19 November 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 4 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 4 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.DLPE@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 4 (October, November).

[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	Several 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. • RN041136 – Kyalla 117 N2 Gum Ridge Formation impact monitoring bore - 8 parameters above the 75th percentile (Table 2) • RN041137 - Kyalla 117 N2 Anthony Lagoon Formation impact monitoring bore - 10 parameters above the 75th percentile (Table 3) • RN043874 – Shenandoah South 2 Gum Ridge Formation impact monitoring bore - 10 parameters above the 75th percentile (Table 4) • RN043873 - Shenandoah South 2 Anthony Lagoon Formation impact monitoring bore - 8 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

Data required	Tamboran response
	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 fully equilibrated following the installation of the bores. • 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

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

Table 2 Kyalla 117 Gum Ridge Formation bore comparison October 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 1/10/2025	RN041132 (BET-MB022) to RN041136 (BET-MB024) Ratio	75th Percentile Exceedance	Comment
Acenaphthene	33	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Acenaphthylene	33	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Alkalinity (Bicarbonate as CaCO3)	34	1	mg/L	mg/L	313	307	0.98	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	307	0.98	Complies	
Anthracene	33	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Arsenic	33	0.001	mg/L	mg/L	0.004	0.001	0.25	Complies	
Barium	33	0.001	mg/L	mg/L	0.062	0.052	0.84	Complies	
Benzo(a)anthracene	33	1	µg/L	µg/L	<1.0	<1.0	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	<0.0010	<0.0010	NA	Complies	
Benzo(g,h,i)perylene	33	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Benzo(k)fluoranthene	33	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Boron	33	0.05	mg/L	mg/L	0.230	0.200	0.87	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	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	85	0.91	Complies	
Chloride	34	1	mg/L	mg/L	168	199	1.19	Exceedance	Historically values have been dynamic. Just above historical maximum. Possible rising trend since Feb 24.
Chromium (III+VI)	33	0.001	mg/L	mg/L	<0.001	<0.001	NA	Complies	
Chrysene	33	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Copper	33	0.001	mg/L	mg/L	0.0020	<0.001	NA	Complies	
Dibenz(a,h)anthracene	33	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Dissolved Oxygen (Field)	28	0.1	mg/L	mg/L	0.52	0.24	0.46	Complies	
Electrical Conductivity (Field)	35	1	µS/cm	µS/cm	1529	1573	1.03	Exceedance	Very small exceedance, within calibration and measurement error. No real trend
Specific conductance (Field)	31	1	µS/cm	µS/cm	1247	1257	1.01	Exceedance	Very small exceedance, within calibration and measurement error. No real trend
Electrical Conductivity (Lab)	34	1	µS/cm	µS/cm	1208	1200	0.99	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	<1.0	<1.0	NA	Complies	
Fluorene	33	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Fluoride	34	0.1	mg/L	mg/L	1.4	1.4	1	Complies	
Gross alpha activity	28	0.05	Bq/L	Bq/L	1.64	1.02	0.62	Complies	
Gross beta activity (excluding activity of K-40)	28	0.1	Bq/L	Bq/L	0.60	0.31	0.52	Complies	
Indeno(1,2,3-c,d)pyrene	33	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Iron	33	0.05	mg/L	mg/L	2.86	0.26	0.09	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	0.038	0.86	Complies	
Magnesium	34	1	mg/L	mg/L	40	37	0.93	Complies	
Manganese	33	0.001	mg/L	mg/L	0.034	0.037	1.09	Exceedance	No real long-term trend, and lower than historical maximum
Mercury	33	0.0001	mg/L	mg/L	<0.0001	<0.0001	NA	Complies	
Methane	33	0.01	mg/L	mg/L	0.035	<0.01	NA	Complies	
Naphthalene	33	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Nitrate (as N)	34	0.01	mg/L	mg/L	0.02	0.010	0.50	Complies	
Nitrite (as N)	34	0.01	mg/L	mg/L	0.000	<0.01	NA	Complies	
Nitrite + Nitrate (as N)	17	0.01	mg/L	mg/L	0.02	0.01	0.50	Complies	
pH (Lab)	33	0.01	pH Unit	pH Units	7.66	7.84	1.02	Exceedance	Very small exceedance, within calibration and measurement error. Possible slight rising trend since August 2024
pH (Field)	39	0.01	pH Unit	pH Units	7.07	7.37	1.04	Exceedance	Very small exceedance, within calibration and measurement error. Possible slight rising trend since August 2024
Phenanthrene	33	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Potassium	34	1	mg/L	mg/L	16	14	0.88	Complies	
Propane	33	0.01	mg/L	mg/L	<0.01	<0.01	NA	Complies	
Pyrene	33	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Selenium	33	0.01	mg/L	mg/L	0.000	<0.01	NA	Complies	
Silicon as Si	31	0.05	mg/L	mg/L	10.5	10.3	0.99	Complies	
Silver	33	0.001	mg/L	mg/L	<0.001	<0.001	NA	Complies	
Sodium	34	1	mg/L	mg/L	102	98	0.96	Complies	
Strontium	33	0.001	mg/L	mg/L	0.80	0.716	0.90	Complies	
Sulphate as SO4	32	1	mg/L	mg/L	125	117	0.94	Complies	
Sum of BTEX	33	1	µg/L	µg/L	<1	<1	NA	Complies	
Suspended Solids	33	5	mg/L	mg/L	10.0	7	NA	Complies	
Temperature (Field)	34	0.1	°C	°C	37.41	38.10	1.02	Exceedance	Very small exceedance, within calibration and measurement error. No obvious trend in recent data
Toluene	33	2	µg/L	µg/L	<2	<2	NA	Complies	
Total Dissolved Solids	34	10	mg/L	mg/L	743	744	1.002	Exceedance	Very small exceedance, within calibration and measurement error. No obvious trend in data
Total Reportable PAH	29	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	<0.005	NA	Complies	

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

Table 3 Kyalla 117 Anthony Lagoon Formation bore comparison October 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 1/10/2025	RN040896 (BET-MB021) to RN041137 (BET-MB023) Ratio	75th Percentile Exceedance	Comment
Acenaphthene	47	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Acenaphthylene	47	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Alkalinity (Bicarbonate as CaCO3)	50	1	mg/L	mg/L	296	316	1.07	Exceedance	Minor exceedance, less than historical maximum, dynamic over time.
Alkalinity (Carbonate as CaCO3)	50	1	mg/L	mg/L	<1	<1	NA	Complies	
Alkalinity (Hydroxide as CaCO3)	50	1	mg/L	mg/L	<1	<1	NA	Complies	
Alkalinity (Total) as CaCO3	50	1	mg/L	mg/L	296	316	1.07	Exceedance	Minor exceedance, less than historical maximum, dynamic over time.
Anthracene	47	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Arsenic	48	0.001	mg/L	mg/L	0.004	0.006	1.5	Exceedance	Less than historical maximum, dynamic over time, possible net declining trend
Barium	48	0.001	mg/L	mg/L	0.060	0.071	1.18	Exceedance	Less than historical maximum, dynamic over time, possible net declining trend
Benzo(a)anthracene	47	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Benzene	47	1	µg/L	µg/L	<1	<1	NA	Complies	
Benzo(a)pyrene	47	0.5	µg/L	µg/L	<0.5	<0.5	NA	Complies	
Benzo(b+j)fluoranthene	47	0.001	mg/L	mg/L	<0.0010	<0.0010	NA	Complies	
Benzo(g,h,i)perylene	47	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Benzo(k)fluoranthene	47	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Boron	48	0.05	mg/L	mg/L	0.230	0.170	0.74	Complies	
C10 - C14 Fraction	47	50	µg/L	µg/L	<50	<50	NA	Complies	
C10 - C16 Fraction	47	100	µg/L	µg/L	<100	<100	NA	Complies	
C10 - C16 Fraction minus Naphthalene (F2)	47	100	µg/L	µg/L	<100	<100	NA	Complies	
C10 - C36 Fraction (Sum)	47	50	µg/L	µg/L	<50	<50	NA	Complies	
C10 - C40 Fraction (Sum)	47	100	µg/L	µg/L	<100	<100	NA	Complies	
C15 - C28 Fraction	47	100	µg/L	µg/L	<100	<100	NA	Complies	
C16 - C34 Fraction	47	100	µg/L	µg/L	<100	<100	NA	Complies	
C29 - C36 Fraction	47	50	µg/L	µg/L	<50	<50	NA	Complies	
C34 - C40 Fraction	47	100	µg/L	µg/L	<100	<100	NA	Complies	
C6 - C10 Fraction	47	20	µg/L	µg/L	<20	<20	NA	Complies	
C6 - C10 Fraction minus BTEX (F1)	47	20	µg/L	µg/L	<20	<20	NA	Complies	
C6 - C9 Fraction	47	20	µg/L	µg/L	<20	<20	NA	Complies	
Cadmium	48	0.0001	mg/L	mg/L	0.0002	<0.0001	NA	Complies	
Calcium	50	1	mg/L	mg/L	83	82	0.99	Complies	
Chloride	50	1	mg/L	mg/L	174	170	0.98	Complies	
Chromium (III+VI)	48	0.001	mg/L	mg/L	0.0010	<0.001	NA	Complies	
Chrysene	47	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Copper	48	0.001	mg/L	mg/L	0.0020	<0.001	NA	Complies	
Dibenz(a,h)anthracene	47	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Dissolved Oxygen (Field)	38	0.1	mg/L	mg/L	1.05	0.22	0.21	Complies	
Electrical Conductivity (Field)	39	1	µS/cm	µS/cm	1491	1440	0.97	Complies	
Specific conductance (Field)	41	1	µS/cm	µS/cm	1268	1179	0.93	Complies	
Electrical Conductivity (Lab)	50	1	µS/cm	µS/cm	1200	1130	0.94	Complies	
Ethane	47	10	µg/L	µg/L	<10	<10	NA	Complies	
Ethylbenzene	47	2	µg/L	µg/L	<2	<2	NA	Complies	
Fluoranthene	47	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Fluorene	47	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Fluoride	50	0.1	mg/L	mg/L	1.1	1.1	1	Complies	
Gross alpha activity	41	0.05	Bq/L	Bq/L	0.36	0.48	1.33	Exceedance	Gross alpha values are historically variable & although the most recent value is far less than the historical maximum of 0.93 Bq/L in Dec 2022
Gross beta activity (excluding activity of K-40)	41	0.1	Bq/L	Bq/L	0.22	0.17	0.77	Complies	
Indeno(1,2,3-c,d)pyrene	47	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Iron	48	0.05	mg/L	mg/L	0.97	0.50	0.52	Complies	
Lead	48	0.001	mg/L	mg/L	0.003	<0.001	NA	Complies	
Lithium	48	0.001	mg/L	mg/L	0.051	0.037	0.73	Complies	
Magnesium	50	1	mg/L	mg/L	41	39	0.95	Complies	
Manganese	48	0.001	mg/L	mg/L	0.040	0.070	1.75	Exceedance	No real trend, and lower than historical maximum
Mercury	48	0.0001	mg/L	mg/L	<0.0001	<0.0001	NA	Complies	
Methane	47	0.01	mg/L	mg/L	0.042	0.012	0.29	Complies	
Naphthalene	47	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Nitrate (as N)	50	0.01	mg/L	mg/L	0.03	0.010	0.33	Complies	
Nitrite (as N)	50	0.01	mg/L	mg/L	<0.01	<0.01	NA	Complies	
Nitrite + Nitrate (as N)	23	0.01	mg/L	mg/L	0.03	0.01	0.33	Complies	
pH (Lab)	50	0.01	pH Unit	pH Units	7.78	7.89	1.01	Exceedance	Very small exceedance, within calibration and measurement error.
pH (Field)	54	0.01	pH Unit	pH Units	7.20	7.30	1.01	Exceedance	Very small exceedance, within calibration and measurement error. Possible slight rising trend since August 2025
Phenanthrene	47	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Potassium	50	1	mg/L	mg/L	15	15	1.00	Complies	
Propane	47	0.01	mg/L	mg/L	<0.01	<0.01	NA	Complies	
Pyrene	47	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Selenium	48	0.01	mg/L	mg/L	<0.01	<0.01	NA	Complies	
Silicon as Si	44	0.05	mg/L	mg/L	10.3	10.8	1.05	Exceedance	Small exceedance & less than historical maximum. No obvious trend in recent data
Silver	48	0.001	mg/L	mg/L	<0.001	<0.001	NA	Complies	
Sodium	50	1	mg/L	mg/L	110	88	0.80	Complies	
Strontium	48	0.001	mg/L	mg/L	0.67	0.590	0.88	Complies	
Sulphate as SO_4	45	1	mg/L	mg/L	133	97	0.73	Complies	
Sum of BTEX	47	1	µg/L	µg/L	<1	<1	NA	Complies	
Suspended Solids	48	5	mg/L	mg/L	9.8	<5	NA	Complies	
Temperature (Field)	40	0.1	°C	°C	36.00	36.60	1.02	Exceedance	Very small exceedance, within calibration and measurement error. No obvious trend in recent data
Toluene	47	2	µg/L	µg/L	<2	<2	NA	Complies	
Total Dissolved Solids	50	10	mg/L	mg/L	719	656	0.912	Complies	
Total Reportable PAH	40	0.5	µg/L	µg/L	<0.5	<0.5	NA	Complies	
Xylene (m & p)	47	2	µg/L	µg/L	<2	<2	NA	Complies	
Xylene (o)	47	2	µg/L	µg/L	<2	<2	NA	Complies	
Xylene Total	47	2	µg/L	µg/L	<2	<2	NA	Complies	
Zinc	48	0.005	mg/L	mg/L	0.043	<0.005	NA	Complies	

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

Table 4 Shenandoah South 2 Gum Ridge Formation bore comparison October 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 3/10/2025	RN041132 (BET-MB022) to RN043874 (BET-MB031) Ratio	75th Percentile Exceedance	Comment
Acenaphthene	33	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Acenaphthylene	33	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Alkalinity (Bicarbonate as CaCO3)	34	1	mg/L	mg/L	313	304	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	304	0.97	Complies	
Anthracene	33	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Arsenic	33	0.001	mg/L	mg/L	0.004	0.005	1.25	Exceedance	Small exceedance and long-term declining trend evident
Barium	33	0.001	mg/L	mg/L	0.062	0.058	0.94	Complies	
Benzo(a)anthracene	33	1	µg/L	µg/L	<1.0	<1.0	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	<0.0010	<0.0010	NA	Complies	
Benzo(g,h,i)perylene	33	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Benzo(k)fluoranthene	33	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Boron	33	0.05	mg/L	mg/L	0.230	0.200	0.87	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	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	92	0.98	Complies	
Chloride	34	1	mg/L	mg/L	168	200	1.19	Exceedance	Historically values have been dynamic. Historical maximum. Possible rising trend since July 2025
Chromium (III+VI)	33	0.001	mg/L	mg/L	<0.001	<0.001	NA	Complies	
Chrysene	33	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Copper	33	0.001	mg/L	mg/L	0.0020	<0.001	NA	Complies	
Dibenz(a,h)anthracene	33	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Dissolved Oxygen (Field)	28	0.1	mg/L	mg/L	0.52	0.24	0.46	Complies	
Electrical Conductivity (Field)	35	1	µS/cm	µS/cm	1529	1563	1.02	Exceedance	Very small exceedance, within calibration and measurement error. Less than historical maximum. No real trend
Specific conductance (Field)	31	1	µS/cm	µS/cm	1247	1269	1.02	Exceedance	Very small exceedance, within calibration and measurement error. Less than historical maximum. No real trend
Electrical Conductivity (Lab)	34	1	µS/cm	µS/cm	1208	1230	1.02	Exceedance	Very small exceedance, within calibration and measurement error. Less than historical maximum. No real trend
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	<1.0	<1.0	NA	Complies	
Fluorene	33	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Fluoride	34	0.1	mg/L	mg/L	1.4	1.2	0.86	Complies	
Gross alpha activity	28	0.05	Bq/L	Bq/L	1.64	0.82	0.50	Complies	
Gross beta activity (excluding activity of K-40)	28	0.1	Bq/L	Bq/L	0.60	0.24	0.40	Complies	
Indeno(1,2,3-c,d)pyrene	33	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Iron	33	0.05	mg/L	mg/L	2.86	0.40	0.14	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	0.040	0.91	Complies	
Magnesium	34	1	mg/L	mg/L	40	40	1.00	Complies	
Manganese	33	0.001	mg/L	mg/L	0.034	0.012	0.35	Complies	
Mercury	33	0.0001	mg/L	mg/L	<0.0001	<0.0001	NA	Complies	
Methane	33	0.01	mg/L	mg/L	0.035	<0.01	NA	Complies	
Naphthalene	33	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Nitrate (as N)	34	0.01	mg/L	mg/L	0.02	<0.01	NA	Complies	
Nitrite (as N)	34	0.01	mg/L	mg/L	<0.01	<0.01	NA	Complies	
Nitrite + Nitrate (as N)	17	0.01	mg/L	mg/L	0.02	<0.01	NA	Complies	
pH (Lab)	33	0.01	pH Unit	pH Units	7.66	7.84	1.02	Exceedance	Small exceedance however highest historical value with possible slight rising trend since June 2025
pH (Field)	39	0.01	pH Unit	pH Units	7.07	7.34	1.04	Exceedance	Small exceedance however highest historical value with possible slight rising trend since June 2025
Phenanthrene	33	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Potassium	34	1	mg/L	mg/L	16	15	0.94	Complies	
Propane	33	0.01	mg/L	mg/L	<0.01	<0.01	NA	Complies	
Pyrene	33	1	µg/L	µg/L	<1.0	<1.0	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	10.8	1.03	Exceedance	Small exceedance and no long-term trend evident
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	Small exceedance and no long-term trend evident
Strontium	33	0.001	mg/L	mg/L	0.80	0.730	0.92	Complies	
Sulphate as SO4	32	1	mg/L	mg/L	125	134	1.08	Exceedance	Small exceedance and no long-term trend evident
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)	34	0.1	°C	°C	37.41	37.20	0.99	Complies	
Toluene	33	2	µg/L	µg/L	<2	<2	NA	Complies	
Total Dissolved Solids	34	10	mg/L	mg/L	743	739	0.995	Complies	
Total Reportable PAH	29	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	0.84	Complies	

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

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

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 3/10/2025	RN040896 (BET-MB021) to RN043873 (BET-MB030) Ratio	75th Percentile Exceedance	Comment
Acenaphthene	47	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Acenaphthylene	47	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Alkalinity (Bicarbonate as CaCO3)	50	1	mg/L	mg/L	296	288	0.97	Complies	
Alkalinity (Carbonate as CaCO3)	50	1	mg/L	mg/L	<1	<1	NA	Complies	
Alkalinity (Hydroxide as CaCO3)	50	1	mg/L	mg/L	<1	<1	NA	Complies	
Alkalinity (Total) as CaCO3	50	1	mg/L	mg/L	296	288	0.97	Complies	
Anthracene	47	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Arsenic	48	0.001	mg/L	mg/L	0.004	0.014	3.5	Exceedance	Less than historical maximum, dynamic over time, possible net declining trend
Barium	48	0.001	mg/L	mg/L	0.060	0.047	0.78	Complies	
Benzo(a)anthracene	47	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Benzene	47	1	µg/L	µg/L	<1	<1	NA	Complies	
Benzo(a)pyrene	47	0.5	µg/L	µg/L	<0.5	<0.5	NA	Complies	
Benzo(b+j)fluoranthene	47	0.001	mg/L	mg/L	<0.0010	<0.0010	NA	Complies	
Benzo(g,h,i)perylene	47	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Benzo(k)fluoranthene	47	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Boron	48	0.05	mg/L	mg/L	0.230	0.220	0.96	Complies	
C10 - C14 Fraction	47	50	µg/L	µg/L	<50	<50	NA	Complies	
C10 - C16 Fraction	47	100	µg/L	µg/L	<100	<100	NA	Complies	
C10 - C16 Fraction minus Naphthalene (F2)	47	100	µg/L	µg/L	<100	<100	NA	Complies	
C10 - C36 Fraction (Sum)	47	50	µg/L	µg/L	<50	<50	NA	Complies	
C10 - C40 Fraction (Sum)	47	100	µg/L	µg/L	<100	<100	NA	Complies	
C15 - C28 Fraction	47	100	µg/L	µg/L	<100	<100	NA	Complies	
C16 - C34 Fraction	47	100	µg/L	µg/L	<100	<100	NA	Complies	
C29 - C36 Fraction	47	50	µg/L	µg/L	<50	<50	NA	Complies	
C34 - C40 Fraction	47	100	µg/L	µg/L	<100	<100	NA	Complies	
C6 - C10 Fraction	47	20	µg/L	µg/L	<20	<20	NA	Complies	
C6 - C10 Fraction minus BTEX (F1)	47	20	µg/L	µg/L	<20	<20	NA	Complies	
C6 - C9 Fraction	47	20	µg/L	µg/L	<20	<20	NA	Complies	
Cadmium	48	0.0001	mg/L	mg/L	0.0002	<0.0001	NA	Complies	
Calcium	50	1	mg/L	mg/L	83	80	0.96	Complies	
Chloride	50	1	mg/L	mg/L	174	200	1.15	Exceedance	A possible rising trend since July 2025
Chromium (III+VI)	48	0.001	mg/L	mg/L	0.0010	<0.001	NA	Complies	
Chrysene	47	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Copper	48	0.001	mg/L	mg/L	0.0020	<0.001	NA	Complies	
Dibenz(a,h)anthracene	47	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Dissolved Oxygen (Field)	38	0.1	mg/L	mg/L	1.05	0.27	0.26	Complies	
Electrical Conductivity (Field)	39	1	µS/cm	µS/cm	1491	1502	1.01	Exceedance	Slight exceedance and results show no real trend
Specific conductance (Field)	41	1	µS/cm	µS/cm	1268	1239	0.98	Complies	
Electrical Conductivity (Lab)	50	1	µS/cm	µS/cm	1200	1170	0.98	Complies	
Ethane	47	10	µg/L	µg/L	<10	<10	NA	Complies	
Ethylbenzene	47	2	µg/L	µg/L	<2	<2	NA	Complies	
Fluoranthene	47	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Fluorene	47	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Fluoride	50	0.1	mg/L	mg/L	1.1	1.2	1.09	Exceedance	Slight exceedance and results show long-term stabilisation trend
Gross alpha activity	41	0.05	Bq/L	Bq/L	0.36	0.42	1.17	Exceedance	Gross alpha values are historically variable & although the most recent value is far less than the historical maximum of 1.21 Bq/L in Sept 2024. Likely long-term net declining trend
Gross beta activity (excluding activity of K-40)	41	0.1	Bq/L	Bq/L	0.22	0.20	0.91	Complies	
Indeno(1,2,3-c,d)pyrene	47	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Iron	48	0.05	mg/L	mg/L	0.97	0.12	0.12	Complies	
Lead	48	0.001	mg/L	mg/L	0.003	<0.001	NA	Complies	
Lithium	48	0.001	mg/L	mg/L	0.051	0.043	0.84	Complies	
Magnesium	50	1	mg/L	mg/L	41	36	0.88	Complies	
Manganese	48	0.001	mg/L	mg/L	0.040	0.021	0.53	Complies	
Mercury	48	0.0001	mg/L	mg/L	<0.0001	<0.0001	NA	Complies	
Methane	47	0.01	mg/L	mg/L	0.042	<0.01	NA	Complies	
Naphthalene	47	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Nitrate (as N)	50	0.01	mg/L	mg/L	0.03	0.010	0.33	Complies	
Nitrite (as N)	50	0.01	mg/L	mg/L	<0.01	<0.01	NA	Complies	
Nitrite + Nitrate (as N)	23	0.01	mg/L	mg/L	0.03	0.01	0.33	Complies	
pH (Lab)	50	0.01	pH Unit	pH Units	7.78	7.71	0.99	Complies	
pH (Field)	54	0.01	pH Unit	pH Units	7.20	7.40	1.03	Exceedance	Small exceedance. Historical maximum. Possible slight rising trend since June 2025
Phenanthrene	47	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Potassium	50	1	mg/L	mg/L	15	13	0.87	Complies	
Propane	47	0.00	mg/L	mg/L	<0.01	<0.01	NA	Complies	
Pyrene	47	1	µg/L	µg/L	<1.0	<1.0	NA	Complies	
Selenium	48	0.01	mg/L	mg/L	<0.01	<0.01	NA	Complies	
Silicon as Si	44	0.05	mg/L	mg/L	10.3	10.0	0.97	Complies	
Silver	48	0.001	mg/L	mg/L	<0.001	<0.001	NA	Complies	
Sodium	50	1	mg/L	mg/L	110	101	0.92	Complies	
Strontium	48	0.001	mg/L	mg/L	0.67	0.640	0.96	Complies	
Sulphate as SO4	45	1	mg/L	mg/L	133	128	0.96	Complies	
Sum of BTEX	47	1	µg/L	µg/L	<1	<1	NA	Complies	
Suspended Solids	48	5	mg/L	mg/L	9.8	6.0	0.62	Complies	
Temperature (Field)	40	0.1	°C	°C	36.00	36.20	1.01	Exceedance	Very small exceedance, within calibration and measurement error. No obvious trend in recent data
Toluene	47	2	µg/L	µg/L	0.00	0.0	NA	Complies	
Total Dissolved Solids	50	10	mg/L	mg/L	719	726	1.01	Exceedance	Very small exceedance, within calibration and measurement error. Historical record indicates stabilising values with time
Total Reportable PAH	40	0.5	µg/L	µg/L	<0.5	<0.5	NA	Complies	
Xylene (m & p)	47	2	µg/L	µg/L	<2	<2	NA	Complies	
Xylene (o)	47	2	µg/L	µg/L	<2	<2	NA	Complies	
Xylene Total	47	2	µg/L	µg/L	<2	<2	NA	Complies	
Zinc	48	0.005	mg/L	mg/L	0.043	0.011	0.25	Complies	