



Sweetpea Petroleum Pty Ltd
 C/- Tamboran Resources Limited
 GPO Box 4025
 Darwin, NT0801
 Australia

ABN 42 074 750 879

6 October 2023



Re: Beetaloo Sub-basin Well Drilling, Hydraulic Fracture Stimulation and Well Testing NT Exploration Permit (EP) 136 Environment Management Plan (SWP4-3)

In accordance with condition 6 (iii) of the Beetaloo Sub-basin Well Drilling, Hydraulic Fracture Stimulation and Well Testing EP 136 EMP (SWP4-3), a summary of observed water quality results above the 75 percentile are provided in Table 1.

In addition to the statistical analysis provided herein, a full compilation of water quality monitoring results has been provided with this report.

Table 1: Groundwater quality monitoring results reporting summary – RN042730 (EP 136)

Data required	Sweetpea response
The title of the current plan and the relevant approval condition the submission of quarterly groundwater data is intended to satisfy	Beetaloo Sub-basin Well Drilling, Hydraulic Fracture Stimulation and Well Testing NT EP 136 EMP (SWP4-3)
Details of the relevant approval condition the notification of any groundwater monitoring results above the interquartile range is intended to satisfy	Condition 6iii. Provide to DEPWS, via Onshoregas.DEPWS@nt.gov.au , an interpretative report of groundwater quality based on the groundwater monitoring required to be conducted at the well site(s) in accordance with Table 6 of the Code. The interpretative report must be provided annually within 3 months of the anniversary of the approval date of the EMP.
Information to demonstrate that the reporting has occurred within the timeframe specified in the relevant condition	Groundwater monitoring results that have been collected during the period are submitted to DEPWS quarterly. The monitoring frequency of the groundwater program aligns with the <i>Preliminary Guideline: Groundwater monitoring bores for exploration petroleum wells in the Beetaloo sub-basin</i> . The preliminary guidelines require quarterly groundwater samples to be collected from impact monitoring bores upon completion of hydraulic stimulation. Monitoring result exceedances have been provided within 5 days of becoming aware of the results.



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Data required	Sweetpea response
Statement on whether the analytical results are within or outside of natural variability of baseline groundwater quality	The analytical results from the Maverick-1 Gum Ridge control monitoring bore (RN042730) have recorded several results outside of the interquartile range.
Highlighting the data that are above the respective interquartile range for the relevant groundwater parameter(s)	<p>Eight (8) chemical parameters measured in the control monitoring bore were identified to exceed the 75th percentile of background concentrations (Table 2).</p> <p>The results of the statistical analysis, identifying the analytes that exceed the 75th percentile, are provided separately to this summary (Table 2).</p>
A summary and an analysis of causes for elevated groundwater monitoring results and actions taken to ensure that protection of groundwater is maintained	The 75 th percentile exceedances observed from the control monitoring bore are very slight and consistent with historic ranges.
The outcome of the risk review undertaken as a result of the notification, including an updated assessment of the occurrence likelihood and whether this changes the risk ranking.	<p>There is currently only a control monitoring bore installed on the site. The observed exceedances are consistent with historic ranges and do not indicate a trend.</p> <p>There is no change to the risk ranking associated with the activity.</p>

[Redacted]

[Redacted]

Table 2: Maverick-1 Gum Ridge Formation bore, July 2023

Analyte	RN042730 (BET-MB028) count samples	EQL	EQL units	Result Value	Output Unit	RN042730 (BET-MB028) 75th percentile	RN042730 (BET-MB028) Concentration as of last sample date 11 July 2023	75th Percentile exceedance	Comment
Acenaphthene	14	1	µg/L	<1	µg/L	<1	<1	Complies	
Acenaphthylene	14	1	µg/L	<1	µg/L	<1	<1	Complies	
Alkalinity (Bicarbonate as CaCO3)	13	1	mg/L	423	mg/L	421	423	Exceedance	Result consistent with historic range - no trend.
Alkalinity (Carbonate as CaCO3)	13	1	mg/L	<1	mg/L	<1	<1	Complies	
Alkalinity (Hydroxide) as CaCO3	13	1	mg/L	<1	mg/L	<1	<1	Complies	
Alkalinity (total) as CaCO3	13	1	mg/L	423	mg/L	421	423	Exceedance	Result consistent with historic range - no trend.
Anions Total	13	0.01	mg/L	14.9	mg/L	14.8	14.9	Exceedance	Result consistent with historic range - no trend.
Anthracene	14	1	µg/L	<1	µg/L	<1	<1	Complies	
Arsenic (As III)	14	0.001	mg/L	<0.001	mg/L	<0.001	<0.001	Complies	
Barium	14	0.001	mg/L	0.051	mg/L	0.060	0.051	Complies	
Benz(a)anthracene	14	1	µg/L	<1	µg/L	<1	<1	Complies	
Benzene	14	1	µg/L	<1	µg/L	<1	<1	Complies	
Benzo(a) pyrene	13	0.5	µg/L	<0.5	µg/L	<0.5	<0.5	Complies	
Benzo(b+)fluoranthene	13	1	µg/L	1	µg/L	1	1	Complies	
Benzo(g,h,i)perylene	13	1	µg/L	<1	µg/L	<1	<1	Complies	
Benzo(k)fluoranthene	13	1	µg/L	<1	µg/L	<1	<1	Complies	
Boron	14	0.05	mg/L	0.19	mg/L	0.16	0.19	Exceedance	Result consistent with historic range - no trend.
C10-C14 Fraction	13	50	µg/L	<50	µg/L	<50	<50	Complies	
>C10-C16 Fraction	13	100	µg/L	<100	µg/L	<100	<100	Complies	
>C10-C16 Fraction minus Naphthalene (F2)	13	100	µg/L	<100	µg/L	<100	<100	Complies	
C10-C36 Fraction (Sum)	13	50	µg/L	<50	µg/L	<50	<50	Complies	
>C10-C40 Fraction (Sum)	13	100	µg/L	<100	µg/L	<100	<100	Complies	
C15-C28 Fraction	13	100	µg/L	<100	µg/L	<100	<100	Complies	
>C16-C34 Fraction	13	100	µg/L	<100	µg/L	<100	<100	Complies	
C29-C36 Fraction	13	50	µg/L	<50	µg/L	<50	<50	Complies	
C34-C40 Fraction	13	100	µg/L	<100	µg/L	<100	<100	Complies	
C6-C10 Fraction	13	20	µg/L	<20	µg/L	<20	<20	Complies	
C6-C10 minus BTEX (F1)	13	20	µg/L	<20	µg/L	<20	<20	Complies	
C6-C9 Fraction	13	20	µg/L	<20	µg/L	<20	<20	Complies	
Cadmium	14	0.001	mg/L	<0.0001	mg/L	<0.0001	<0.0001	Complies	
Calcium (Dissolved)	13	1	mg/L	115	mg/L	127	115	Complies	
Cations Total	13	0.01	mg/L	13	mg/L	14.3	13	Complies	
Chloride	13	1	mg/L	122	mg/L	122	122	Complies	
Chromium (III)	14	0.001	mg/L	<0.001	mg/L	<0.001	<0.001	Complies	
Chrysene	13	1	µg/L	<1	µg/L	<1	<1	Complies	
Copper (Dissolved)	14	0.001	mg/L	<0.001	mg/L	0.002	0.002	Complies	
Dibenz(a,h)anthracene	13	1	µg/L	<1	µg/L	<1	<1	Complies	
Dissolved Oxygen (field)	10	0.1	mg/L	38	mg/L	49.1	38	Complies	Converted to mg/L from % DO.
Electrical Conductivity (field)	11	1	µS/cm	1263	µS/cm	1291.5	1263	Complies	
Electrical Conductivity (Lab)	13	1	µS/cm	1280	µS/cm	1280	1280	Complies	
Ethane	13	10	µg/L	<10	µg/L	<10	<10	Complies	
Ethylbenzene	14	2	µg/L	<2	µg/L	<2	<2	Complies	
Fluoranthene	13	1	µg/L	<1	µg/L	<1	<1	Complies	
Fluorene	13	1	µg/L	<1	µg/L	<1	<1	Complies	
Fluoride (Dissolved)	13	0.1	mg/L	0.7	mg/L	0.6	0.7	Exceedance	Result consistent with historic range - no trend.
Gross alpha activity	14	0.05	Bq/L	0.38	Bq/L	0.22	0.38	Exceedance	Results remain low with no increasing trend.
Gross beta activity (excluding 40-K)	14	0.1	Bq/L	0.38	Bq/L	0.41	0.38	Complies	
Indeno(1,2,3-c,d)pyrene	13	1	µg/L	<1	µg/L	<1	<1	Complies	
Ionic Balance	13	0.001	%	6.82	%	4.10	6.82	Exceedance	Result consistent with historic range - no trend.
Iron (Dissolved)	14	0.0001	mg/L	<0.05	mg/L	0.15	<0.05	Complies	
Lead (Dissolved)	14	0.001	mg/L	<0.001	mg/L	<0.001	<0.001	Complies	
Lithium (Dissolved)	14	0.001	mg/L	0.053	mg/L	0.056	0.053	Complies	
Magnesium (Dissolved)	13	1	mg/L	48	mg/L	53	48	Complies	
Manganese (Dissolved)	14	0.01	mg/L	0.003	mg/L	0.007	0.003	Complies	
Mercury (Dissolved)	14	0.01	mg/L	<0.0001	mg/L	<0.0001	<0.0001	Complies	
Methane	13	<10	µg/L	<10	µg/L	<10	<10	Complies	
Naphthalene	14	1	µg/L	<1	µg/L	<1	<1	Complies	
Naphthalene (VOC)	14	0.005	mg/L	<0.005	mg/L	<0.005	<0.005	Complies	
Nickel (Dissolved)	2	0.001	mg/L	0.005	mg/L	0.004	0.005	Complies	
Nitrate (as N)	13	0.01	mg/L	0.05	mg/L	0.05	0.05	Complies	
Nitrite (as N)	13	0.01	mg/L	<0.01	mg/L	<0.01	<0.01	Complies	
Nitrite + Nitrate as N	13	0.01	mg/L	0.05	mg/L	0.05	0.05	Complies	
Oxidation-Reduction Potential (Field)	10		mV	53.2	mV	182.55	53.2	Complies	
PAHs (Sum of total)	13	0.5	µg/L	<0.5	µg/L	<0.5	<0.5	Complies	
pH (Field)	11		-	7.02	-	6.97	7.02	Exceedance	Result consistent with historic range - no trend.
pH (Lab)	13		-	7.39	-	7.76	7.39	Complies	
Phenanthrene	13	1	µg/L	<1	µg/L	<1	<1	Complies	
Potassium (Dissolved)	13	1	mg/L	10	mg/L	11	10	Complies	
Propane	13	10	µg/L	<10	µg/L	<10	<10	Complies	
Pyrene	13	1	µg/L	<1	µg/L	<1	<1	Complies	
Salinity (Field)	7					0.6	-	Complies	
Selenium (Dissolved, Total)	14	0.0001	mg/L	<0.01	mg/L	<0.01	<0.01	Complies	
Silicon as SiO2	13	0.1	mg/L	29.7	mg/L	29.7	29.7	Complies	
Silver (Dissolved)	14	0.001	mg/L	<0.001	mg/L	<0.001	<0.001	Complies	
Sodium (Dissolved)	13	1	mg/L	70	mg/L	78	70	Complies	
Strontium (Dissolved)	14	0.005	mg/L	0.627	mg/L	0.756	0.627	Complies	
Sulfate as SO4	13	1	mg/L	144	mg/L	149	144	Complies	
Sum of BTEX	13	1	µg/L	<1	µg/L	<1	<1	Complies	

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Temperature (Field)	11		oC	31.1	oC	33.9	31.1	Complies	
Toluene	14	2	µg/L	<2	µg/L	<2	<2	Complies	
Sum of BTEX	13	1	µg/L	<1	µg/L	<1	<1	Complies	
Total Dissolved Solids (Field)	7		mg/L	-	mg/L	785	-	Complies	
Total Dissolved Solids (Lab)	13	10	mg/L	742	mg/L	796	742	Complies	
Total Suspended Solids (Lab)	13	1	mg/L	<5	mg/L	1	<5	Complies	
Turbidity (Field)	7					2.83	-	Complies	
Xylene (m & p)	13	2	µg/L	<2	µg/L	<2	<2	Complies	
Xylene (o)	13	2	µg/L	<2	µg/L	<2	<2	Complies	
Xylene Total	12	2	µg/L	<2	µg/L	<2	<2	Complies	
Zinc (Dissolved)	14	0.05	mg/L	0.008	mg/L	0.010	0.008	Complies	