basins around the pH of 5 level. Given the large volume of rainwater that falls on a site in a very short period, the pH in the sediment basin is anticipated to be low, before increasing as they interact with the receiving soils. This has been observed in sediment basins onsite, with pH increasing from 5.2 to 6.5 over several hours after a rainfall event due to the low buffer capacity of rainwater. Given the existing pH of rainwater is approximately 5.2, we believe this to be an appropriate release limit for stormwater.
Visible hydrocarbons, sheens, foaming or discolouration	No visible oil, grease or other hydrocarbons. No visible foams caused by surfactants and detergents. No visible abnormal discoloration.	

8.5 Monitoring

Table 34: Monitoring program summary

Monitoring program	Purpose	Monitoring points	Parameters	Frequency	Investigation thresholds	Instrument calibration	Reference document
Stormwater	Manage stormwater collected	Chemical storage areas	Field EC and pH	Prior to release	Off-site release and dust suppression limits:	Instrument calibrated before use.	N/A

8.5 Monitoring

Table 34: Monitoring program summary

Monitoring program	Purpose	Monitoring points	Parameters	Frequency	Investigation thresholds	Instrument calibration	Reference document
Stormwater	Manage stormwater	Chemical storage areas	Field EC and pH	Prior to release	Off-site release and dust suppression limits:	Instrument calibrated before use.	N/A

Interest holder	Tamboran B2 Pty Ltd	EMP Title	Beetaloo W-1 Exploration Permit (EP) 117 (ORI8-2)	Unique EMP ID	TAM2-3	Mod #	1	Date	23 January 2025

Current EMP text								Amended EMP text							
	within bunds during activities				• pH 6-9 • EC 1300µs/cm	pH probe calibrated with a two point calibration using a pH buffer of 7 and 10. EC meter calibrated with a 1413µs/cm (or similar) standard			collected within bunds during activities				• pH 5.2 – 9.0 • EC 1300 µs/cm	pH probe calibrated with a two point calibration using a pH buffer of 7 and 10. EC meter calibrated with a 1413µs/cm (or similar) standard	