

Maules Creek Coal Mine Community Consultative Committee Meeting #45

Environmental Monitoring Report For the Q1 period, January – March 2024

Attended Noise Monitoring

Maules Creek Coal (MCC) engaged an independent acoustic consultant to conduct LAeq (15minutes) and LA1 (1 minute) attended noise monitoring at six monitoring locations on site.

A. NOISE GENERATED BY MCCM AGAINST OPERATIONAL DAY & NIGHT NOISE CRITERIA; JANUARY – MARCH 2023.

The results show that MCCM is within EPL 20221 compliance limits, that operations did not exceed the applicable; LAeq (15minute) 35dB Criteria, LA1 (1Minute) 45dB Criteria and the EPA's Noise Policy for Industry compliance guidelines.

Table 1 – January Noise Monitoring

Location	Start date and Time	Wind		Stability class	Very enhancing? ¹	Limits, dB ¹		Site levels, dB ²		Exceedances, dB	
		Speed m/s	Direction ³			L _{Aeq,15minute}	L _{Amax}	L _{Aeq,15minute}	L _{Amax}	L _{Aeq,15minute}	L _{Amax}
NM1	16/01/2024 22:30	2.9	85	D	No	35	45	IA	IA	Nil	Nil
NM2	16/01/2024 23:30	4.0	63	D	Yes	44	50	IA	IA	Nil	Nil
NM3	16/01/2024 23:30	4.0	63	D	Yes	40	50	IA	IA	Nil	Nil
NM4	16/01/2024 23:00	3.3	70	D	Yes	40	50	IA	IA	Nil	Nil
NM5	16/01/2024 22:00	3.8	74	D	Yes	40	50	IA	IA	Nil	Nil
NM6	16/01/2024 23:55	3.0	55	D	No	35	45	IA	IA	Nil	Nil

Notes: 1. Noise limits are adjusted by +5 dB during 'very enhancing meteorological conditions' in accordance with the NPfl.
 2. Site-only LAeq,15minute, includes modifying factor penalties if applicable.
 3. Degrees magnetic north, "-" indicates calm conditions.

Table 2 – February Noise Monitoring

Location	Start date and Time	Wind		Stability class	Very enhancing? ¹	Limits, dB ¹		Site levels, dB ²		Exceedances, dB	
		Speed m/s	Direction ³			L _{Aeq,15minute}	L _{Amax}	L _{Aeq,15minute}	L _{Amax}	L _{Aeq,15minute}	L _{Amax}
NM1	27/02/2024 22:30	4.3	83	D	Yes	40	50	IA	IA	Nil	Nil
NM2	27/02/2024 23:38	4.2	72	D	Yes	44	50	IA	IA	Nil	Nil
NM3	27/02/2024 23:21	3.8	65	D	Yes	40	50	IA	IA	Nil	Nil
NM4	27/02/2024 23:00	4.3	72	D	Yes	40	50	IA	IA	Nil	Nil
NM5	27/02/2024 22:00	3.1	80	D	Yes	40	50	IA	IA	Nil	Nil
NM6	28/02/2024 00:04	3.7	66	D	Yes	40	50	IA	IA	Nil	Nil

Notes: 1. Noise limits are adjusted by +5 dB during 'very enhancing meteorological conditions' in accordance with the NPfl.
 2. Site-only LAeq,15minute, includes modifying factor penalties if applicable.
 3. Degrees magnetic north, "-" indicates calm conditions.

Table 3 – March Noise Monitoring

Location	Start date and Time	Wind		Stability class	Very enhancing? ¹	Limits, dB ¹		Site levels, dB ²		Exceedances, dB	
		Speed m/s	Direction ³			L _{Aeq,15minute}	L _{Amax}	L _{Aeq,15minute}	L _{Amax}	L _{Aeq,15minute}	L _{Amax}
NM1	18/03/2024 22:30	2.3	99	E	No	40	50	IA	IA	Nil	Nil
NM2	18/03/2024 23:30	0.6	324	F	No	44	50	<20	25	Nil	Nil
NM3	19/03/2024 00:22	1.0	180	F	No	40	50	<20	<25	Nil	Nil
NM4	18/03/2024 23:00	2.0	86	F	No	40	50	IA	IA	Nil	Nil
NM5	18/03/2024 22:00	3.0	91	D	No	40	50	IA	IA	Nil	Nil
NM6	18/03/2024 23:55	1.2	15	F	No	40	50	IA	IA	Nil	Nil

Notes: 1. Noise limits are adjusted by +5 dB during 'very enhancing meteorological conditions' in accordance with the NPfl.
2. Site-only LAeq,15minute, includes modifying factor penalties if applicable.
3. Degrees magnetic north, "-" indicates calm conditions.

Wind Direction during Attended Monitoring

Wind direction data is collected from the Maule’s Creek Coal Mine (MCCM) Automated Weather Station (AWS). Wind data for the duration of the attended monitoring assessment, recorded at the MCCM AWS is presented in the table below.

Table 4 - Prevailing Wind Direction

Monitoring Date	Prevailing Wind Direction
January	ESE
February	SE
March	ESE

Blast Monitoring

There was 30 blasts at MCCM during Q1 2023. All blast monitoring results recorded within the reporting period have complied with applicable overpressure and ground vibration limits specified in the respective approvals.

Table 5 – Blast Results Summary

Parameter	Units	Frequency	Number	Average	Max	100% Limit	Exceedance (Yes / No)
Noise	dB	All	30	94.52	112.7	120	No
Vibration	mm/s		30	0.10	0.37	10	No

Air Quality

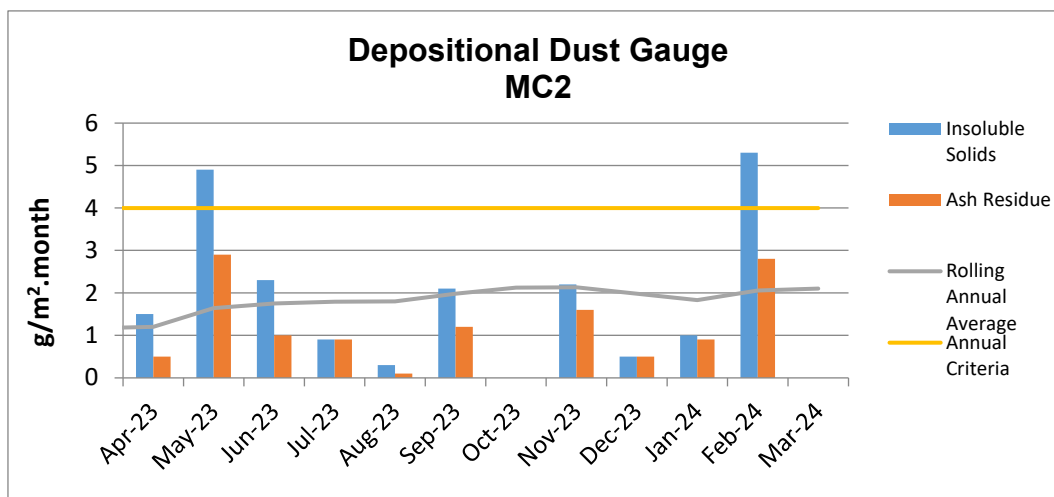
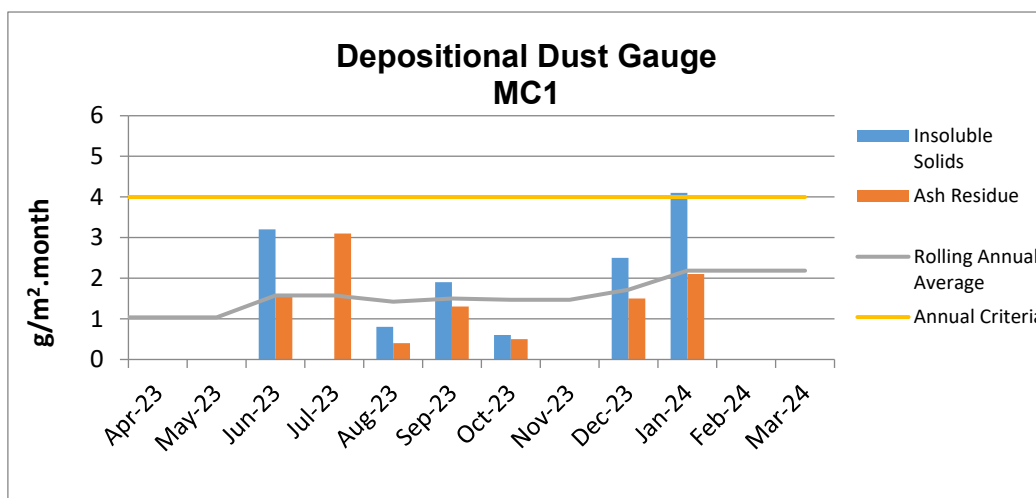
A. Total Depositional Dust

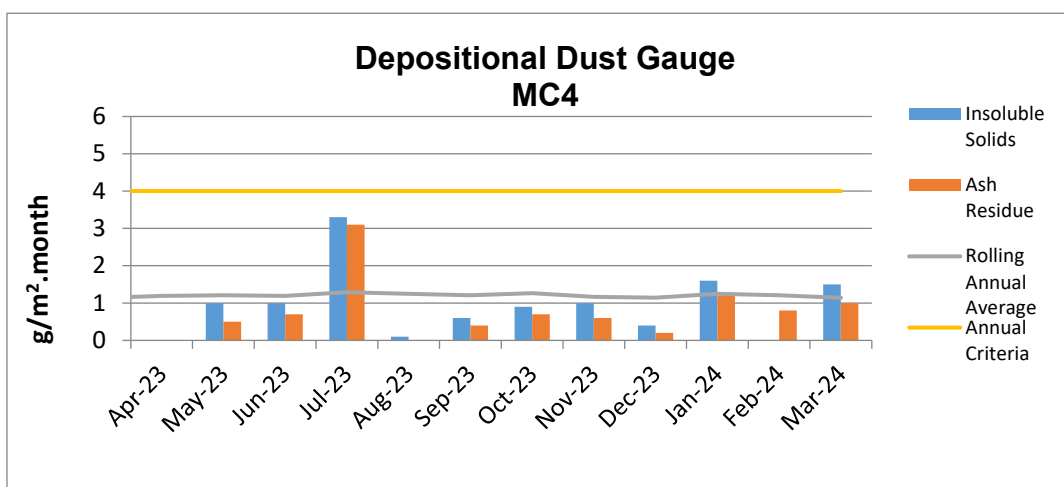
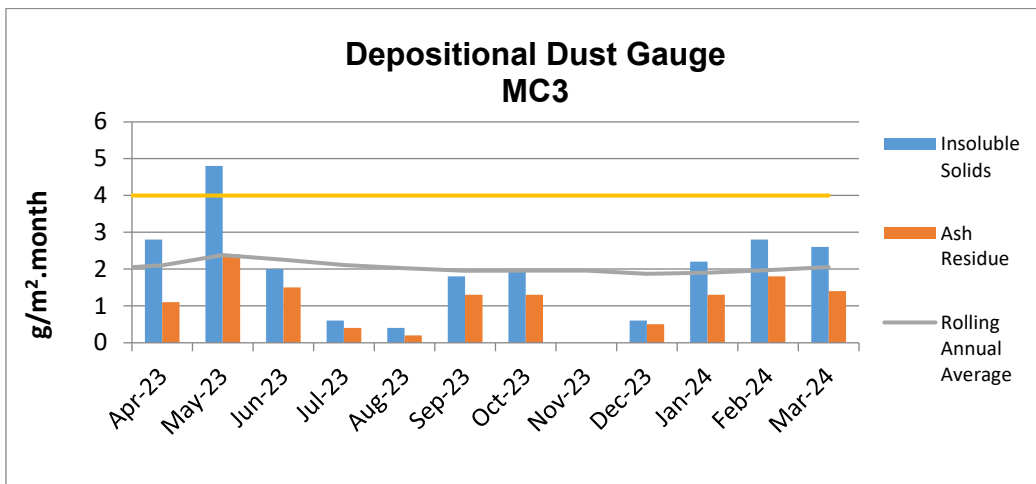
The 12 monthly rolling annual average remains below the relevant Project Approval (PA 10_0138) criteria of 4g/m²/month for the respective monitoring points.

Table 6 – Deposited Dust Gauge Results [g/m²/month]

MONTH	MC1	MC2	MC3	MC4
January	4.1	1.0	2.2	1.6
February	7.5c	5.3	2.8	3.7c
March	31.9c	9.1c	2.6	1.5
12 MONTH ROLLING AVERAGE	2.2	2.1	2.1	1.1

^c samples contaminated by bird dropping, decomposed insects or vegetable matter.



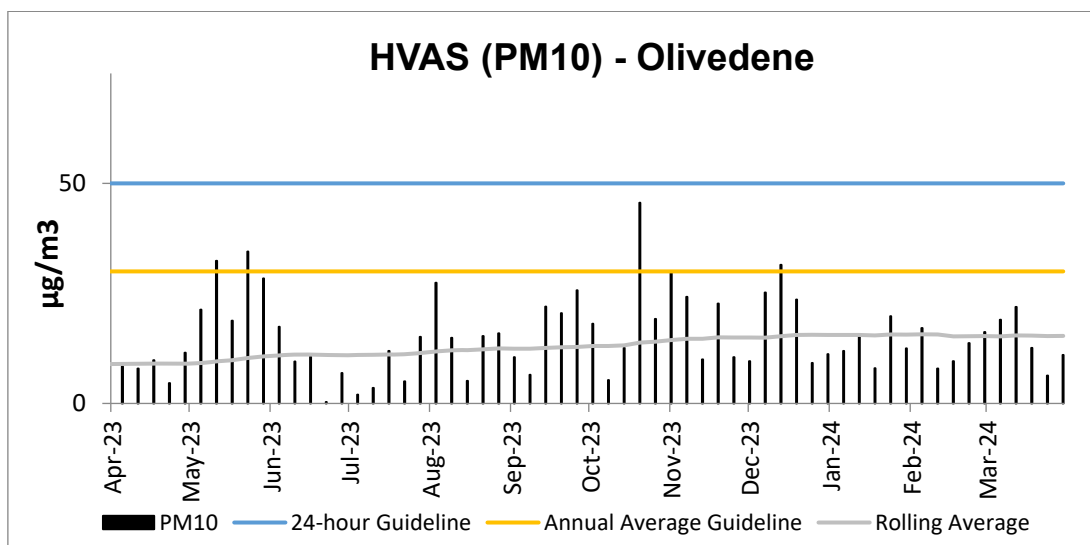


* Blank cells indicate sample periods where the sample has been contaminated and excluded from the results tables due to contaminated material (insect larvae, bird droppings, vegetation etc.).

B. High Volume Air Sampling (HVAS)

The HVAS monitor is located on the property 'Olivedene,' a mine owned property on Therribri Road. During past 12 months, there have been no exceedances of the 24-hour average of 50 µg/m³.

HVAS PM₁₀ Rolling Annual Average as of March was **15.3 µg/m³**, which is below the Annual Average Guideline of 30 µg/m³.



C. TEOM - PM10 Results

The annual rolling average for PM10 at the Maules Creek Coal TEOM1 was **6.9 µg/m³**, which is below the Project Approval annual average criteria of 30µg/m³ as shown in the following figure. There have been no exceedances of the 24-hour average for Q1 2023.

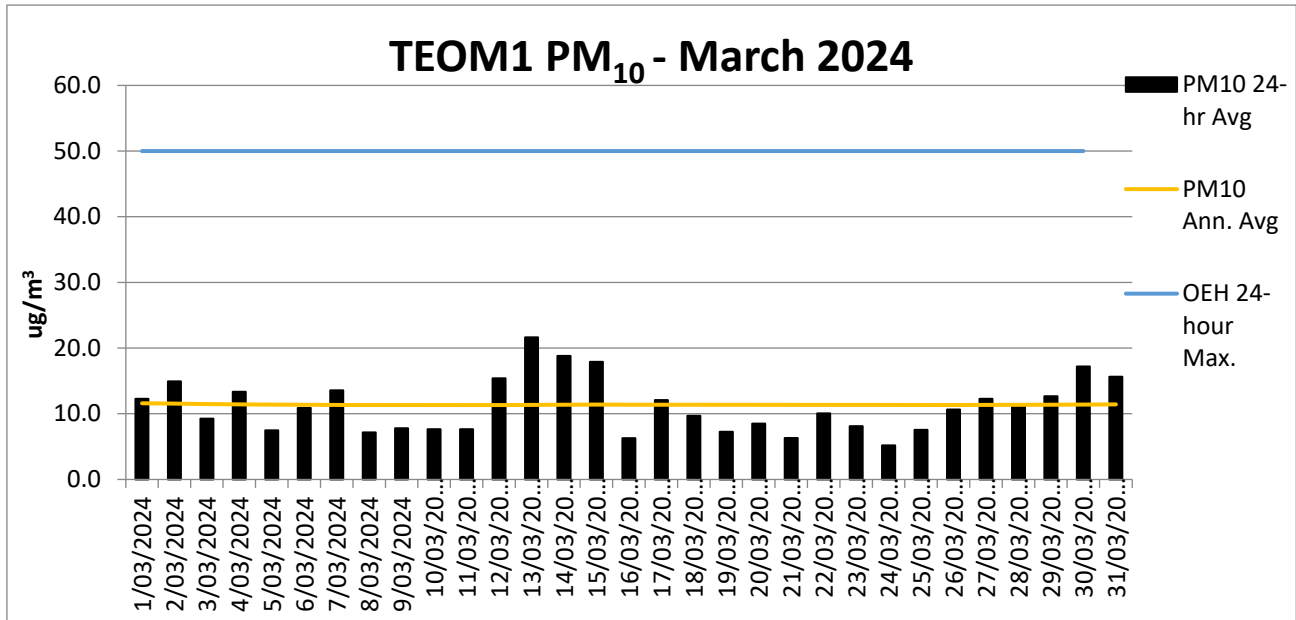


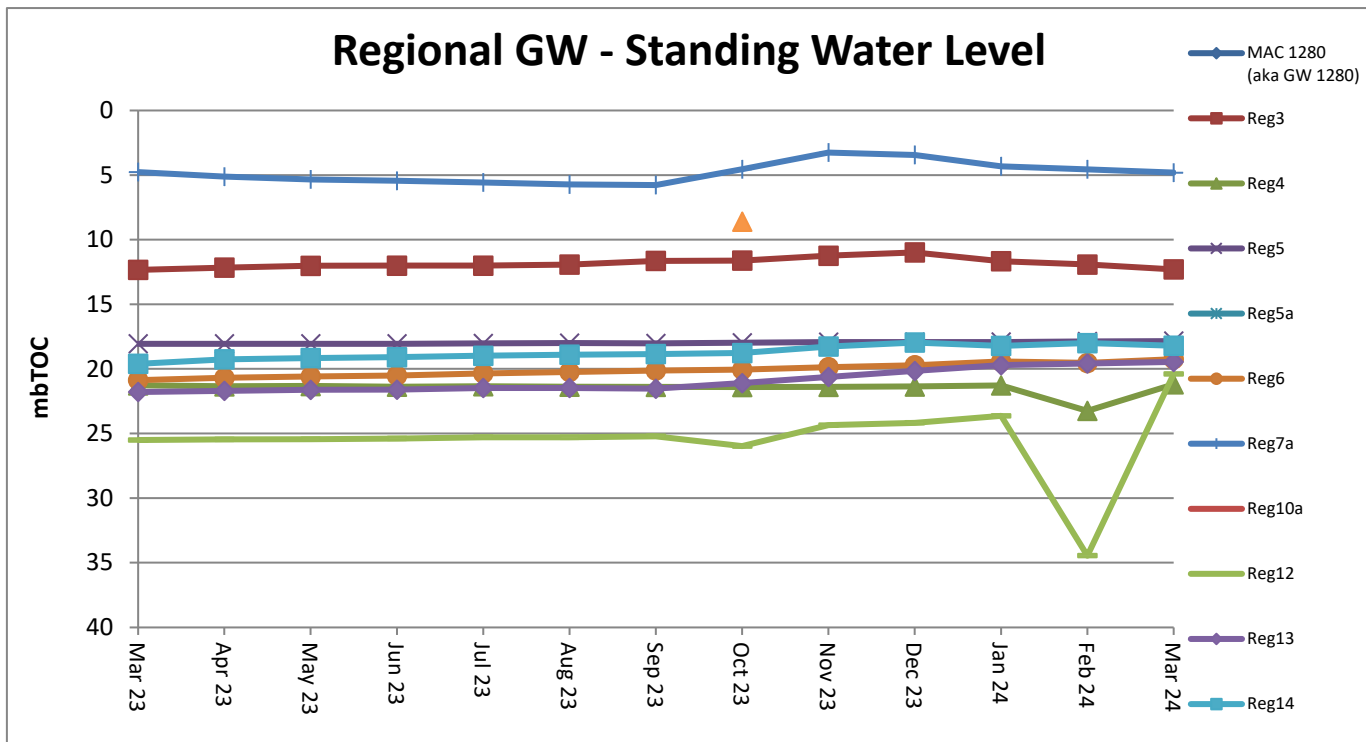
Figure 1 - TEOM Result – Particulate Matter PM₁₀µg/m³

* Blank columns indicate sample periods where there was either power outage, maintenance or other related causes.

Water Monitoring

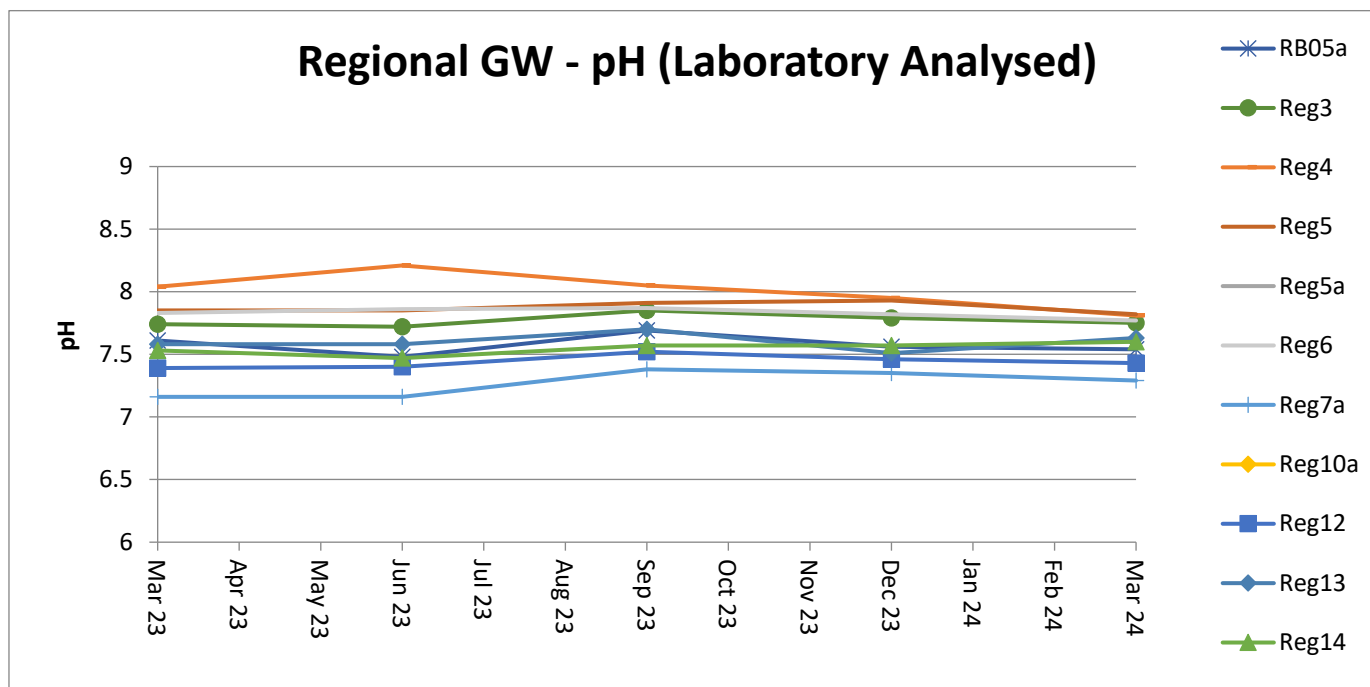
A. Groundwater

Groundwater monitoring results in open standpipe piezometers show levels to be relatively stable. The Regional bores were installed between Q4, 2013 and Q1, 2014. BCM01, BCM03, Reg10 are shallow bores which have remained dry since construction in 2013.



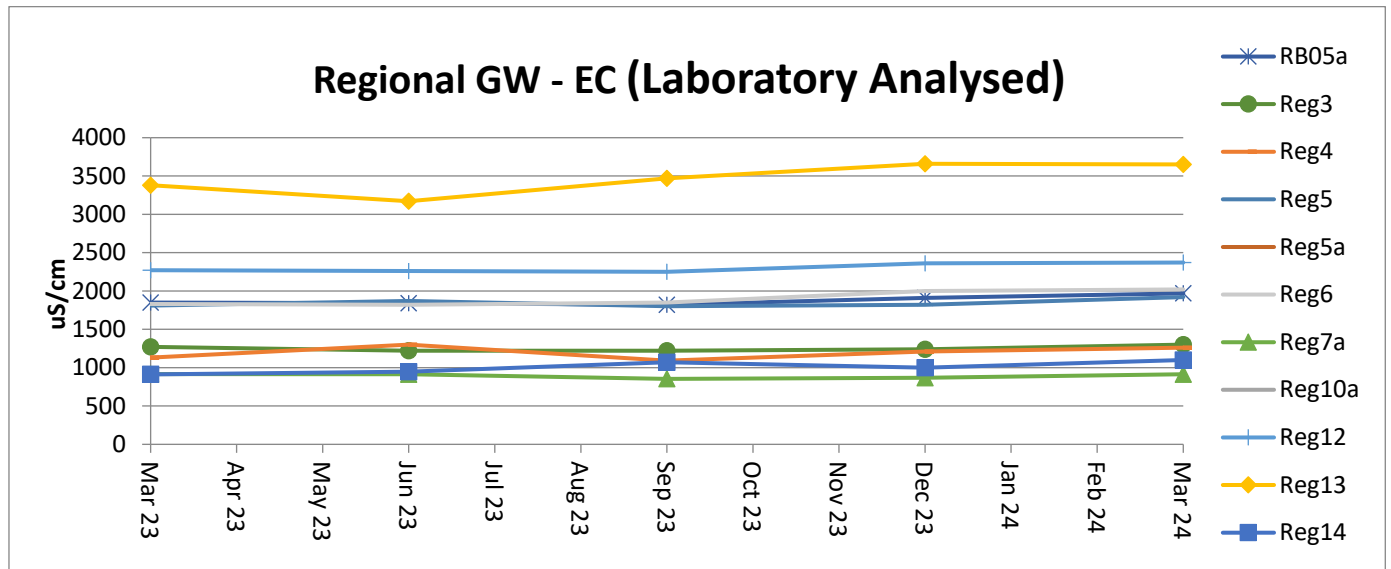
Acidity / Alkalinity (pH)

Over the past twelve months pH readings across the regional bores have remained static with very little fluctuation.



Electrical Conductivity

Laboratory Electrical Conductivity (EC) levels are all within historic groundwater EC range of 500 $\mu\text{S}/\text{cm}$ to 2,500 $\mu\text{S}/\text{cm}$, with the exception of monitoring bore Reg13 which has a historic groundwater EC range of 2,500 $\mu\text{S}/\text{cm}$ to 4,100 $\mu\text{S}/\text{cm}$. Within the last twelve months EC has remained static.

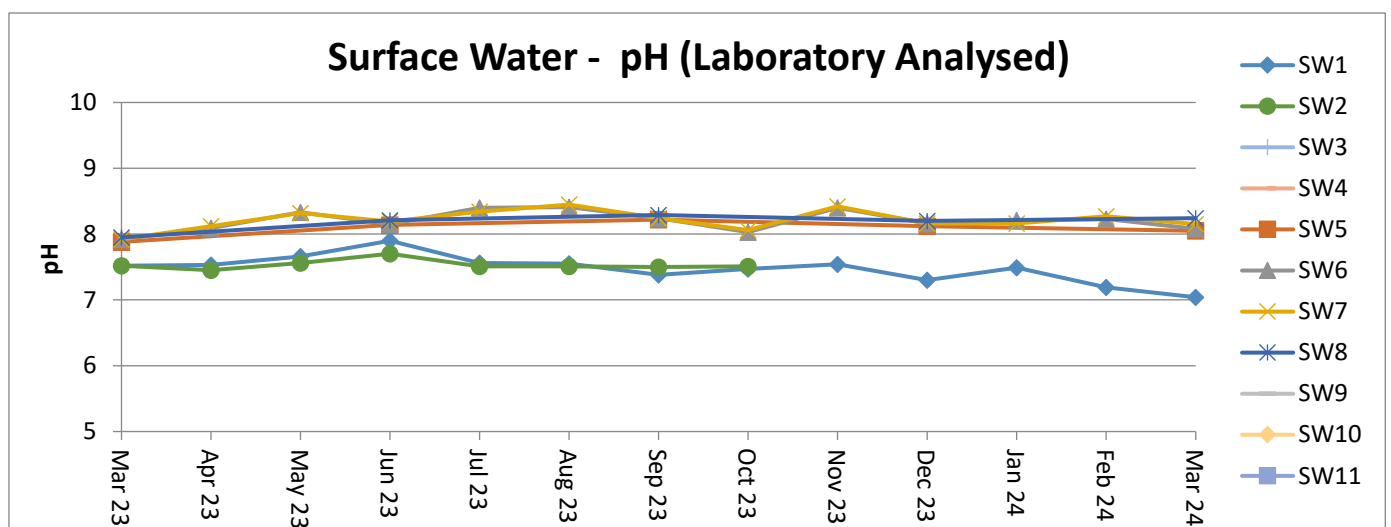


B. Surface Water – Creeks and Rivers

Routine surface water monitoring is conducted in surrounding creeks and rivers on a monthly basis. Results for parameters including pH, EC and Total Suspended Solids (TSS) are shown in the figures below.

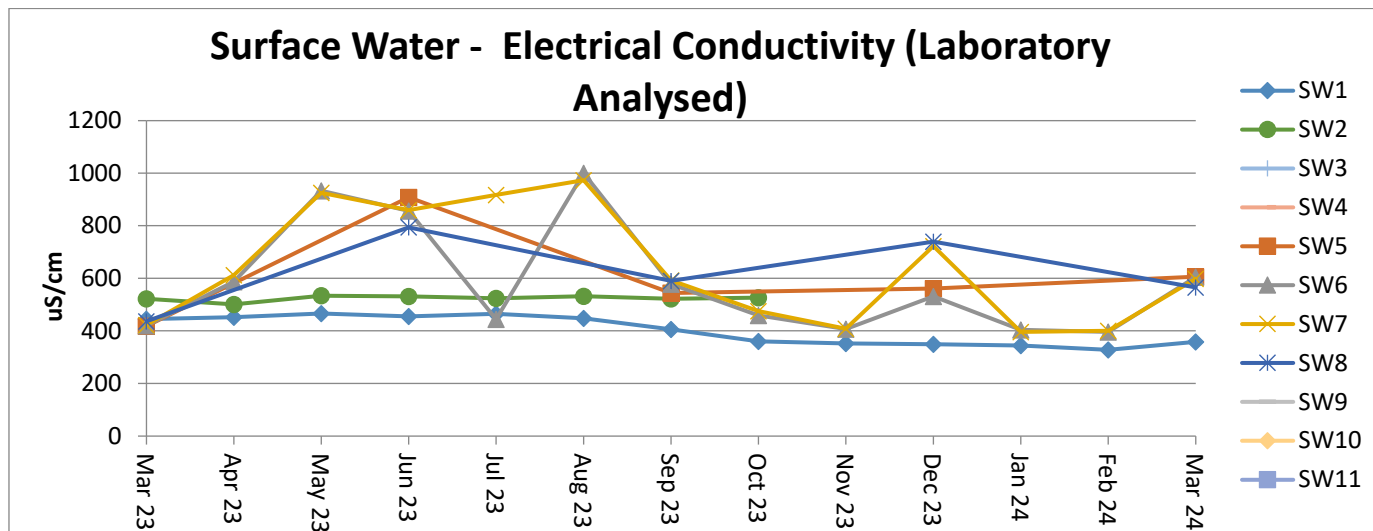
Acidity / Alkalinity (pH)

Monitoring results for pH in creeks and rivers surrounding MCCM are all trending within the ANZECC range for Irrigation, Ecosystem Health and Recreation.



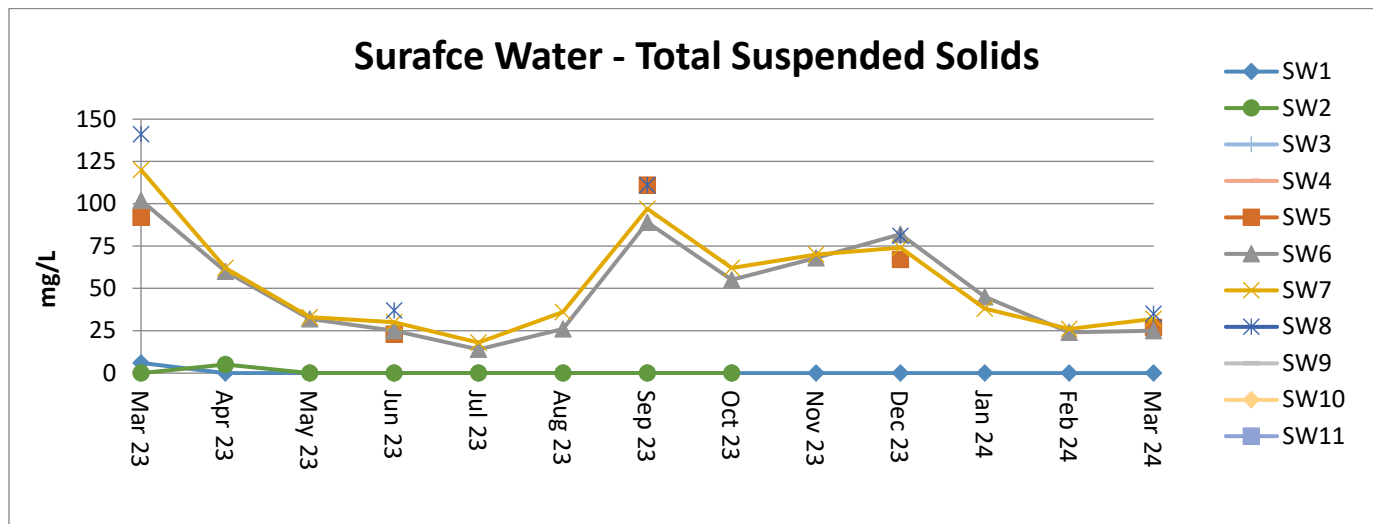
Electrical Conductivity

Surface water EC trends have remained consistent with SW5, SW6, SW7 and SW8 all historically variable. SW5, SW6, SW7 and SW8 are points along the Namoi River which are subject to regulated and variable flow regimes.



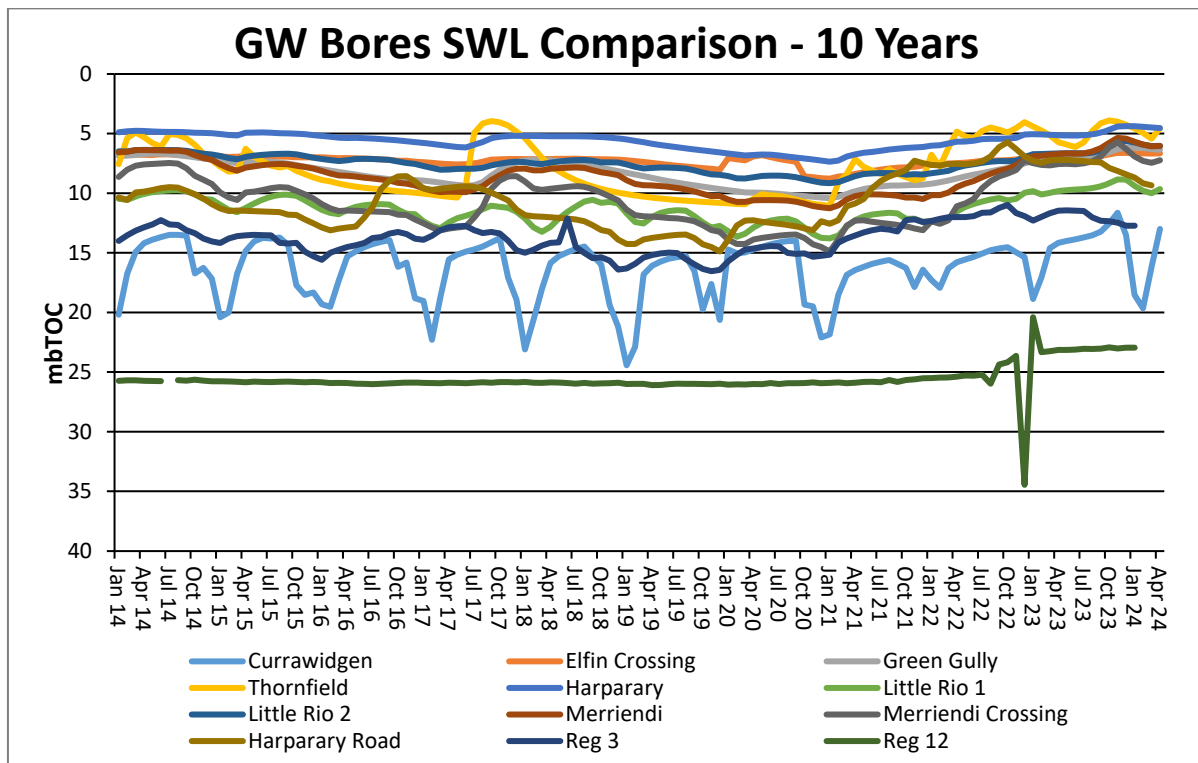
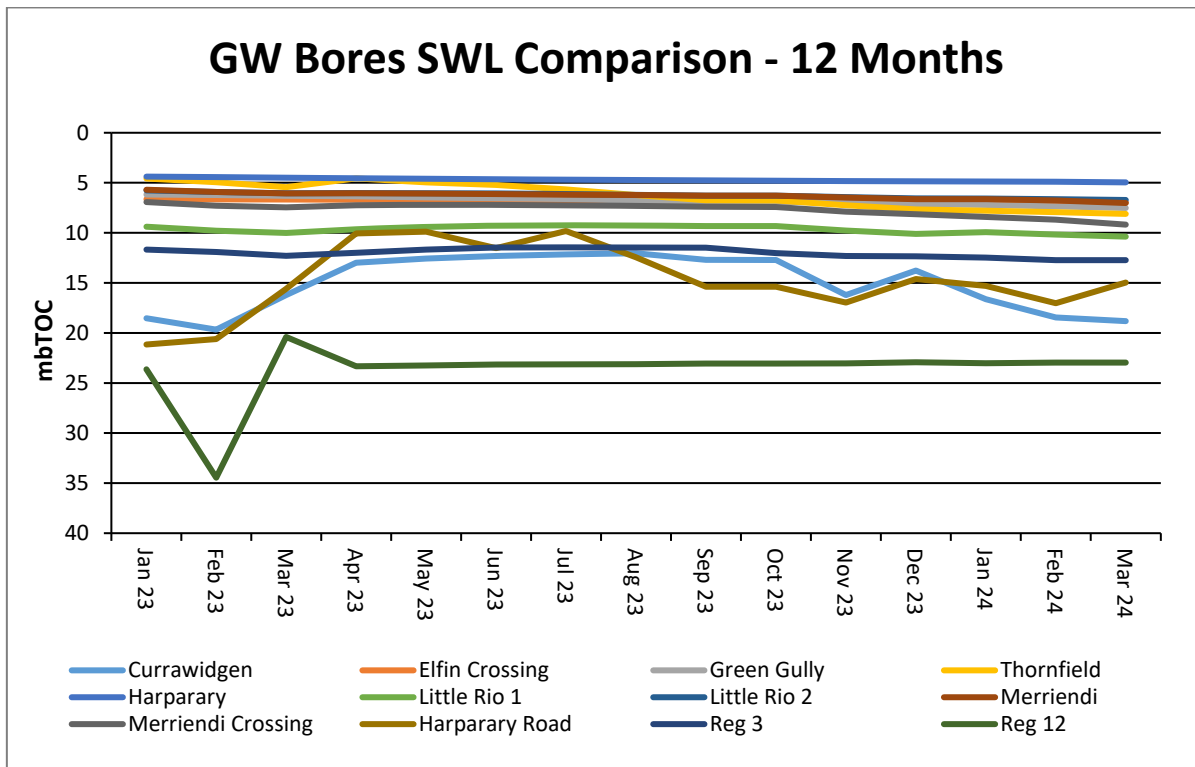
Total Suspended Solids (TSS)

Surface water TSS trends have remained generally consistent with historical results. SW5, SW6, SW7 and SW8 are historically variable as they are located along the Namoi River which is subject to regulated and variable flow regimes.



Regional Groundwater monitoring

Maules Creek Coal Mine monitors regional bores across the region.



Rehabilitation

Progressive rehabilitation works are ongoing. MCC is on track to complete CY24 rehabilitation in accordance with the Forward Plan.

Feral Animal Management

Most recent routine Whitehaven Biodiversity Feral Animal Control program (January to March 2024) results were:

- 1,336 out of total 2,189 pigs trapped or baited were from the Maules Biodiversity properties; and,
- All 20 of the Goats harvested were from the Maules Biodiversity properties; and,
- 128 out of total 447 Canid Pest Ejectors (1080) consumed were from the Maules Biodiversity properties

MCC conducted Feral Animal Control program during February – March 2023.

Weed Control

During January to March 2024 the following weed control was undertaken via spot spraying/jetting on the Maules Biodiversity Properties:

44ha of Broadleaf weeds such as General Broadleaf, marshmallow, St John's Wort, Cobblers Peg, General Thistles and Cockspur were sprayed.

191ha of Grasses such as African Lovegrass, Buffel Grass, Rhodes Grass and Coolatai Grass were sprayed.

96ha of Woody Weeds such as Box Thorn, Prickly Pear, Sweet Briar, Tiger Pear, Velvet Pear and Blackberry has been sprayed.

251ha of tracks sprayed as part of the track maintenance.

Community Complaints

No complaints were received during the quarter.