6 October 2025

Director Petroleum Operations
Department of Lands, Planning and Environment
PO Box 3675
Darwin NT 0801

Attention: Ms Sally Strohmayr

Dear Ms Strohmayr

Re: Quarter 3 2025 Groundwater Monitoring Results *Beetaloo Basin Shenandoah South Exploration & Appraisal Environment Management Plan* (TAM1-3) EP 117 and EP 98

In accordance with the ministerial condition of approval 14 (iv) of the *Beetaloo Sub -Basin Shenandoah South E&A Program Environment Management Plan (TAM1-3)*, a summary of observed water quality results are provided to the Department of Lands, Planning and Environment (DLPE) 60 days following Quarter 1 2025 monitoring event at the Kyalla 117 N2 and Shenandoah South 2 (SS2) well sites.

A summary of water quality results greater than the 75th percentile of background concentrations have been provided in Table 1.

Table 1: Quarter 3 2025 Groundwater Quality Monitoring Result Summary

Data required	Tamboran response
The title of the current plan the relevant approval conditions the submission of quarterly groundwater data is intended to satisfy	*Beetaloo Sub -Basin Shenandoah South E&A Program Environment Management Plan* (TAM1-3)
Details of the relevant approval condition the notification of any groundwater monitoring results above the interquartile range is intended to satisfy	**Condition 14:** The interest holder must: *iv. within 60 days of each groundwater monitoring event, the interest holder must submit to onshoregas.DEPWS@nt.gov.au the results of groundwater monitoring in a format to be determined by DEPWS[1].*
Information to demonstrate that the reporting has occurred within the timeframe specified in the relevant condition	Groundwater monitoring results collected during the reporting period are submitted to DLPE within 60 days post sample event. The monitoring frequency of the groundwater program aligns with TAM3-1 Ministerial Condition 14 iii which requires quarterly groundwater monitoring at each control and impact monitoring bores. Monitoring was conducted during Quarter 3 (July, August, September).

[1] *Under the new Administration Arrangement Orders the following departmental name change has occurred - Department of Environment, Parks and Water Security (DEPWS) has been revised to Department of Lands Planning and Environment (DLPE).*

Data required	Tamboran response
Statement on whether the analytical results are within or outside of natural variability of baseline groundwater quality	The analytical results from the Kyalla 117 N2 (RN041136) and SS2 (RN043874) Gum Ridge impact monitoring bores and the Kyalla 117 N2 (RN041137) and SS2 (RN043873) Anthony Lagoon impact monitoring bores have recorded several results outside of the interquartile range. The 75th percentile exceedances observed from both impact monitoring bores are within the natural variability based on the hydrogeological conceptualisation of the Cambrian limestone aquifers and the low absolute concentrations where exceedances occur.
Highlighting the data that are above the respective interquartile range for the relevant groundwater parameter/s	A number of parameters were above the 75th percentile calculated from the control monitoring bore results for each aquifer. For each of the impact bores, the following number of analytes were greater then interquartile range. • RN041136 – Kyalla 117 Gum Ridge Formation impact monitoring bore - 7 parameters above the 75th percentile (Table 2) • RN041137 - Kyalla 117 Anthony Lagoon Formation impact monitoring bore - 10 parameters above the 75th percentile (Table 3) • RN043874 – SS2 Gum Ridge Formation impact monitoring bore - 6 parameters above the 75th percentile (Table 4) • RN043873 - SS2 Anthony Lagoon Formation impact monitoring bore - 10 parameters above the 75th percentile (Table 5) The results of the statistical analysis, identifying the analytes that exceed the 75th percentile, is provided separately to this summary.
A summary and an analysis of causes for elevated groundwater monitoring results and actions taken to ensure that protection of groundwater is maintained	• All exceedances are believed to be the result of natural variability within the aquifer. In general, water quality collected from the impact bores show close correlation with the water chemistry from the control monitoring bores. • Key chemical indicators of the formations targeted by the petroleum exploration such as salinity (as measured by electrical conductivity or total dissolved solids), boron, barium, strontium and sodium are consistent with the background concentrations expected for the Cambrian Limestone Aquifers. • There is some indication of potential influence of rainfall recharge to the Cambrian limestone aquifer with the continuation of the large wet seasons for 2023/2024 and 2024/2025. • There are some indications that the groundwater chemistry in the SS2 IMBs have not equilibrated following the installation of the bores.

Data required	Tamboran response
	• Results of groundwater monitoring confirm no material deterioration in groundwater quality associated with Tamboran's activities.
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.	The observed results are assessed as not being associated with exploration well drilling or stimulation activities.

A full compilation of water quality monitoring results across Tamboran's sites has been provided with this report.

If you require any further information, please do not hesitate to email me.

Kind Regards

Alana Court
Senior Approvals Manager

Tamboran Resources
E: [redacted]com
M: [redacted]

Table 2 - Kyalla 117 Gum Ridge Formation Bore Comparison Results, July 2025

Table 2 Kyalla 117 Gum Ridge Formation bore comparison July 2025

Analyte	RN041132 (BET-MB022) Count Samples	EQL	EQL Units	Output Unit	RN041132 (BET-MB022) 75th percentile	RN041136 (BET-MB024) Concentration as of Last Sample Date 14/07/2025	RN041132 (BET-MB022) to RN041136 (BET-MB024) Ratio	75th Percentile Exceedance	Comment
Acenaphthene	33	1	µg/L	µg/L	<1	<1	NA	Complies	
Acenaphthylene	33	1	µg/L	µg/L	<1	<1	NA	Complies	
Alkalinity (Bicarbonate as CaCO3)	34	1	mg/L	mg/L	313	303	0.97	Complies	
Alkalinity (Carbonate as CaCO3)	34	1	mg/L	mg/L	<1	<1	NA	Complies	
Alkalinity (Hydroxide) as CaCO3	34	1	mg/L	mg/L	<1	<1	NA	Complies	
Alkalinity (Total) (as CaCO3)	34	1	mg/L	mg/L	313	303	0.97	Complies	
Anthracene	33	1	µg/L	µg/L	<1	<1	NA	Complies	
Arsenic	33	0.001	mg/L	mg/L	0.004	0.002	0.50	Complies	
Barium	33	0.001	mg/L	mg/L	0.062	0.058	0.94	Complies	
Benzo(a)anthracene	33	1	µg/L	µg/L	<1	<1	NA	Complies	
Benzene	33	1	µg/L	µg/L	<1	<1	NA	Complies	
Benzo(a)pyrene	33	0.5	µg/L	µg/L	<0.5	<0.5	NA	Complies	
Benzo(b+j)fluoranthene	33	0.001	mg/L	mg/L	<0.001	<0.001	NA	Complies	
Benzo(g,h,i)perylene	33	1	µg/L	µg/L	<1	<1	NA	Complies	
Benzo(k)fluoranthene	33	1	µg/L	µg/L	<1	<1	NA	Complies	
Boron	33	0.05	mg/L	mg/L	0.230	0.230	1.00	Complies	
C10 - C14 Fraction	33	50	µg/L	µg/L	<50	<50	NA	Complies	
C10 - C16 Fraction	33	100	µg/L	µg/L	<100	<100	NA	Complies	
C10 - C16 Fraction minus Naphthalene (F2)	33	100	µg/L	µg/L	<100	<100	NA	Complies	
C10 - C36 Fraction (Sum)	33	50	µg/L	µg/L	<50	<50	NA	Complies	
C10 - C40 Fraction (Sum)	33	100	µg/L	µg/L	<100	<100	NA	Complies	
C15 - C28 Fraction	33	100	µg/L	µg/L	<100	<100	NA	Complies	
C16 - C34 Fraction	33	100	µg/L	µg/L	<100	<100	NA	Complies	
C29 - C36 Fraction	33	50	µg/L	µg/L	<50	<50	NA	Complies	
C34 - C40 Fraction	33	100	µg/L	µg/L	<100	<100	NA	Complies	
C6 - C10 Fraction (F1)	33	20	µg/L	µg/L	<20	<20	NA	Complies	
C6 - C10 Fraction minus BTEX (F1)	33	20	µg/L	µg/L	<20	<20	NA	Complies	
C6 - C9 Fraction	33	20	µg/L	µg/L	<20	<20	NA	Complies	
Cadmium	33	0.0001	mg/L	mg/L	<0.0001	<0.0001	NA	Complies	
Calcium	34	1	mg/L	mg/L	94	89	0.95	Complies	
Chloride	34	1	mg/L	mg/L	167	166	0.99	Complies	
Chromium (III+VI)	33	0.001	mg/L	mg/L	<0.001	<0.001	NA	Complies	
Chrysene	33	1	µg/L	µg/L	<1	<1	NA	Complies	
Copper	33	0.001	mg/L	mg/L	0.0020	<0.001	NA	Complies	
Dibenzo(a,h)anthracene	33	1	µg/L	µg/L	<1	<1	NA	Complies	
Dissolved Oxygen (Field)	20	0.1	mg/L	mg/L	0.2	0.28	1.14	Exceedance	Possibly due to purge time differences
Electrical Conductivity (Field)	33	1	µS/cm	µS/cm	1528	1555	1.02	Exceedance	Only very slight exceedance & SPC & Lab EC comply
Specific conductance (Field)	28	1	µS/cm	µS/cm	1249	1252	1.00	Complies	
Electrical Conductivity (Lab)	34	1	µS/cm	µS/cm	1210	1120	0.93	Complies	
Ethane	33	10	µg/L	µg/L	<10	<10	NA	Complies	
Ethylbenzene	33	2	µg/L	µg/L	<2	<2	NA	Complies	
Fluoranthene	33	1	µg/L	µg/L	<1	<1	NA	Complies	
Fluorene	33	1	µg/L	µg/L	<1	<1	NA	Complies	
Fluoride	34	0.1	mg/L	mg/L	1.40	1.3	0.93	Complies	
Gross alpha activity	27	0.05	Bq/L	Bq/L	1.65	0.94	0.57	Complies	
Gross beta activity (excluding activity of K-40)	27	0.1	Bq/L	Bq/L	0.63	0.2	0.37	Complies	
Indeno(1,2,3-c,d)pyrene	33	1	µg/L	µg/L	<1	<1	NA	Complies	
Iron	33	0.05	mg/L	mg/L	2.86	4.05	1.42	Exceedance	Iron levels are somewhat dynamic with no trend. Less than historical peak value
Lead	33	0.001	mg/L	mg/L	<0.001	<0.001	NA	Complies	
Lithium	33	0.001	mg/L	mg/L	0.044	0.038	0.86	Complies	
Magnesium	34	1	mg/L	mg/L	40	38	0.95	Complies	
Manganese	33	0.001	mg/L	mg/L	0.034	0.051	1.50	Exceedance	Low level with no real long-term trend after very first observation
Mercury	33	0.0001	mg/L	mg/L	<0.0001	<0.0001	NA	Complies	
Methane	33	10	µg/L	mg/L	0.034	<0.01	NA	Complies	
Naphthalene	33	1	µg/L	µg/L	<1	<1	NA	Complies	
Nitrate (as N)	34	0.01	mg/L	mg/L	0.020	<0.01	NA	Complies	
Nitrite (as N)	34	0.01	mg/L	mg/L	<0.01	<0.01	NA	Complies	
Nitrite + Nitrate (as N)	16	0.01	mg/L	mg/L	0.020	<0.01	NA	Complies	
pH (Lab)	34	0.01	pH units	pH units	7.64	7.43	0.97	Complies	
pH (Field)	37	0.01	pH units	pH units	7.03	7.23	1.03	Exceedance	Very small exceedance. Possible slight rising trend
Phenanthrene	33	1	µg/L	µg/L	<1	<1	NA	Complies	
Potassium	34	1	mg/L	mg/L	16	16	1.00	Complies	
Propane	33	10	µg/L	mg/L	<0.01	<0.01	NA	Complies	
Pyrene	33	1	µg/L	µg/L	<1	<1	NA	Complies	
Selenium	33	0.01	mg/L	mg/L	<0.01	<0.01	NA	Complies	
Silicon as Si	31	0.05	mg/L	mg/L	10.5	10.6	1.01	Exceedance	Slight exceedance only, no data trend
Silver	33	0.001	mg/L	mg/L	<0.001	<0.001	NA	Complies	
Sodium	34	1	mg/L	mg/L	102	103	1.01	Exceedance	Very small exceedance. Possible declining trend. Current value less than historical maximum
Strontium	33	0.001	mg/L	mg/L	0.795	0.793	1.00	Complies	
Sulphate as SO4	32	1	mg/L	mg/L	126	117	0.93	Complies	
Sum of BTEX	33	1	µg/L	µg/L	<1	<1	NA	Complies	
Suspended Solids	33	5	mg/L	mg/L	10.0	10.00	1.00	Complies	
Temperature (Field)	33	0.1	°C	°C	37.4	NA	NA	NA	
Toluene	33	2	µg/L	µg/L	<2	<2	NA	Complies	
Total Dissolved Solids	34	10	mg/L	mg/L	743	716	0.96	Complies	
Total Reportable PAH	28	0.5	µg/L	µg/L	<0.5	<0.5	NA	Complies	
Xylene (m & p)	33	2	µg/L	µg/L	<2	<2	NA	Complies	
Xylene (o)	33	2	µg/L	µg/L	<2	<2	NA	Complies	
Xylene Total	33	2	µg/L	µg/L	<2	<2	NA	Complies	
Zinc	33	0.005	mg/L	mg/L	0.011	0.009	0.82	Complies	Concentrations appear to be declining

Table 3 - Kyalla 117 Anthony Lagoon Formation Bore Comparison Results, July 2025

Table 3 Kyalla 117 Anthony Lagoon Formation bore comparison July 2025

Analyte	RN040896 (BET-MB021) Count Samples	EQL	EQL Units	Output Unit	RN040896 (BET-MB021) 75th percentile	RN041137 (BET-MB023) Concentration as of Last Sample Date 14/07/2025	RN040896 (BET-MB021) to RN041137 (BET-MB023) Ratio	75th Percentile Exceedance	Comment
Acenaphthene	42	1	µg/L	µg/L	<1	<1	NA	Complies	
Acenaphthylene	42	1	µg/L	µg/L	<1	<1	NA	Complies	
Alkalinity (Bicarbonate as CaCO3)	45	1	mg/L	mg/L	296	318	1.07	Exceedance	Minor exceedance. No discernible trend. Less than historical maximum
Alkalinity (Carbonate as CaCO3)	45	1	mg/L	mg/L	<1	<1	NA	Complies	
Alkalinity (Hydroxide) as CaCO3	45	1	mg/L	mg/L	<1	<1	NA	Complies	
Alkalinity (Total)(as CaCO3)	45	1	mg/L	mg/L	296	318	1.07	Exceedance	Minor exceedance. No discernible trend. Less than historical maximum
Anthracene	42	1	µg/L	µg/L	<1	<1	NA	Complies	
Arsenic	43	0.001	mg/L	mg/L	0.004	0.010	2.50	Exceedance	Overall dynamic but declining trend. Detections likely related to pyrite oxidation due to drilling with air
Barium	43	0.001	mg/L	mg/L	0.060	0.072	1.21	Exceedance	Long term gradual declining trend, but with significant shorter-term variability. Less than historical maximum
Benzo(a)anthracene	42	1	µg/L	µg/L	<1	<1	NA	Complies	
Benzene	42	1	µg/L	µg/L	<1	<1	NA	Complies	
Benzo(a)pyrene	42	0.5	µg/L	µg/L	<0.5	<0.5	NA	Complies	
Benzo(Baj)fluoranthene	42	0.001	mg/L	mg/L	<0.001	<0.001	NA	Complies	
Benzo(g,h,i)perylene	42	1	µg/L	µg/L	<1	<1	NA	Complies	
Benzo(k)fluoranthene	42	1	µg/L	µg/L	<1	<1	NA	Complies	
Boron	43	0.05	mg/L	mg/L	0.23	0.21	0.91	Complies	
C10 - C14 Fraction	42	50	µg/L	µg/L	<50	<50	NA	Complies	
C10 - C16 Fraction	42	100	µg/L	µg/L	<100	<100	NA	Complies	
C10 - C16 Fraction minus Naphthalene (F2)	42	100	µg/L	µg/L	<100	<100	NA	Complies	
C10 - C36 Fraction (Sum)	42	50	µg/L	µg/L	<50	<50	NA	Complies	
C10 - C40 Fraction (Sum)	42	100	µg/L	µg/L	<100	<100	NA	Complies	
C15 - C28 Fraction	42	100	µg/L	µg/L	<100	<100	NA	Complies	
C16 - C34 Fraction	42	100	µg/L	µg/L	<100	<100	NA	Complies	
C29 - C36 Fraction	42	50	µg/L	µg/L	<50	<50	NA	Complies	
C34 - C40 Fraction	42	100	µg/L	µg/L	<100	<100	NA	Complies	
C6 - C10 Fraction	42	20	µg/L	µg/L	<20	<20	NA	Complies	
C6 - C10 Fraction minus BTEX (F1)	42	20	µg/L	µg/L	<20	<20	NA	Complies	
C6 - C9 Fraction	42	20	µg/L	µg/L	<20	<20	NA	Complies	
Cadmium	43	0.0001	mg/L	mg/L	<0.0001	<0.0001	NA	Complies	
Calcium	45	1	mg/L	mg/L	83	84	1.01	Exceedance	Slight exceedance. No discernible trend. Less than historical maximum
Chloride	45	1	mg/L	mg/L	174	144	0.83	Complies	
Chromium (III+VI)	43	0.001	mg/L	mg/L	<0.001	<0.001	NA	Complies	
Chrysene	42	1	µg/L	µg/L	<1	<1	NA	Complies	
Copper	43	0.001	mg/L	mg/L	<0.001	<0.001	NA	Complies	
Dibenz(a,h)anthracene	42	1	µg/L	µg/L	<1	<1	NA	Complies	
Dissolved Oxygen (Field)	47	0.1	mg/L	mg/L	1.03	0.22	0.21	Complies	
Electrical Conductivity (Field)	35	1	µS/cm	µS/cm	1486	1,452	0.98	Complies	
Specific conductance (Field)	38	1	µS/cm	µS/cm	1269	1,189	0.94	Complies	
Electrical Conductivity (Lab)	45	1	µS/cm	µS/cm	1200	1,070	0.89	Complies	
Ethane	42	10	µg/L	µg/L	<10	<10	NA	Complies	
Ethylbenzene	42	2	µg/L	µg/L	<2	<2	NA	Complies	
Fluoranthene	42	1	µg/L	µg/L	<1	<1	NA	Complies	
Fluorene	42	1	µg/L	µg/L	<1	<1	NA	Complies	
Fluoride	45	0.1	mg/L	mg/L	1.1	1.0	0.91	Complies	
Gross alpha activity	36	0.05	Bq/L	Bq/L	0.36	0.33	0.92	Complies	
Gross beta activity (excluding activity of K-40)	36	0.1	Bq/L	Bq/L	0.22	0.18	0.82	Complies	
Indeno(1,2,3-c,d)pyrene	42	1	µg/L	µg/L	<1	<1	NA	Complies	
Iron	43	0.05	mg/L	mg/L	1.08	2.38	2.21	Exceedance	Historically dynamic value. Current value less than historical maximum.
Lead	43	0.001	mg/L	mg/L	<0.001	<0.001	NA	Complies	
Lithium	43	0.001	mg/L	mg/L	0.051	0.038	0.75	Complies	
Magnesium	45	1	mg/L	mg/L	41	39	0.95	Complies	
Manganese	43	0.001	mg/L	mg/L	0.040	0.065	1.63	Exceedance	Minor exceedance. Less than historical maximum, no discernible trend
Mercury	43	0.0001	mg/L	mg/L	<0.0001	<0.0001	NA	Complies	
Methane	42	10	µg/L	mg/L	0.033	0.017	0.52	Complies	
Naphthalene	42	1	µg/L	µg/L	<1	<1	NA	Complies	
Nitrate (as N)	45	0.01	mg/L	mg/L	0.03	<0.01	NA	Complies	
Nitrite (as N)	45	0.01	mg/L	mg/L	<0.01	<0.01	NA	Complies	
Nitrite + Nitrate (as N)	20	0.01	mg/L	mg/L	0.03	<0.01	NA	Complies	
pH (Lab)	45	0.01	pH units	pH units	7.75	7.39	0.95	Complies	
pH (Field)	50	0.01	pH units	pH units	7.18	7.14	0.99	Complies	
Phenanthrene	42	1	µg/L	µg/L	<1	<1	NA	Complies	
Potassium	45	1	mg/L	mg/L	15	15	1	Complies	
Propane	42	0.01	mg/L	mg/L	<0.01	<0.01	1	Complies	
Pyrene	42	1	µg/L	µg/L	<1	<1	NA	Complies	
Selenium	43	0.01	mg/L	mg/L	<0.01	<0.01	NA	Complies	
Silicon as Si	40	0.05	mg/L	mg/L	10.30	11.1	1.08	Exceedance	Minor exceedance. Highly variable historical data. Current result less than historical maximum
Silver	43	0.001	mg/L	mg/L	<0.001	<0.001	NA	Complies	
Sodium	45	1	mg/L	mg/L	110	92	0.84	Complies	
Strontium	43	0.001	mg/L	mg/L	0.669	0.671	1.003	Exceedance	Only very minor exceedance.
Sulphate as SO4	41	1	mg/L	mg/L	134	104	0.78	Complies	
Sum of BTEX	42	1	µg/L	µg/L	<1	<1	NA	Complies	
Suspended Solids	43	5	mg/L	mg/L	10	<5	NA	Complies	
Temperature (Field)	36	0.1	°C	°C	36.0	36.6	1.02	Exceedance	Results consistent with previous measurements, but greater than historical values. Likely due to different purge durations
Toluene	42	2	µg/L	µg/L	<2	<2	NA	Complies	
Total Dissolved Solids	45	10	mg/L	mg/L	715	670	0.94	Complies	
Total Reportable PAH	36	0.5	µg/L	µg/L	<0.5	<0.5	NA	Complies	
Xylene (m & p)	42	2	µg/L	µg/L	<2	<2	NA	Complies	
Xylene (o)	42	2	µg/L	µg/L	<2	<2	NA	Complies	
Xylene Total	42	2	µg/L	µg/L	<2	<2	NA	Complies	
Zinc	43	0.005	mg/L	mg/L	0.039	0.007	0.18	Complies	

Table 4 - SS2 Gum Ridge Formation Bore Comparison Results, July 2025

Table 4 Shenandoah South 2 Gum Ridge Formation bore comparison July 2025

Analyte	RN041132 (BET-MB022) Count Samples	EQL	EQL Units	Output Unit	RN041132 (BET-MB022) 75th percentile	RN043874 (BET-MB031) Concentration as of Last Sample Date 15/07/2025	RN041132 (BET-MB022) to RN043874 (BET-MB031) Ratio	75th Percentile Exceedance	Comment
Acenaphthene	33	1	µg/L	µg/L	<1	<1	NA	Complies	
Acenaphthylene	33	1	µg/L	µg/L	<1	<1	NA	Complies	
Alkalinity (Bicarbonate as CaCO3)	34	1	mg/L	mg/L	313	305	0.97	Complies	
Alkalinity (Carbonate as CaCO3)	34	1	mg/L	mg/L	<1	<1	NA	Complies	
Alkalinity (Hydroxide) as CaCO3	34	1	mg/L	mg/L	<1	<1	NA	Complies	
Alkalinity (Total) (as CaCO3)	34	1	mg/L	mg/L	313	305	0.97	Complies	
Anthracene	33	1	µg/L	µg/L	<1	<1	NA	Complies	
Arsenic	33	0.001	mg/L	mg/L	0.004	0.008	2.00	Exceedance	Early time elevated concentrations likely due to pyrite oxidation due to drilling with air.
Barium	33	0.001	mg/L	mg/L	0.062	0.059	0.95	Complies	
Benzo(a)anthracene	33	1	µg/L	µg/L	<1	<1	NA	Complies	
Benzene	33	1	µg/L	µg/L	<1	<1	NA	Complies	
Benzo(a)pyrene	33	0.5	µg/L	µg/L	<0.5	<0.5	NA	Complies	
Benzo(b+j)fluoranthene	33	0.001	mg/L	mg/L	<0.001	<0.001	NA	Complies	
Benzo(g,h,i)perylene	33	1	µg/L	µg/L	<1	<1	NA	Complies	
Benzo(k)fluoranthene	33	1	µg/L	µg/L	<1	<1	NA	Complies	
Boron	33	0.05	mg/L	mg/L	0.230	0.30	1.30	Exceedance	Possible rising trend, value less than 10% of Drinking water standard & stock water standard
C10 - C14 Fraction	33	50	µg/L	µg/L	<50	<50	NA	Complies	
C10 - C16 Fraction	33	100	µg/L	µg/L	<100	<100	NA	Complies	
C10 - C16 Fraction minus Naphthalene (F2)	33	100	µg/L	µg/L	<100	<100	NA	Complies	
C10 - C36 Fraction (Sum)	33	50	µg/L	µg/L	<50	<50	NA	Complies	
C10 - C40 Fraction (Sum)	33	100	µg/L	µg/L	<100	<100	NA	Complies	
C15 - C28 Fraction	33	100	µg/L	µg/L	<100	<100	NA	Complies	
C16 - C34 Fraction	33	100	µg/L	µg/L	<100	<100	NA	Complies	
C29 - C36 Fraction	33	50	µg/L	µg/L	<50	<50	NA	Complies	
C34 - C40 Fraction	33	100	µg/L	µg/L	<100	<100	NA	Complies	
C6 - C10 Fraction (F1)	33	20	µg/L	µg/L	<20	<20	NA	Complies	
C6 - C10 Fraction minus BTEX (F1)	33	20	µg/L	µg/L	<20	<20	NA	Complies	
C6 - C9 Fraction	33	20	µg/L	µg/L	<20	<20	NA	Complies	
Cadmium	33	0.0001	mg/L	mg/L	<0.0001	<0.0001	NA	Complies	
Calcium	34	1	mg/L	mg/L	94	93	0.99	Complies	
Chloride	34	1	mg/L	mg/L	167	162	0.97	Complies	
Chromium (III+VI)	33	0.001	mg/L	mg/L	<0.001	<0.001	NA	Complies	
Chrysene	33	1	µg/L	µg/L	<1	<1	NA	Complies	
Copper	33	0.001	mg/L	mg/L	0.0020	<0.001	NA	Complies	
Dibenzo(a,h)anthracene	33	1	µg/L	µg/L	<1	<1	NA	Complies	
Dissolved Oxygen (Field)	20	0.1	mg/L	mg/L	0.2	NA	NA	NA	
Electrical Conductivity (Field)	33	1	µS/cm	µS/cm	1528	NA	NA	NA	
Specific conductance (Field)	28	1	µS/cm	µS/cm	1249	1193	0.96	Complies	
Electrical Conductivity (Lab)	34	1	µS/cm	µS/cm	1210	1,140	0.94	Complies	
Ethane	33	10	µg/L	µg/L	<10	<10	NA	Complies	
Ethylbenzene	33	2	µg/L	µg/L	<2	<2	NA	Complies	
Fluoranthene	33	1	µg/L	µg/L	<1	<1	NA	Complies	
Fluorene	33	1	µg/L	µg/L	<1	<1	NA	Complies	
Fluoride	34	0.1	mg/L	mg/L	1.40	1.2	0.86	Complies	
Gross alpha activity	27	0.05	Bq/L	Bq/L	1.65	0.81	0.49	Complies	
Gross beta activity (excluding activity of K-40)	27	0.1	Bq/L	Bq/L	0.63	0.22	0.35	Complies	
Indeno(1,2,3-c,d)pyrene	33	1	µg/L	µg/L	<1	<1	NA	Complies	
Iron	33	0.05	mg/L	mg/L	2.86	0.89	0.31	Complies	
Lead	33	0.001	mg/L	mg/L	<0.001	<0.001	NA	Complies	
Lithium	33	0.001	mg/L	mg/L	0.044	0.041	0.93	Complies	
Magnesium	34	1	mg/L	mg/L	40	39	0.98	Complies	
Manganese	33	0.001	mg/L	mg/L	0.034	0.013	0.38	Complies	
Mercury	33	0.0001	mg/L	mg/L	<0.0001	<0.0001	NA	Complies	
Methane	33	10	µg/L	mg/L	0.034	<0.01	NA	Complies	
Naphthalene	33	1	µg/L	µg/L	<1	<1	NA	Complies	
Nitrate (as N)	34	0.01	mg/L	mg/L	0.020	<0.01	NA	Complies	
Nitrite (as N)	34	0.01	mg/L	mg/L	<0.01	<0.01	NA	Complies	
Nitrite + Nitrate (as N)	16	0.01	mg/L	mg/L	0.020	<0.01	NA	Complies	
pH (Lab)	34	0.01	pH units	pH units	7.64	7.42	0.97	Complies	
pH (Field)	37	0.01	pH units	pH units	7.03	7.17	1.02	Exceedance	Very small exceedance. Possible rising trend
Phenanthrene	33	1	µg/L	µg/L	<1	<1	NA	Complies	
Potassium	34	1	mg/L	mg/L	16	15	0.94	Complies	
Propane	33	10	µg/L	mg/L	<0.01	<0.01	NA	Complies	
Pyrene	33	1	µg/L	µg/L	<1	<1	NA	Complies	
Selenium	33	0.01	mg/L	mg/L	<0.01	<0.01	NA	Complies	
Silicon as Si	31	0.05	mg/L	mg/L	10.5	11.0	1.05	Exceedance	Slight exceedance only, no data trend
Silver	33	0.001	mg/L	mg/L	<0.001	<0.001	NA	Complies	
Sodium	34	1	mg/L	mg/L	102	104	1.02	Exceedance	Very small exceedance. Possible declining trend. Current value less than historical maximum
Strontium	33	0.001	mg/L	mg/L	0.795	0.786	0.99	Complies	
Sulphate as SO4	32	1	mg/L	mg/L	126	135	1.07	Exceedance	No trend. Only very slightly higher than historical maximum
Sum of BTEX	33	1	µg/L	µg/L	<1	<1	NA	Complies	
Suspended Solids	33	5	mg/L	mg/L	10.0	<5	NA	Complies	
Temperature (Field)	33	0.1	°C	°C	37.4	NA	NA	NA	
Toluene	33	2	µg/L	µg/L	<2	<2	NA	Complies	
Total Dissolved Solids	34	10	mg/L	mg/L	743	731	0.98	Complies	
Total Reportable PAH	28	0.5	µg/L	µg/L	<0.5	<0.5	NA	Complies	
Xylene (m & p)	33	2	µg/L	µg/L	<2	<2	NA	Complies	
Xylene (o)	33	2	µg/L	µg/L	<2	<2	NA	Complies	
Xylene Total	33	2	µg/L	µg/L	<2	<2	NA	Complies	
Zinc	33	0.005	mg/L	mg/L	0.011	0.007	0.64	Complies	Concentrations appear to be declining

Table 5 - SS2 Anthony Lagoon Formation Bore Comparison Results, July 2025

Table 5 Shenandoah South 2 Anthony Lagoon Formation bore comparison July 2025

Analyte	RN040896 (BET-MB021) Count Samples	EQL	EQL Units	Output Unit	RN040896 (BET-MB021) 75th percentile	RN43873 (BET-MB030) Concentration as of Last Sample Date 15/07/2025	RN040896 (BET-MB021) to RN43873 (BET-MB030) Ratio	75th Percentile Exceedance	Comment
Acenaphthene	42	1	µg/L	µg/L	<1	<1.0	NA	Complies	
Acenaphthylene	42	1	µg/L	µg/L	<1	<1.0	NA	Complies	
Alkalinity (Bicarbonate as CaCO3)	45	1	mg/L	mg/L	296	291	0.98	Complies	
Alkalinity (Carbonate as CaCO3)	45	1	mg/L	mg/L	<1	<1	NA	Complies	
Alkalinity (Hydroxide) as CaCO3	45	1	mg/L	mg/L	<1	<1	NA	Complies	
Alkalinity (Total)(as CaCO3)	45	1	mg/L	mg/L	296	291	0.98	Complies	
Anthracene	42	1	µg/L	µg/L	<1	<1.0	NA	Complies	
Arsenic	43	0.001	mg/L	mg/L	0.004	0.023	5.75	Exceedance	Overall dynamic but declining trend. Detections likely related to pyrite oxidation due to drilling with air
Barium	43	0.001	mg/L	mg/L	0.060	0.052	0.87	Complies	
Benzo(a)anthracene	42	1	µg/L	µg/L	<1	<1.0	NA	Complies	
Benzene	42	1	µg/L	µg/L	<1	<1	NA	Complies	
Benzo(a)pyrene	42	0.5	µg/L	µg/L	<0.5	<0.5	NA	Complies	
Benzo(Baj)fluoranthene	42	0.001	mg/L	mg/L	<0.001	<0.0010	NA	Complies	
Benzo(g,h,i)perylene	42	1	µg/L	µg/L	<1	<1.0	NA	Complies	
Benzo(k)fluoranthene	42	1	µg/L	µg/L	<1	<1.0	NA	Complies	
Boron	43	0.05	mg/L	mg/L	0.23	0.24	1.04	Exceedance	Only a slight exceedance. Less than historical maximum
C10 - C14 Fraction	42	50	µg/L	µg/L	<50	<50	NA	Complies	
C10 - C16 Fraction	42	100	µg/L	µg/L	<100	<100	NA	Complies	
C10 - C16 Fraction minus Naphthalene (F2)	42	100	µg/L	µg/L	<100	<100	NA	Complies	
C10 - C36 Fraction (Sum)	42	50	µg/L	µg/L	<50	<50	NA	Complies	
C10 - C40 Fraction (Sum)	42	100	µg/L	µg/L	<100	<100	NA	Complies	
C15 - C28 Fraction	42	100	µg/L	µg/L	<100	<100	NA	Complies	
C16 - C34 Fraction	42	100	µg/L	µg/L	<100	<100	NA	Complies	
C29 - C36 Fraction	42	50	µg/L	µg/L	<50	<50	NA	Complies	
C34 - C40 Fraction	42	100	µg/L	µg/L	<100	<100	NA	Complies	
C6 - C10 Fraction	42	20	µg/L	µg/L	<20	<20	NA	Complies	
C6 - C10 Fraction minus BTEX (F1)	42	20	µg/L	µg/L	<20	<20	NA	Complies	
C6 - C9 Fraction	42	20	µg/L	µg/L	<20	<20	NA	Complies	
Cadmium	43	0.0001	mg/L	mg/L	<0.0001	<0.0001	NA	Complies	
Calcium	45	1	mg/L	mg/L	83	85	1.02	Exceedance	Slight exceedance. No discernible trend. Less than historical maximum
Chloride	45	1	mg/L	mg/L	174	164	0.94	Complies	
Chromium (III+VI)	43	0.001	mg/L	mg/L	<0.001	<0.001	NA	Complies	
Chrysene	42	1	µg/L	µg/L	<1	<1.0	NA	Complies	
Copper	43	0.001	mg/L	mg/L	<0.001	<0.001	NA	Complies	
Dibenz(a,h)anthracene	42	1	µg/L	µg/L	<1	<1.0	NA	Complies	
Dissolved Oxygen (Field)	47	0.1	mg/L	mg/L	1.03	0.27	0.26	Complies	
Electrical Conductivity (Field)	35	1	µS/cm	µS/cm	1486	1,560	1.05	Exceedance	Laboratory value & SPC comply
Specific conductance (Field)	38	1	µS/cm	µS/cm	1269	1,267	1.00	Complies	
Electrical Conductivity (Lab)	45	1	µS/cm	µS/cm	1200	1,120	0.93	Complies	
Ethane	42	10	µg/L	µg/L	<10	<10	NA	Complies	
Ethylbenzene	42	2	µg/L	µg/L	<2	<2	NA	Complies	
Fluoranthene	42	1	µg/L	µg/L	<1	<1.0	NA	Complies	
Fluorene	42	1	µg/L	µg/L	<1	<1.0	NA	Complies	
Fluoride	45	0.1	mg/L	mg/L	1.1	1.2	1.09	Exceedance	Slight exceedance. No discernible trend. Less than historical maximum
Gross alpha activity	36	0.05	Bq/L	Bq/L	0.36	0.48	1.33	Exceedance	May reflect cross connection with GRF prior to workover to isolate ALB
Gross beta activity (excluding activity of K-40)	36	0.1	Bq/L	Bq/L	0.22	0.21	0.95	Complies	
Indeno(1,2,3-c,d)pyrene	42	1	µg/L	µg/L	<1	<1.0	NA	Complies	
Iron	43	0.05	mg/L	mg/L	1.08	0.88	0.82	Complies	
Lead	43	0.001	mg/L	mg/L	<0.001	<0.001	NA	Complies	
Lithium	43	0.001	mg/L	mg/L	0.051	0.044	0.86	Complies	
Magnesium	45	1	mg/L	mg/L	41	37	0.90	Complies	
Manganese	43	0.001	mg/L	mg/L	0.040	0.022	0.55	Complies	
Mercury	43	0.0001	mg/L	mg/L	<0.0001	<0.0001	NA	Complies	
Methane	42	10	µg/L	mg/L	0.033	<0.01	NA	Complies	
Naphthalene	42	1	µg/L	µg/L	<1	<1.0	NA	Complies	
Nitrate (as N)	45	0.01	mg/L	mg/L	0.03	<0.01	NA	Complies	
Nitrite (as N)	45	0.01	mg/L	mg/L	<0.01	<0.01	NA	Complies	
Nitrite + Nitrate (as N)	20	0.01	mg/L	mg/L	0.03	<0.01	NA	Complies	
pH (Lab)	45	0.01	pH units	pH units	7.75	7.51	0.97	Complies	
pH (Field)	50	0.01	pH units	pH units	7.18	7.10	0.99	Complies	
Phenanthrene	42	1	µg/L	µg/L	<1	<1.0	NA	Complies	
Potassium	45	1	mg/L	mg/L	15	14	0.93	Complies	
Propane	42	0.01	mg/L	mg/L	<0.01	<0.01	NA	Complies	
Pyrene	42	1	µg/L	µg/L	<1	<1.0	NA	Complies	
Selenium	43	0.01	mg/L	mg/L	<0.01	<0.01	NA	Complies	
Silicon as Si	40	0.05	mg/L	mg/L	10.30	10.3	1.00	Complies	
Silver	43	0.001	mg/L	mg/L	<0.001	<0.001	NA	Complies	
Sodium	45	1	mg/L	mg/L	110	106	0.96	Complies	
Strontium	43	0.001	mg/L	mg/L	0.669	0.711	1.06	Exceedance	Only very minor exceedance, may reflect oxidisation of pyrite from oxygen introduced while drilling
Sulphate as SO4	41	1	mg/L	mg/L	134	133	1.00	Complies	
Sum of BTEX	42	1	µg/L	µg/L	<1	<1	NA	Complies	
Suspended Solids	43	5	mg/L	mg/L	10	<5	NA	Complies	
Temperature (Field)	36	0.1	°C	°C	36.0	37.2	1.03	Exceedance	Results consistent with previous measurements, but greater than historical values. Likely due to different purge durations
Toluene	42	2	µg/L	µg/L	<2	<2	NA	Complies	
Total Dissolved Solids	45	10	mg/L	mg/L	715	737	1.03	Exceedance	Minor exceedance, however trend is overall declining
Total Reportable PAH	36	0.5	µg/L	µg/L	<0.5	<0.5	NA	Complies	
Xylene (m & p)	42	2	µg/L	µg/L	<2	<2	NA	Complies	
Xylene (o)	42	2	µg/L	µg/L	<2	<2	NA	Complies	
Xylene Total	42	2	µg/L	µg/L	<2	<2	NA	Complies	
Zinc	43	0.005	mg/L	mg/L	0.039	0.017	0.44	Complies	