

27 March 2026

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

**Attention:** Ms Sally Strohmayer

Dear Ms Strohmayer

**Re: Quarter 1 2026 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 2026 monitoring event at the Kyalla 117 N2 and Shenandoah South 2 (SS2) well sites.

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

**Table 1: Quarter 1 2026 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	<i>Beetaloo Sub -Basin Shenandoah South E&amp;A Program Environment Management Plan (TAM1-3)</i>
Details of the relevant approval condition the notification of any groundwater monitoring results above the interquartile range is intended to satisfy	<b>Condition 14:</b> The interest holder must:  <i>iv. within 60 days of each groundwater monitoring event, the interest holder must submit to <a href="mailto:onshoregas.DEPWS@nt.gov.au">onshoregas.DEPWS@nt.gov.au</a> the results of groundwater monitoring in a format to be determined by DEPWS<sup>1</sup>.</i>
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 1 (January 2026).

<sup>1</sup> 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).

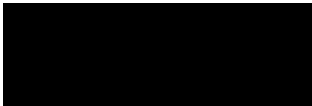
Data required	Tamboran response
Statement on whether the analytical results are within or outside of natural variability of baseline groundwater quality	<p>The analytical results from the Kyalla 117 N2 (RN041136) and SS2 (RN043874) Gum Ridge impact monitoring bores and the Kyalla 117 N2 (RN041137) and SS2 (RN043873) Anthony Lagoon impact monitoring bores have recorded several results outside of the interquartile range.</p> <p>The 75<sup>th</sup> 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.</p>
Highlighting the data that are above the respective interquartile range for the relevant groundwater parameter/s	<p>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 the interquartile range.</p> <ul style="list-style-type: none"> <li>• RN041136 – Kyalla 117 Gum Ridge Formation impact monitoring bore - 14 parameters above the 75th percentile (Table 2)</li> <li>• RN041137 - Kyalla 117 Anthony Lagoon Formation impact monitoring bore - 15 parameters above the 75th percentile (Table 3)</li> <li>• RN043874 – Shenandoah South 2 Gum Ridge Formation impact monitoring bore - 13 parameters above the 75th percentile (Table 4)</li> <li>• RN043873 - Shenandoah South 2 Anthony Lagoon Formation impact monitoring bore - 12 parameters above the 75th percentile (Table 5)</li> </ul> <p>The results of the statistical analysis, identifying the analytes that exceed the 75th percentile, is provided separately to this summary.</p>
A summary and an analysis of causes for elevated groundwater monitoring results and actions taken to ensure that protection of groundwater is maintained	<ul style="list-style-type: none"> <li>• 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.</li> <li>• 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.</li> <li>• Results of groundwater monitoring confirm no material deterioration in groundwater quality associated with Tamboran’s activities.</li> </ul>

Data required	Tamboran response
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**

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**Table 2 - Kyalla 117 Gum Ridge Formation Bore Comparison Results, January 2026**

Table 2 Kyalla 117 Gum Ridge Formation bore comparison January 2026

Analyte	RN041132 (BET-MB022) Count Samples (exc field duplicates)	EQL	EQL Units	Output Unit	RN041132 (BET-MB022) 75th percentile	RN041136 (BET-MB024) Concentration as of Last Sample Date 3/10/2025	RN041132 (BET-MB022) to RN041136 (BET-MB024) Ratio	75th Percentile Exceedance	Comment
Acenaphthene	34	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Acenaphthylene	34	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Alkalinity (Bicarbonate as CaCO3)	35	1	mg/L	mg/L	313	301	0.96	Complies	
Alkalinity (Carbonate as CaCO3)	35	1	mg/L	mg/L	<1	<1	NA	Complies	
Alkalinity (Hydroxide as CaCO3)	35	1	mg/L	mg/L	<1	<1	NA	Complies	
Alkalinity (Total) as CaCO3	35	1	mg/L	mg/L	313	301	0.96	Complies	
Anthracene	34	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Arsenic	34	0.001	mg/L	mg/L	0.004	0.002	0.5	Complies	
Barium	34	0.001	mg/L	mg/L	0.063	0.070	1.12	Exceedance	Small exceedance and long-term increasing trend evident since July 2023
Benzo(a)anthracene	34	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Benzene	34	1	µg/L	µg/L	<1	<1	NA	Complies	
Benzo(a)pyrene	34	0.5	µg/L	µg/L	<0.5	<0.5	NA	Complies	
Benzo(b)fluoranthene	34	0.001	mg/L	mg/L	<0.0010	<0.0010	NA	Complies	
Benzo(g,h)perylene	34	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Benzo(k)fluoranthene	34	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Boron	34	0.05	mg/L	mg/L	0.230	0.29	1.26	Exceedance	Dynamic values with time, most recent value is equal historical maximum
C10 - C14 Fraction	34	50	µg/L	µg/L	<50	<50	NA	Complies	
C10 - C16 Fraction	34	100	µg/L	µg/L	<100	<100	NA	Complies	
C10 - C16 Fraction minus Naphthalene (F2)	34	100	µg/L	µg/L	<100	<100	NA	Complies	
C10 - C36 Fraction (Sum)	34	50	µg/L	µg/L	150	<50	NA	Complies	
C10 - C40 Fraction (Sum)	34	100	µg/L	µg/L	190	<100	NA	Complies	
C15 - C28 Fraction	34	100	µg/L	µg/L	150	<100	NA	Complies	
C16 - C34 Fraction	34	100	µg/L	µg/L	190	<100	NA	Complies	
C29 - C36 Fraction	34	50	µg/L	µg/L	<50	<50	NA	Complies	
C34 - C40 Fraction	34	100	µg/L	µg/L	<100	<100	NA	Complies	
C6 - C10 Fraction	34	20	µg/L	µg/L	<20	<20	NA	Complies	
C6 - C10 Fraction minus BTEX (F1)	34	20	µg/L	µg/L	<20	<20	NA	Complies	
C6 - C9 Fraction	34	20	µg/L	µg/L	<20	<20	NA	Complies	
Cadmium	34	0.0001	mg/L	mg/L	<0.0001	<0.0001	NA	Complies	
Calcium	35	1	mg/L	mg/L	94	87	0.93	Complies	
Chloride	35	1	mg/L	mg/L	168	178	1.06	Exceedance	Historically values have been dynamic. Possible rising trend since August 2024
Chromium (III+VI)	34	0.001	mg/L	mg/L	<0.001	<0.001	NA	Complies	
Chrysene	34	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Copper	34	0.001	mg/L	mg/L	0.0020	0.004	NA	Complies	
Dibenz(a,h)anthracene	34	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Dissolved Oxygen (Field)	35	0.1	mg/L	mg/L	0.46	0.25	0.54	Complies	
Electrical Conductivity (Field)	51	1	µS/cm	µS/cm	1532	1634.00	1.07	Exceedance	Very small exceedance. Less than historical maximum. Possible rising trend since April 2023
Specific conductance (Field)	47	1	µS/cm	µS/cm	1245	1304.00	1.05	Exceedance	Very small exceedance, less than historical maximum. Possible rising trend since April 2024
Electrical Conductivity (Lab)	35	1	µS/cm	µS/cm	1210	1,220	1.01	Exceedance	Very small exceedance, within calibration and measurement error. Less than historical maximum. No real trend
Ethane	34	10	µg/L	µg/L	<10	<10	NA	Complies	
Ethylbenzene	34	2	µg/L	µg/L	<2	<2	NA	Complies	
Fluoranthene	34	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Fluorene	34	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Fluoride	35	0.1	mg/L	mg/L	1.4	1.2	0.86	Complies	
Gross alpha activity	29	0.05	Bq/L	Bq/L	1.64	0.64	0.39	Complies	
Gross beta activity (excluding activity of K-40)	29	0.1	Bq/L	Bq/L	0.57	0.19	0.33	Complies	
Indeno(1,2,3-c,d)pyrene	34	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Iron	34	0.05	mg/L	mg/L	2.83	2.16	0.76	Complies	
Lead	34	0.001	mg/L	mg/L	<0.001	<0.001	NA	Complies	
Lithium	34	0.001	mg/L	mg/L	0.045	0.056	1.25	Exceedance	Historically values have been dynamic. Historical maximum value
Magnesium	35	1	mg/L	mg/L	40	37	0.93	Complies	
Manganese	34	0.001	mg/L	mg/L	0.034	0.056	1.65	Exceedance	Historically dynamic values, Possible declining trend since April 2023
Mercury	34	0.0001	mg/L	mg/L	<0.0001	<0.0001	NA	Complies	
Methane	34	0.01	mg/L	mg/L	0.035	<0.01	NA	Complies	
Naphthalene	34	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Nitrate (as N)	35	0.01	mg/L	mg/L	0.02	<0.01	NA	Complies	
Nitrite (as N)	35	0.01	mg/L	mg/L	<0.01	<0.01	NA	Complies	
Nitrite + Nitrate (as N)	18	0.01	mg/L	mg/L	0.02	<0.01	NA	Complies	
pH (Lab)	35	0.01	pH Unit	pH Units	7.65	7.30	0.95	Complies	
pH (Field)	59	0.01	pH Unit	pH Units	7.12	7.33	1.03	Exceedance	Small exceedance. Well below highest historical value. Possible slight rising trend since August 2024
Phenanthrene	34	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Potassium	35	1	mg/L	mg/L	16	15	0.94	Complies	
Propane	34	0.01	mg/L	mg/L	<0.01	<0.01	NA	Complies	
Pyrene	34	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Selenium	34	0.01	mg/L	mg/L	<0.004	<0.004	NA	Complies	
Silicon as Si	32	0.05	mg/L	mg/L	10.5	10.80	1.03	Exceedance	Small exceedance possible slight long-term increasing trend evident
Silver	34	0.001	mg/L	mg/L	<0.001	<0.001	NA	Complies	
Sodium	35	1	mg/L	mg/L	102	99	0.97	Complies	
Strontium	34	0.001	mg/L	mg/L	0.80	0.942	1.18	Exceedance	Small exceedance, dynamic historical values with no real long-term trend evident. Highest historical value.
Sulphate as SO4	33	1	mg/L	mg/L	124	126	1.02	Exceedance	Small exceedance and no real long-term trend evident
Sum of BTEX	34	1	µg/L	µg/L	<1	<1	NA	Complies	
Suspended Solids	34	5	mg/L	mg/L	10.0	<5	NA	Complies	
Temperature (Field)	55	0.1	°C	°C	37.46	39.30	1.05	Exceedance	Very small exceedance, within calibration and measurement error. Declining trend to April 2024 then step increase of approx 5.2 deg C with near stability thereafter
Toluene	34	2	µg/L	µg/L	<2	<2	NA	Complies	
Total Dissolved Solids	35	10	mg/L	mg/L	741	666	0.899	Complies	
Total Reportable PAH	30	0.5	µg/L	µg/L	<0.5	<0.5	NA	Complies	
Xylene (m & p)	34	2	µg/L	µg/L	<2	<2	NA	Complies	
Xylene (o)	34	2	µg/L	µg/L	<2	<2	NA	Complies	
Xylene Total	34	2	µg/L	µg/L	<2	<2	NA	Complies	
Zinc	34	0.005	mg/L	mg/L	0.011	0.015	1.40	Exceedance	Small exceedance, historically dynamic with no real long-term trend evident

**Table 3 - Kyalla 117 Anthony Lagoon Formation Bore Comparison Results, January 2026**

Table 3 Kyalla 117 Anthony Lagoon Formation bore comparison January 2026

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 24/1/2026	RN040896 (BET-MB021) to RN041137 (BET-MB023) Ratio	75th Percentile Exceedance	Comment
Acenaphthene	44	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Acenaphthylene	44	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Alkalinity (Bicarbonate as CaCO3)	47	1	mg/L	mg/L	295.50	313	1.06	Exceedance	Minor exceedance, less than historical maximum, dynamic over time, recent declining trend
Alkalinity (Carbonate as CaCO3)	47	1	mg/L	mg/L	<1	<1	NA	Complies	
Alkalinity (Hydroxide as CaCO3)	47	1	mg/L	mg/L	<1	<1	NA	Complies	
Alkalinity (Total) as CaCO3	47	1	mg/L	mg/L	295.50	313	1.06	Exceedance	Minor exceedance, less than historical maximum, dynamic over time, recent declining trend
Anthracene	44	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Arsenic	45	0.001	mg/L	mg/L	0.004	0.002	0.5	Complies	
Barium	45	0.001	mg/L	mg/L	0.06	0.069	1.13	Exceedance	Less than historical maximum, dynamic over time, possible net declining trend
Benzo(a)anthracene	44	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Benzene	44	1	µg/L	µg/L	<1	<1	NA	Complies	
Benzo(a)pyrene	44	0.5	µg/L	µg/L	<0.5	<0.5	NA	Complies	
Benzo(b+g)fluoranthene	44	0.001	mg/L	mg/L	<0.0010	<0.0010	NA	Complies	
Benzo(g,h,i)perylene	44	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Benzo(k)fluoranthene	44	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Boron	45	0.05	mg/L	mg/L	0.23	0.26	1.13	Exceedance	Minor exceedance, less than historical maximum, dynamic over time
C10 - C14 Fraction	44	50	µg/L	µg/L	<50	<50	NA	Complies	
C10 - C16 Fraction	44	100	µg/L	µg/L	<100	<100	NA	Complies	
C10 - C16 Fraction minus Naphthalene (F2)	44	100	µg/L	µg/L	<100	<100	NA	Complies	
C10 - C36 Fraction (Sum)	44	50	µg/L	µg/L	<50	<50	NA	Complies	
C10 - C40 Fraction (Sum)	44	100	µg/L	µg/L	<100	<100	NA	Complies	
C15 - C28 Fraction	44	100	µg/L	µg/L	<100	<100	NA	Complies	
C16 - C34 Fraction	44	100	µg/L	µg/L	<100	<100	NA	Complies	
C29 - C36 Fraction	44	50	µg/L	µg/L	<50	<50	NA	Complies	
C34 - C40 Fraction	44	100	µg/L	µg/L	<100	<100	NA	Complies	
C6 - C10 Fraction	44	20	µg/L	µg/L	<20	<20	NA	Complies	
C6 - C10 Fraction minus BTEX (F1)	44	20	µg/L	µg/L	<20	<20	NA	Complies	
C6 - C9 Fraction	44	20	µg/L	µg/L	<20	<20	NA	Complies	
Cadmium	45	0.0001	mg/L	mg/L	0.0002	<0.0001	NA	Complies	
Calcium	47	1	mg/L	mg/L	83.00	94	1.13	Exceedance	Minor exceedance, less than historical maximum, dynamic over time
Chloride	47	1	mg/L	mg/L	174.00	162	0.93	Complies	
Chromium (III+VI)	45	0.001	mg/L	mg/L	0.001	<0.001	NA	Complies	
Chrysene	44	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Copper	45	0.001	mg/L	mg/L	<0.001	<0.001	NA	Complies	
Dibenz(a,h)anthracene	44	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Dissolved Oxygen (Field)	46	0.1	mg/L	mg/L	0.51	0.26	0.51	Complies	
Electrical Conductivity (Field)	50	1	µS/cm	µS/cm	1496.00	1511.00	1.01	Exceedance	Very minor exceedance
Specific conductance (Field)	68	1	µS/cm	µS/cm	1269.75	1236.00	0.97	Complies	
Electrical Conductivity (Lab)	47	1	µS/cm	µS/cm	1190.00	1,150	0.97	Complies	
Ethane	44	10	µg/L	µg/L	<10	<10	NA	Complies	
Ethylbenzene	44	2	µg/L	µg/L	<2	<2	NA	Complies	
Fluoranthene	44	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Fluorene	44	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Fluoride	47	0.1	mg/L	mg/L	1.1	1.1	1	Complies	
Gross alpha activity	38	0.05	Bq/L	Bq/L	0.36	0.31	0.87	Complies	
Gross beta activity (excluding activity of K-40)	38	0.1	Bq/L	Bq/L	0.22	<0.10	NA	Complies	
Indeno(1,2,3-c,d)pyrene	44	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Iron	45	0.05	mg/L	mg/L	1.08	1.70	1.58	Exceedance	Low value, concentrations are dynamic with time, lower than highest historical value
Lead	45	0.001	mg/L	mg/L	0.003	<0.001	NA	Complies	
Lithium	45	0.001	mg/L	mg/L	0.05	0.054	1.06	Exceedance	Low value & minor exceedance, concentrations are dynamic with time, highest historical value
Magnesium	47	1	mg/L	mg/L	41.00	44	1.07	Exceedance	Minor exceedance, concentrations are dynamic with time, highest historical value
Manganese	45	0.001	mg/L	mg/L	0.04	0.073	1.78	Exceedance	No real trend, and lower than historical maximum
Mercury	45	0.0001	mg/L	mg/L	<0.0001	<0.0001	NA	Complies	
Methane	44	0.01	mg/L	mg/L	0.04	0.019	0.45	Complies	
Naphthalene	44	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Nitrate (as N)	47	0.01	mg/L	mg/L	0.03	<0.01	NA	Complies	
Nitrite (as N)	47	0.01	mg/L	mg/L	<0.01	<0.01	NA	Complies	
Nitrite + Nitrate (as N)	22	0.01	mg/L	mg/L	0.03	<0.01	NA	Complies	
pH (Lab)	47	0.01	pH Unit	pH Units	7.73	7.26	0.94	Complies	
pH (Field)	74	0.01	pH Unit	pH Units	7.20	7.27	1.01	Exceedance	Very small exceedance, within calibration and measurement error.
Phenanthrene	44	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Potassium	47	1	mg/L	mg/L	15.00	18	1.20	Exceedance	Minor exceedance, concentrations are dynamic with time, equal to highest historical value
Propane	44	0.01	mg/L	mg/L	<0.01	<0.01	NA	Complies	
Pyrene	44	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Selenium	45	0.01	mg/L	mg/L	<0.004	<0.004	NA	Complies	
Silicon as Si	42	0.05	mg/L	mg/L	10.28	11.20	1.09	Exceedance	Small exceedance & less than historical maximum. No obvious trend in recent data
Silver	45	0.001	mg/L	mg/L	<0.001	<0.001	NA	Complies	
Sodium	47	1	mg/L	mg/L	110.00	108	0.98	Complies	
Strontium	45	0.001	mg/L	mg/L	0.67	0.721	1.08	Exceedance	Minor exceedance, concentrations are dynamic with time, less than the highest historical value
Sulphate as SO4	43	1	mg/L	mg/L	130.00	110	0.85	Complies	
Sum of BTEX	44	1	µg/L	µg/L	<1	<1	NA	Complies	
Suspended Solids	45	5	mg/L	mg/L	10	6	NA	Complies	
Temperature (Field)	60	0.1	°C	°C	36.00	36.70	1.02	Exceedance	Very small exceedance, within calibration and measurement error. Declining trend to April 2024 then step increase of approx 1.5 deg C with near stability thereafter
Toluene	44	2	µg/L	µg/L	<2	<2	NA	Complies	
Total Dissolved Solids	47	10	mg/L	mg/L	718.000	588	0.819	Complies	
Total Reportable PAH	39	0.5	µg/L	µg/L	<0.5	<0.5	NA	Complies	
Xylene (m & p)	44	2	µg/L	µg/L	<2	<2	NA	Complies	
Xylene (o)	44	2	µg/L	µg/L	<2	<2	NA	Complies	
Xylene Total	44	2	µg/L	µg/L	<2	<2	NA	Complies	
Zinc	45	0.005	mg/L	mg/L	0.04	0.007	NA	Complies	

**Table 4 - SS2 Gum Ridge Formation Bore Comparison Results, January 2026**

Table 4 Shenandoah South 2 Gum Ridge Formation bore comparison January 2026

Analyte	RN041132 (BET-MB022) Count Samples (exc field duplicates)	EQL	EQL Units	Output Unit	RN041132 (BET-MB022) 75th percentile	RN043874 (BET-MB031) Concentration as of Last Sample Date 24/1/2026	RN041132 (BET-MB022) to RN043874 (BET-MB031) Ratio	75th Percentile Exceedance	Comment
Acenaphthene	34	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Acenaphthylene	34	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Alkalinity (Bicarbonate as CaCO3)	35	1	mg/L	mg/L	313	302	0.96	Complies	
Alkalinity (Carbonate as CaCO3)	35	1	mg/L	mg/L	<1	<1	NA	Complies	
Alkalinity (Hydroxide as CaCO3)	35	1	mg/L	mg/L	<1	<1	NA	Complies	
Alkalinity (Total) as CaCO3	35	1	mg/L	mg/L	313	302	0.96	Complies	
Anthracene	34	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Arsenic	34	0.001	mg/L	mg/L	0.004	0.006	1.5	Exceedance	Small exceedance with long-term declining trend after bore construction
Barium	34	0.001	mg/L	mg/L	0.063	0.068	1.08	Exceedance	Small exceedance and highest historical value
Benzo(a)anthracene	34	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Benzene	34	1	µg/L	µg/L	<1	<1	NA	Complies	
Benzo(a)pyrene	34	0.5	µg/L	µg/L	<0.5	<0.5	NA	Complies	
Benzo(b)fluoranthene	34	0.001	mg/L	mg/L	<0.0010	<0.0010	NA	Complies	
Benzo(g,h,i)perylene	34	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Benzo(k)fluoranthene	34	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Boron	34	0.05	mg/L	mg/L	0.230	0.28	1.22	Exceedance	Small exceedance. Dynamic values with time, most recent value is less than historical maximum
C10 - C14 Fraction	34	50	µg/L	µg/L	<50	<50	NA	Complies	
C10 - C16 Fraction	34	100	µg/L	µg/L	<100	<100	NA	Complies	
C10 - C16 Fraction minus Naphthalene (F2)	34	100	µg/L	µg/L	<100	<100	NA	Complies	
C10 - C36 Fraction (Sum)	34	50	µg/L	µg/L	150	<50	NA	Complies	
C10 - C40 Fraction (Sum)	34	100	µg/L	µg/L	190	<100	NA	Complies	
C15 - C28 Fraction	34	100	µg/L	µg/L	150	<100	NA	Complies	
C16 - C34 Fraction	34	100	µg/L	µg/L	190	<100	NA	Complies	
C29 - C36 Fraction	34	50	µg/L	µg/L	<50	<50	NA	Complies	
C34 - C40 Fraction	34	100	µg/L	µg/L	<100	<100	NA	Complies	
C6 - C10 Fraction	34	20	µg/L	µg/L	<20	<20	NA	Complies	
C6 - C10 Fraction minus BTEX (F1)	34	20	µg/L	µg/L	<20	<20	NA	Complies	
C6 - C9 Fraction	34	20	µg/L	µg/L	<20	<20	NA	Complies	
Cadmium	34	0.0001	mg/L	mg/L	<0.0001	<0.0001	NA	Complies	
Calcium	35	1	mg/L	mg/L	94	85	0.90	Complies	
Chloride	35	1	mg/L	mg/L	168	176	1.05	Exceedance	Historically values have been dynamic. Most recent value less than historical maximum
Chromium (III+VI)	34	0.001	mg/L	mg/L	<0.001	<0.001	NA	Complies	
Chrysene	34	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Copper	34	0.001	mg/L	mg/L	0.0020	<0.001	NA	Complies	
Dibenz(a,h)anthracene	34	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Dissolved Oxygen (Field)	35	0.1	mg/L	mg/L	0.46	0.28	0.61	Complies	
Electrical Conductivity (Field)	51	1	µS/cm	µS/cm	1532	1606.00	1.05	Exceedance	Small exceedance. Most recent value is historical maximum. Possible rising trend.
Specific conductance (Field)	47	1	µS/cm	µS/cm	1245	1299.00	1.04	Exceedance	Small exceedance. Most recent value is historical maximum. Possible rising trend.
Electrical Conductivity (Lab)	35	1	µS/cm	µS/cm	1210	1,220	1.01	Exceedance	Very small exceedance, within calibration and measurement error. Less than historical maximum. No real trend
Ethane	34	10	µg/L	µg/L	<10	<10	NA	Complies	
Ethylbenzene	34	2	µg/L	µg/L	<2	<2	NA	Complies	
Fluoranthene	34	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Fluorene	34	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Fluoride	35	0.1	mg/L	mg/L	1.4	1.3	0.93	Complies	
Gross alpha activity	29	0.05	Bq/L	Bq/L	1.64	0.75	0.46	Complies	
Gross beta activity (excluding activity of K-40)	29	0.1	Bq/L	Bq/L	0.57	<0.10	NA	Complies	
Indeno(1,2,3-c,d)pyrene	34	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Iron	34	0.05	mg/L	mg/L	2.83	0.55	0.19	Complies	
Lead	34	0.001	mg/L	mg/L	<0.001	<0.001	NA	Complies	
Lithium	34	0.001	mg/L	mg/L	0.045	0.054	1.21	Exceedance	Historically values have been dynamic. Historical maximum value
Magnesium	35	1	mg/L	mg/L	40	35	0.88	Complies	
Manganese	34	0.001	mg/L	mg/L	0.034	0.012	0.35	Complies	
Mercury	34	0.0001	mg/L	mg/L	<0.0001	<0.0001	NA	Complies	
Methane	34	0.01	mg/L	mg/L	0.035	<0.01	NA	Complies	
Naphthalene	34	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Nitrate (as N)	35	0.01	mg/L	mg/L	0.02	<0.01	NA	Complies	
Nitrite (as N)	35	0.01	mg/L	mg/L	<0.01	<0.01	NA	Complies	
Nitrite + Nitrate (as N)	18	0.01	mg/L	mg/L	0.02	<0.01	NA	Complies	
pH (Lab)	35	0.01	pH Unit	pH Units	7.65	7.23	0.95	Complies	
pH (Field)	59	0.01	pH Unit	pH Units	7.12	7.28	1.02	Exceedance	Small exceedance. Below highest historical value. Possible slight rising trend since June 2025
Phenanthrene	34	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Potassium	35	1	mg/L	mg/L	16	14	0.88	Complies	
Propane	34.00	0.01	mg/L	mg/L	<0.01	<0.01	NA	Complies	
Pyrene	34	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Selenium	34	0.01	mg/L	mg/L	<0.004	<0.004	NA	Complies	
Silicon as Si	32	0.05	mg/L	mg/L	10.5	11.10	1.06	Exceedance	Small exceedance possible slight long-term increasing trend evident
Silver	34	0.001	mg/L	mg/L	<0.001	<0.001	NA	Complies	
Sodium	35	1	mg/L	mg/L	102	97	0.95	Complies	
Strontium	34	0.001	mg/L	mg/L	0.80	0.884	1.11	Exceedance	Small exceedance, dynamic historical values with no real long-term trend evident. Highest historical value.
Sulphate as SO4	33	1	mg/L	mg/L	124	137	1.10	Exceedance	Small exceedance and no real long-term trend evident. Highest historical value
Sum of BTEX	34	1	µg/L	µg/L	<1	<1	NA	Complies	
Suspended Solids	34	5	mg/L	mg/L	10.0	<5	NA	Complies	
Temperature (Field)	55	0.1	°C	°C	37.46	37.300	0.996	Complies	
Toluene	34	2	µg/L	µg/L	<2	<2	NA	Complies	
Total Dissolved Solids	35	10	mg/L	mg/L	741	645	0.87	Complies	
Total Reportable PAH	30	0.5	µg/L	µg/L	<0.5	<0.5	NA	Complies	
Xylene (m & p)	34	2	µg/L	µg/L	<2	<2	NA	Complies	
Xylene (o)	34	2	µg/L	µg/L	<2	<2	NA	Complies	
Xylene Total	34	2	µg/L	µg/L	<2	<2	NA	Complies	
Zinc	34	0.005	mg/L	mg/L	0.011	0.018	1.67	Exceedance	Small exceedance, historically long-term decline but now stabilising

**Table 5 - SS2 Anthony Lagoon Formation Bore Comparison Results, January 2026**

Table 5 Shenandoah South 2 Anthony Lagoon Formation bore comparison January 2026

Analyte	RN040896 (BET-MB021) Count Samples	EQL	EQL Units	Output Unit	RN040896 (BET-MB021) 75th percentile	RN043873 (BET-MB030) Concentration as of Last Sample Date 25/1/2026	RN040896 (BET-MB021) to RN043873 (BET-MB030) Ratio	75th Percentile Exceedance	Comment
Acenaphthene	44	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Acenaphthylene	44	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Alkalinity (Bicarbonate as CaCO3)	47	1	mg/L	mg/L	295.50	289	0.98	Complies	
Alkalinity (Carbonate as CaCO3)	47	1	mg/L	mg/L	<1	<1	NA	Complies	
Alkalinity (Hydroxide as CaCO3)	47	1	mg/L	mg/L	<1	<1	NA	Complies	
Alkalinity (Total) as CaCO3	47	1	mg/L	mg/L	295.50	289	0.98	Complies	
Anthracene	44	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Arsenic	45	0.001	mg/L	mg/L	0.004	0.020	5	Exceedance	Less than historical maximum, dynamic over time, possible net declining trend
Barium	45	0.001	mg/L	mg/L	0.06	0.065	1.07	Exceedance	Less than historical maximum, dynamic over time
Benzo(a)anthracene	44	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Benzene	44	1	µg/L	µg/L	<1	<1	NA	Complies	
Benzo(a)pyrene	44	0.5	µg/L	µg/L	<0.5	<0.5	NA	Complies	
Benzo(b+ji)fluoranthene	44	0.001	mg/L	mg/L	<0.0010	<0.0010	NA	Complies	
Benzo(g,h,i)perylene	44	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Benzo(k)fluoranthene	44	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Boron	45	0.05	mg/L	mg/L	0.23	0.30	1.30	Exceedance	Minor exceedance, less than historical maximum, dynamic over time
C10 - C14 Fraction	44	50	µg/L	µg/L	<50	<50	NA	Complies	
C10 - C16 Fraction	44	100	µg/L	µg/L	<100	<100	NA	Complies	
C10 - C16 Fraction minus Naphthalene (F2)	44	100	µg/L	µg/L	<100	<100	NA	Complies	
C10 - C36 Fraction (Sum)	44	50	µg/L	µg/L	<50	<50	NA	Complies	
C10 - C40 Fraction (Sum)	44	100	µg/L	µg/L	<100	<100	NA	Complies	
C15 - C28 Fraction	44	100	µg/L	µg/L	<100	<100	NA	Complies	
C16 - C34 Fraction	44	100	µg/L	µg/L	<100	<100	NA	Complies	
C29 - C36 Fraction	44	50	µg/L	µg/L	<50	<50	NA	Complies	
C34 - C40 Fraction	44	100	µg/L	µg/L	<100	<100	NA	Complies	
C6 - C10 Fraction	44	20	µg/L	µg/L	<20	<20	NA	Complies	
C6 - C10 Fraction minus BTEX (F1)	44	20	µg/L	µg/L	<20	<20	NA	Complies	
C6 - C9 Fraction	44	20	µg/L	µg/L	<20	<20	NA	Complies	
Cadmium	45	0.0001	mg/L	mg/L	0.0002	<0.0001	NA	Complies	
Calcium	47	1	mg/L	mg/L	83	79	0.95	Complies	
Chloride	47	1	mg/L	mg/L	174	168	0.97	Complies	
Chromium (III+VI)	45	0.001	mg/L	mg/L	0.001	<0.001	NA	Complies	
Chrysene	44	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Copper	45	0.001	mg/L	mg/L	<0.001	<0.001	NA	Complies	
Dibenz(a,h)anthracene	44	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Dissolved Oxygen (Field)	46	0.1	mg/L	mg/L	0.51	0.31	0.61	Complies	
Electrical Conductivity (Field)	50	1	µS/cm	µS/cm	1496.00	1515.00	1.01	Exceedance	Very minor exceedance
Specific conductance (Field)	68	1	µS/cm	µS/cm	1269.75	1243.00	0.98	Complies	
Electrical Conductivity (Lab)	47	1	µS/cm	µS/cm	1190.00	1,180	0.99	Complies	
Ethane	44	10	µg/L	µg/L	<10	<10	NA	Complies	
Ethylbenzene	44	2	µg/L	µg/L	<2	<2	NA	Complies	
Fluoranthene	44	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Fluorene	44	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Fluoride	47	0.1	mg/L	mg/L	1.1	1.1	1	Complies	
Gross alpha activity	38	0.05	Bq/L	Bq/L	0.36	0.44	1.23	Exceedance	Small exceedance & ongoing, long-term declining trend
Gross beta activity (excluding activity of K-40)	38	0.1	Bq/L	Bq/L	0.22	<0.10	NA	Complies	
Indeno(1,2,3-c,d)pyrene	44	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Iron	45	0.05	mg/L	mg/L	1.08	0.45	0.42	Complies	
Lead	45	0.001	mg/L	mg/L	0.003	<0.001	NA	Complies	
Lithium	45	0.001	mg/L	mg/L	0.05	0.055	1.08	Exceedance	Low value & minor exceedance, concentrations are dynamic with time, less than highest historical value
Magnesium	47	1	mg/L	mg/L	41.00	34	0.83	Complies	
Manganese	45	0.001	mg/L	mg/L	0.04	0.033	0.80	Complies	
Mercury	45	0.0001	mg/L	mg/L	<0.0001	<0.0001	NA	Complies	
Methane	44	0.01	mg/L	mg/L	0.04	<0.01	NA	Complies	
Naphthalene	44	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Nitrate (as N)	47	0.01	mg/L	mg/L	0.03	<0.01	NA	Complies	
Nitrite (as N)	47	0.01	mg/L	mg/L	<0.01	<0.01	NA	Complies	
Nitrite + Nitrate (as N)	22	0.01	mg/L	mg/L	0.03	<0.01	NA	Complies	
pH (Lab)	47	0.01	pH Unit	pH Units	7.73	7.28	0.94	Complies	
pH (Field)	74	0.01	pH Unit	pH Units	7.20	7.27	1.01	Exceedance	Very small exceedance
Phenanthrene	44	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Potassium	47	1	mg/L	mg/L	15.00	13	0.87	Complies	
Propane	44	0.01	mg/L	mg/L	<0.01	<0.01	NA	Complies	
Pyrene	44	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Selenium	45	0.01	mg/L	mg/L	<0.004	<0.004	NA	Complies	
Silicon as Si	42	0.05	mg/L	mg/L	10.28	10.40	1.01	Exceedance	Small exceedance & less than historical maximum. Possible long-term rising trend
Silver	45	0.001	mg/L	mg/L	<0.001	<0.001	NA	Complies	
Sodium	47	1	mg/L	mg/L	110	98	0.89	Complies	
Strontium	45	0.001	mg/L	mg/L	0.67	0.825	1.23	Exceedance	Minor exceedance, concentrations are dynamic with time, highest historical value
Sulphate as SO4	43	1	mg/L	mg/L	130.00	132	1.02	Exceedance	Small exceedance, long-term declining trend
Sum of BTEX	44	1	µg/L	µg/L	<1	<1	NA	Complies	
Suspended Solids	45	5	mg/L	mg/L	10	24	2.40	Exceedance	Large exceedance, may reflect casing corrosion product
Temperature (Field)	60	0.1	°C	°C	36.00	36.50	1.01	Exceedance	Small exceedance, less than historical maximum
Toluene	44	2	µg/L	µg/L	<2	<2	NA	Complies	
Total Dissolved Solids	47	10	mg/L	mg/L	718.000	634	0.883	Complies	
Total Reportable PAH	39	0.5	µg/L	µg/L	<0.5	<0.5	NA	Complies	
Xylene (m & p)	44	2	µg/L	µg/L	<2	<2	NA	Complies	
Xylene (o)	44	2	µg/L	µg/L	<2	<2	NA	Complies	
Xylene Total	44	2	µg/L	µg/L	<2	<2	NA	Complies	
Zinc	45	0.005	mg/L	mg/L	0.04	0.020	NA	Complies	