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 NPfI.
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 NPfI.
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 NPfI.
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

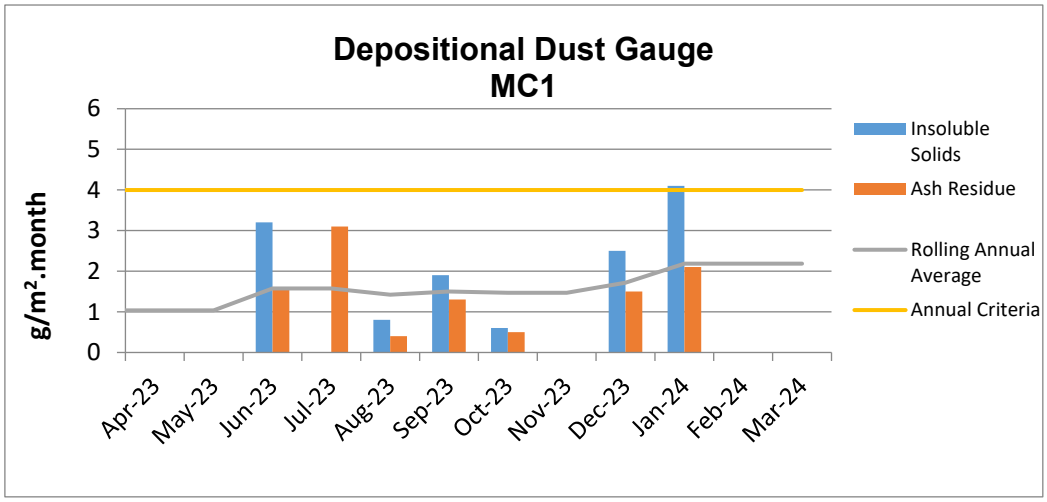
A. Total Depositional Dust

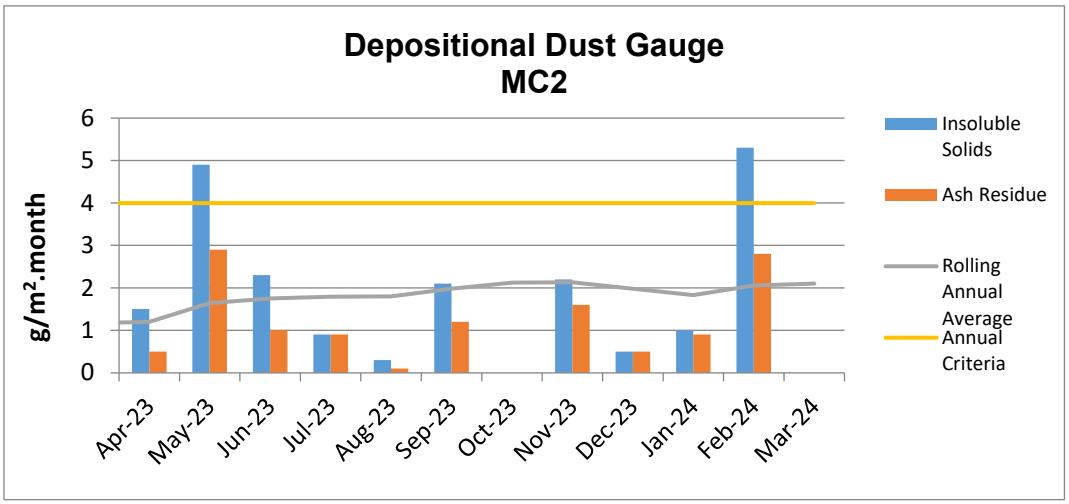
The 12 monthly rolling annual average remains below the relevant Project Approval (PA 10_0138) criteria of 4g/m^2/month for the respective monitoring points.

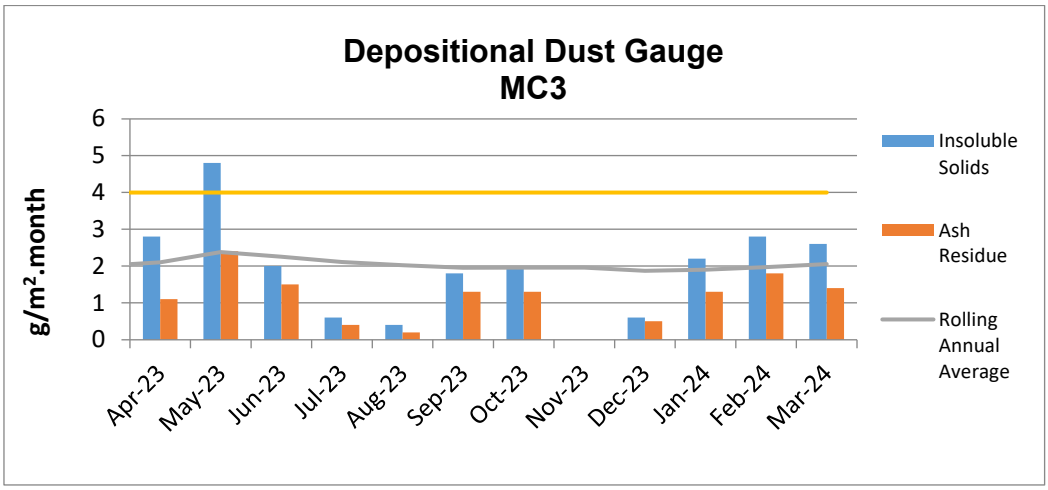
Table 6 – Deposited Dust Gauge Results [g/m^2/month]

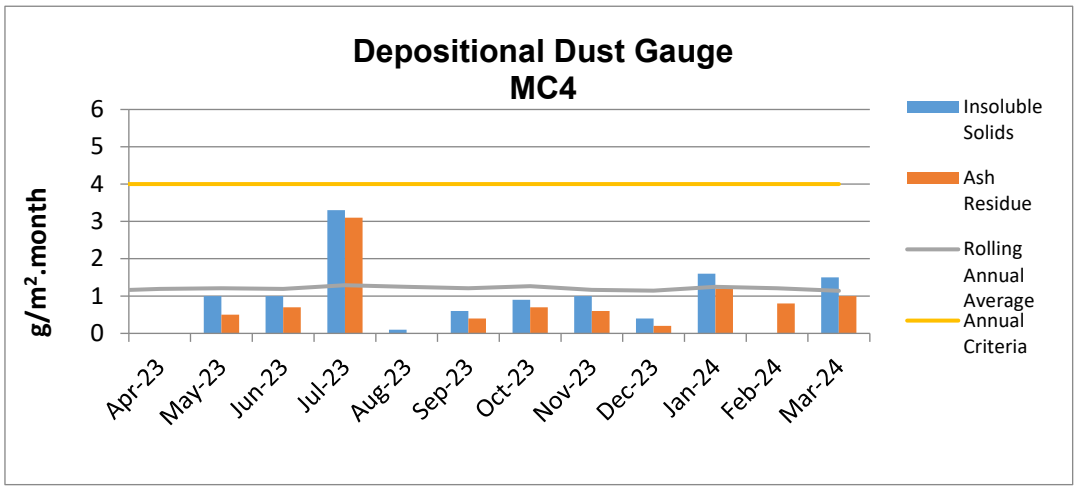
MONTH	MC1	MC2	MC3	MC4
January	4.1	1.0	2.2	1.6
February	7.5c	5.3	2.8	3.7c
March	31.9c	9.1c	2.6	1.5
12 MONTH ROLLING AVERAGE	**2.2**	**2.1**	**2.1**	**1.1**

[c] *samples contaminated by bird dropping, decomposed insects or vegetable matter.*







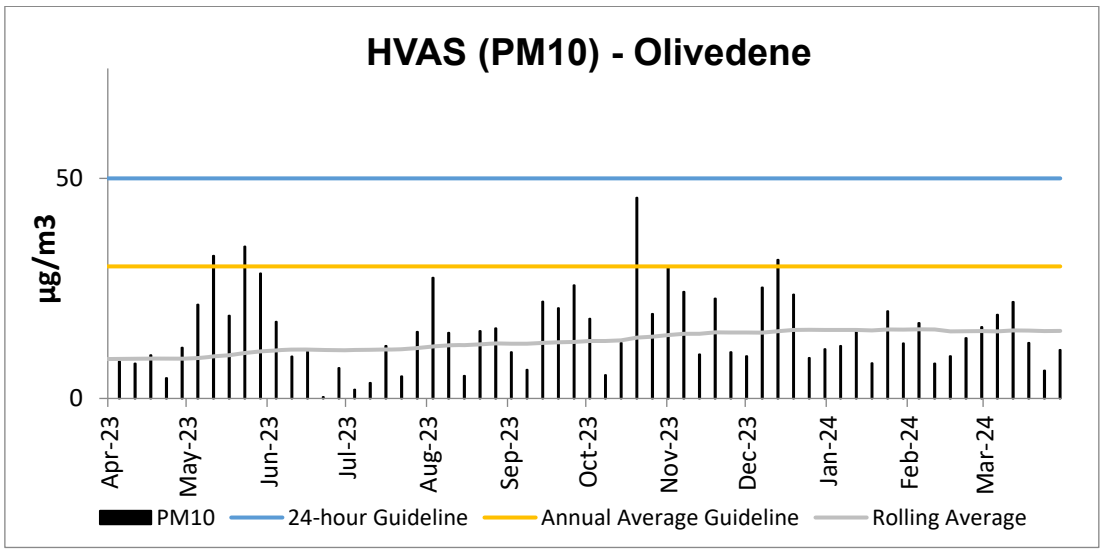


** Blank cells indicate sample periods where the sample has been contaminated and excluded from the results tables due to contaminated material (insect larvae, bird droppings, vegetation etc.).*

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/m^3.

HVAS PM_{10} Rolling Annual Average as of March was **15.3 µg/m^3**, which is below the Annual Average Guideline of 30 µg/m^3.



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.

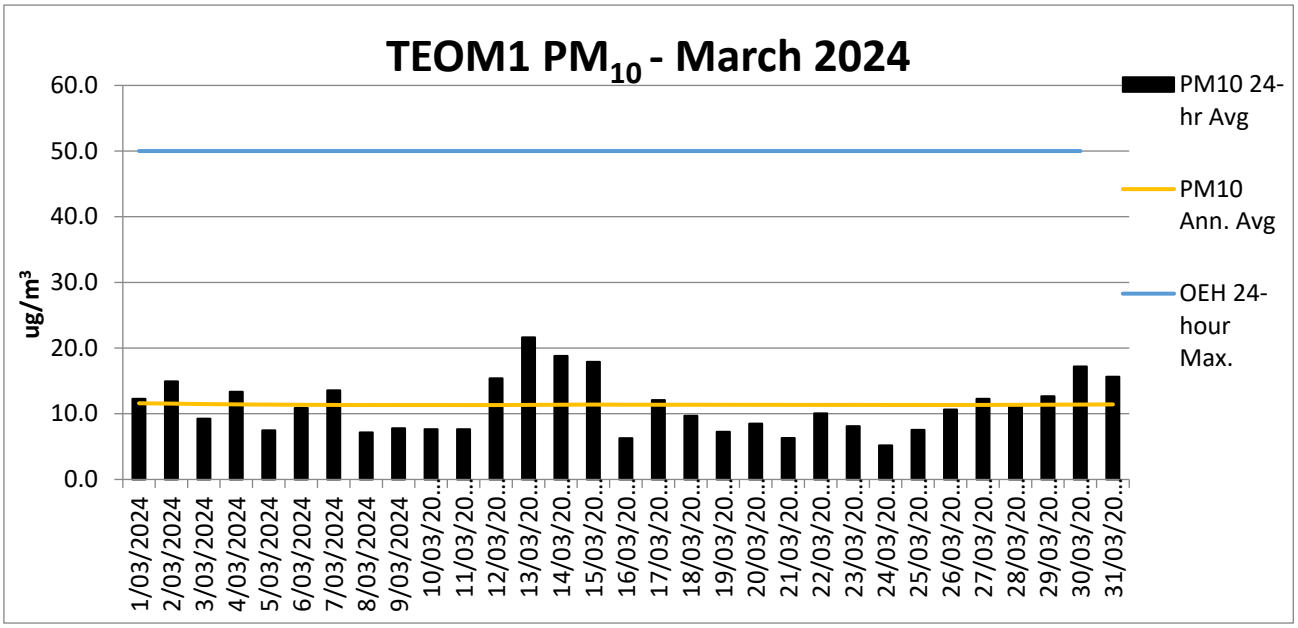


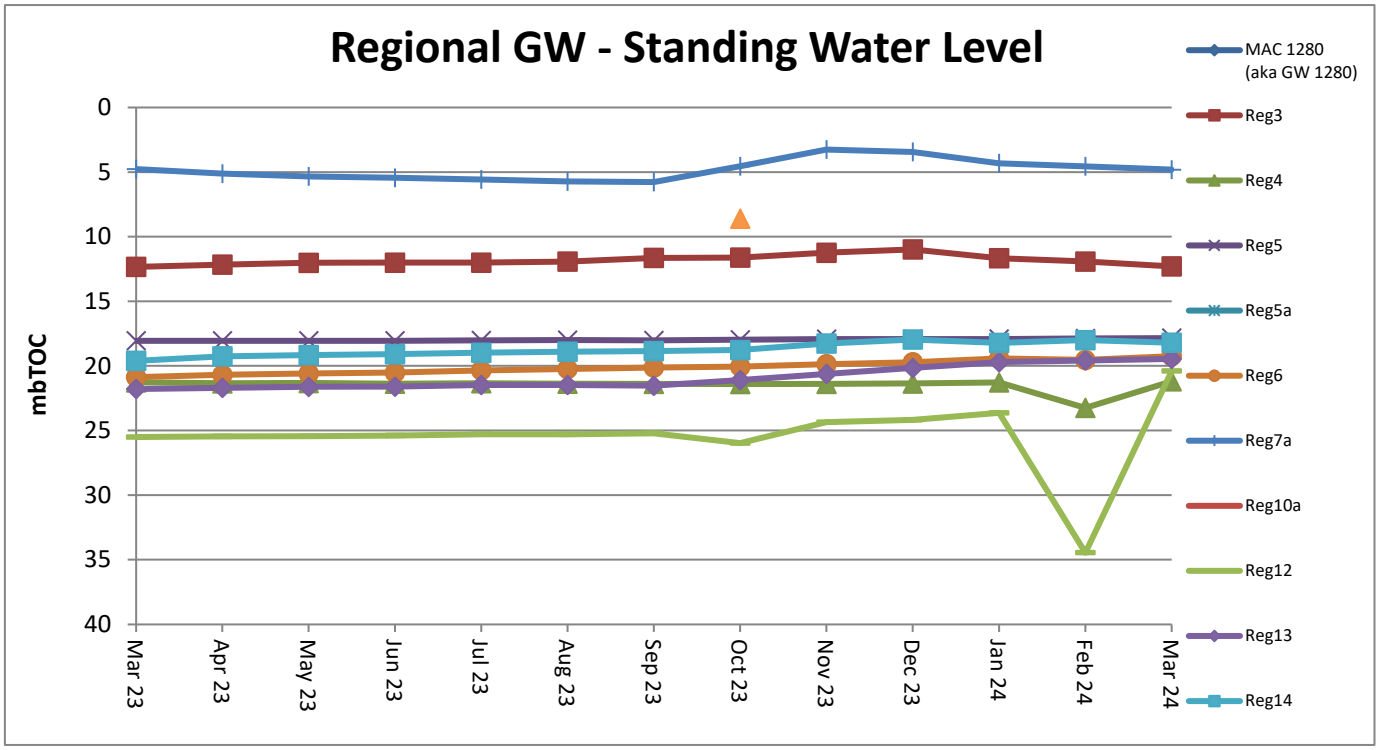
Figure 1 - TEOM Result – Particulate Matter $PM_{10\mu g/m^3}$

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

Water Monitoring

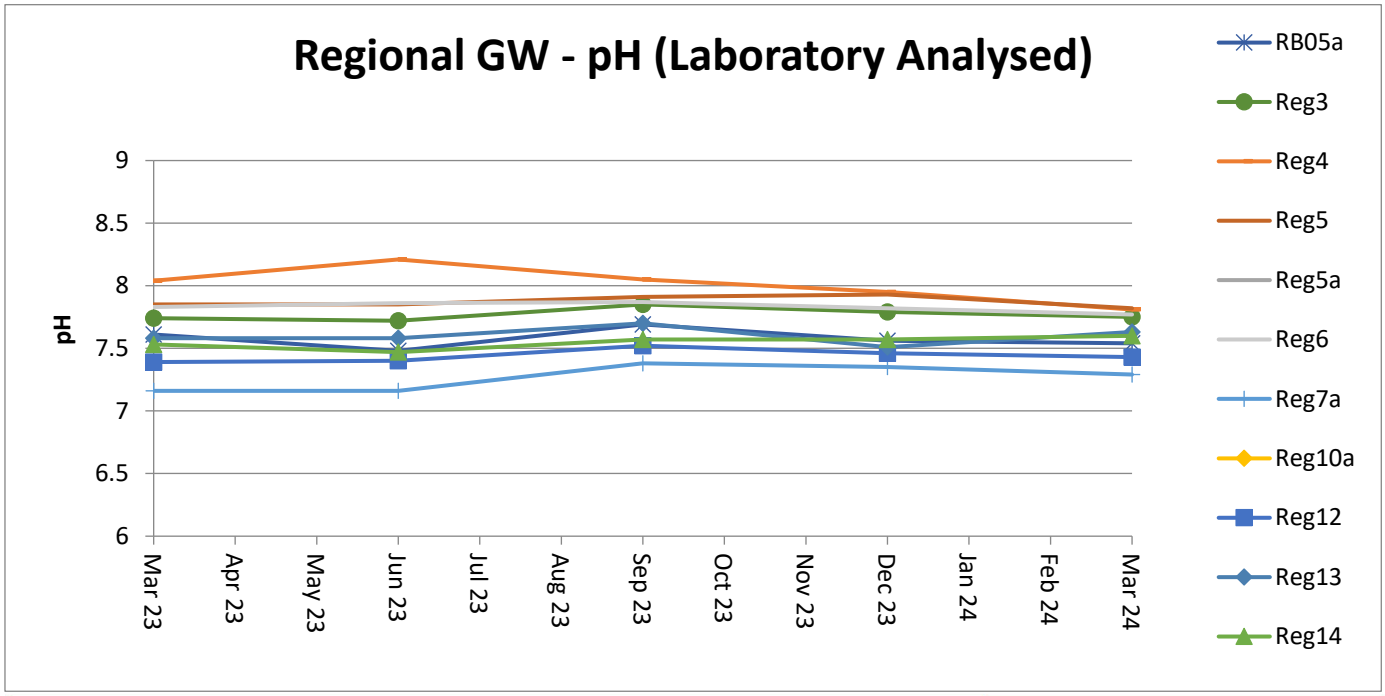
A. Groundwater

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.



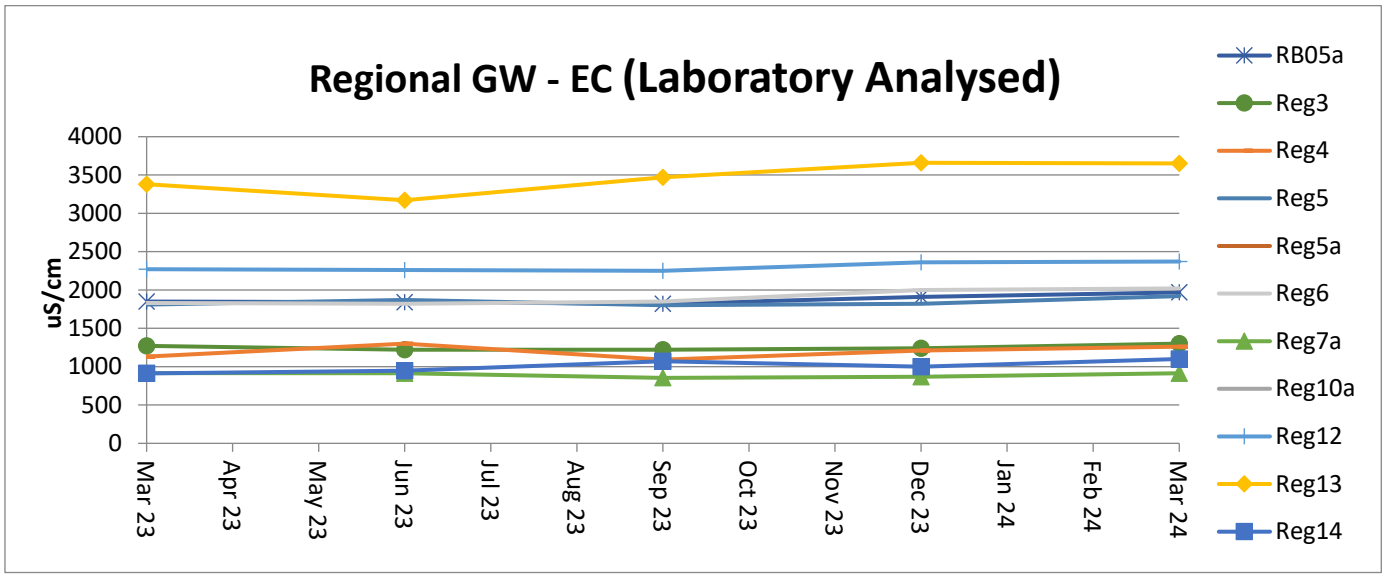
Acidity / Alkalinity (pH)

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$_{\mu s/cm}$ to 2,500$_{\mu s/cm}$, with the exception of monitoring bore Reg13 which has a historic groundwater EC range of 2,500$_{\mu s/cm}$ to 4,100$_{\mu s/cm}$. Within the last twelve months EC has remained static.

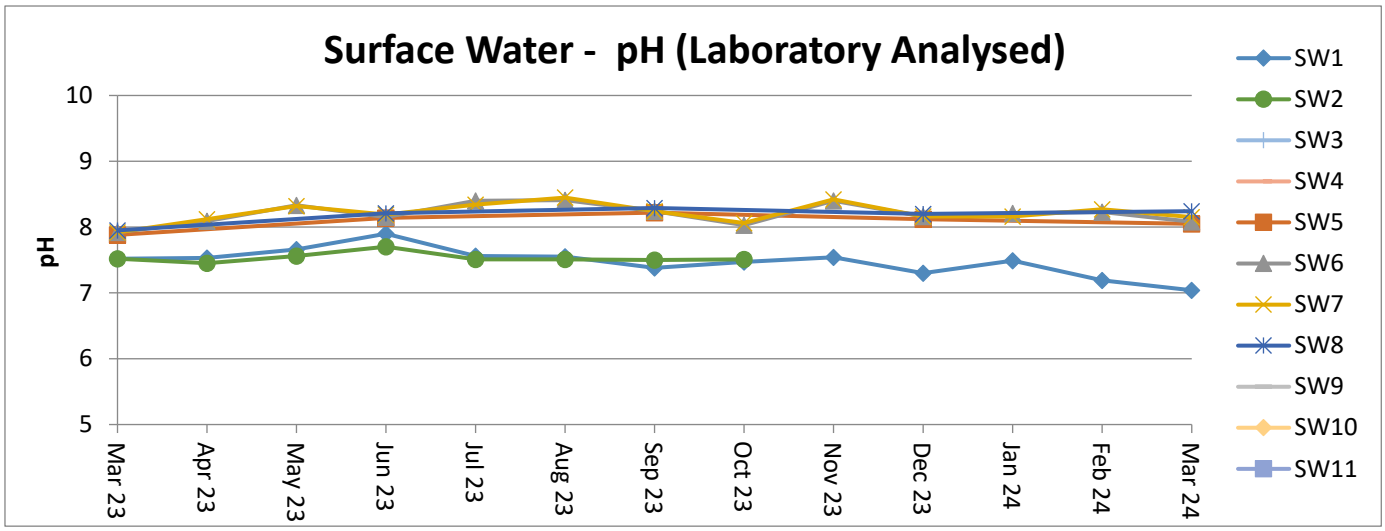


B. Surface Water – Creeks and Rivers

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.

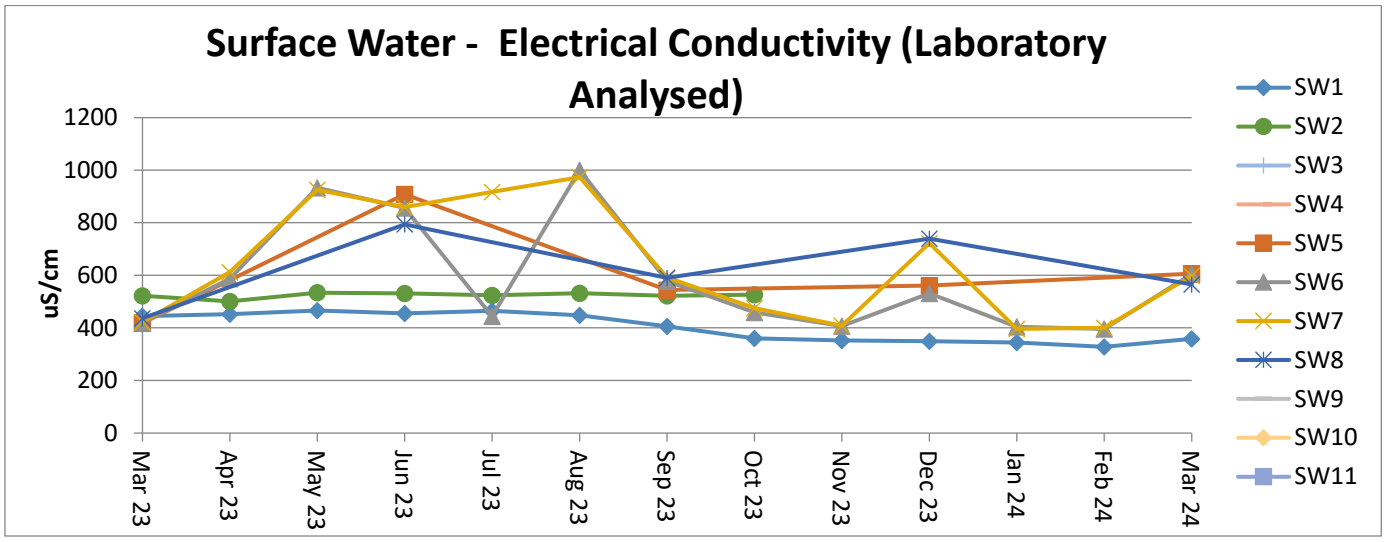
Acidity / Alkalinity (pH)

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



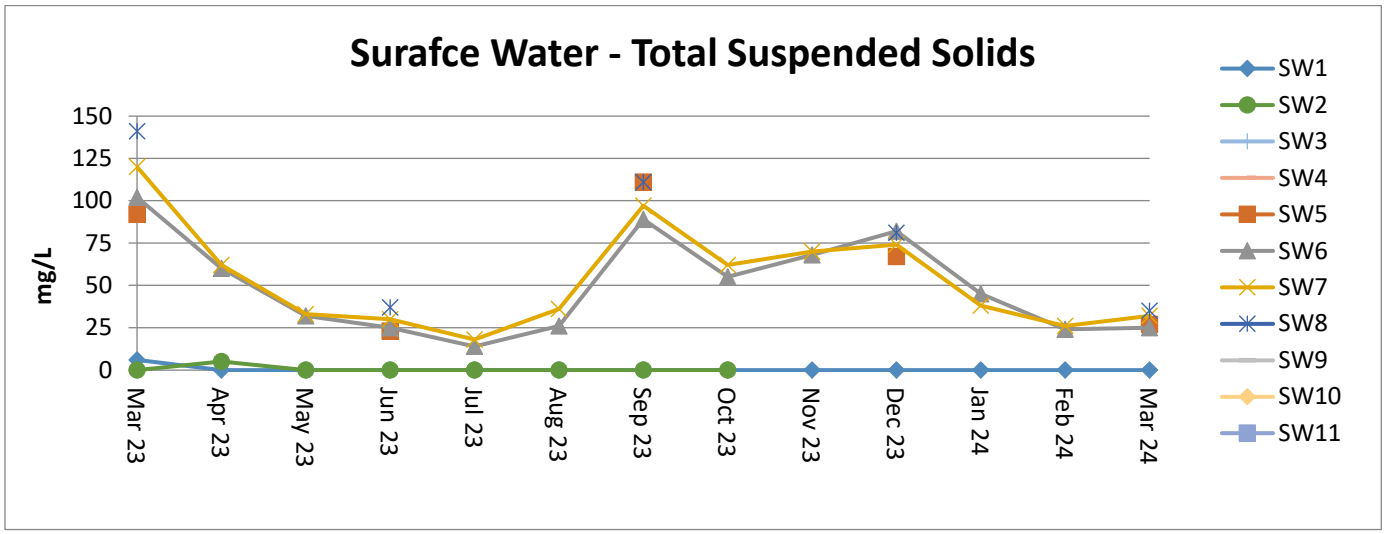
Electrical Conductivity

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.



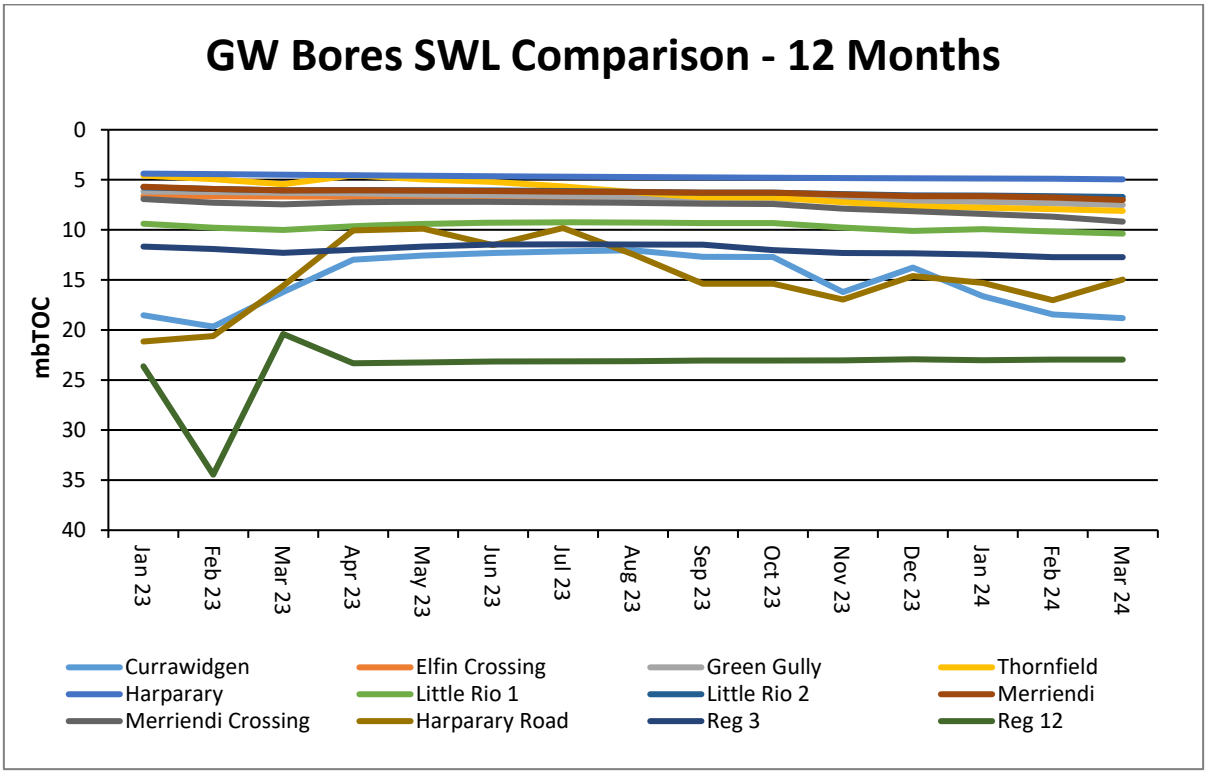
Total Suspended Solids (TSS)

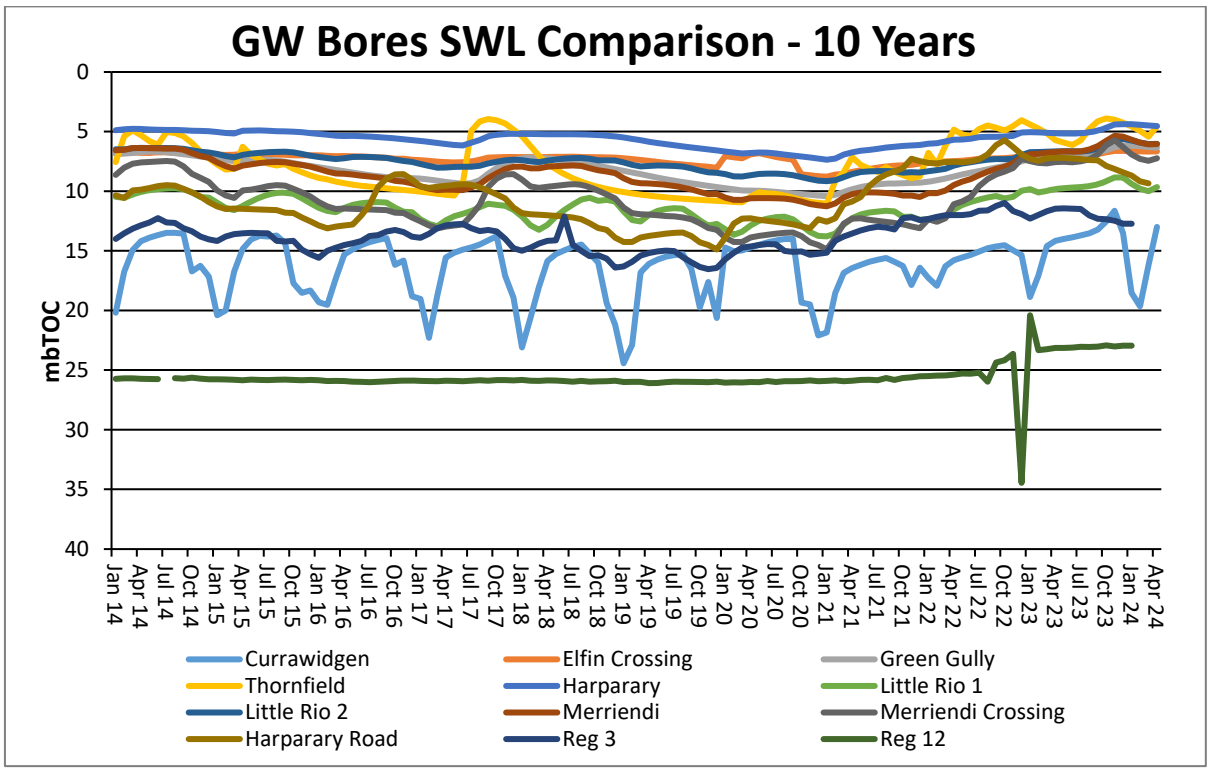
Surface water TSS trends have remained generally consistent with historical results. SW5, SW6, SW7 and SW8 are historically variable as they are located along the Namoi River which is subject to regulated and variable flow regimes.



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.

Maules Creek Coal Mine
Community Consultative Committee
Meeting #46

Environmental Monitoring Report
For the Q2 period, April – June 2024 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;April – June 2024 .

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 –April 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	1/04/2024 22:30	0.5	216	F	No	35	45	IA	IA	Nil	Nil
NM2	1/04/2024 23:30	0.3	0	F	No	39	45	IA	IA	Nil	Nil
NM3	2/04/2024 0:20	0.5	186	F	No	35	45	IA	IA	Nil	Nil
NM4	1/04/2024 23:00	0.5	140	F	No	35	45	IA	IA	Nil	Nil
NM5	1/04/2024 22:00	1.1	209	F	No	35	45	<25	30	Nil	Nil
NM6	1/04/2024 23:55	0.3	0	F	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 NPfI.
2. Site-only LAeq,15minute, includes modifying factor penalties if applicable.
3. Degrees magnetic north, "-" indicates calm conditions.

Table 2 – May 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	1/05/2024 22:30	3.3	124	D	Yes	40	50	IA	IA	Nil	Nil
NM2	1/05/2024 23:30	2.3	141	E	No	39	45	<30	<30	Nil	Nil
NM3	2/05/2024 00:21	1.0	151	F	No	35	45	33	36	Nil	Nil
NM4	1/05/2024 23:00	2.8	135	D	No	35	45	IA	IA	Nil	Nil
NM5	1/05/2024 22:00	3.2	122	D	Yes	40	50	IA	IA	Nil	Nil
NM6	1/05/2024 23:55	1.6	148	E	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 NPfI.
2. Site-only LAeq,15minute, includes modifying factor penalties if applicable.
3. Degrees magnetic north, "-" indicates calm conditions.

Table 3 – June 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	10/06/2024 22:30	0.6	29	F	No	35	45	<25	<25	Nil	Nil
NM2	10/06/2024 23:30	1.1	213	F	No	39	45	34	36	Nil	Nil
NM3	11/06/2024 00:20	0.5	227	F	No	35	45	24	29	Nil	Nil
NM4	10/06/2024 23:00	0.3	35	F	No	35	45	<25	<25	Nil	Nil
NM5	10/06/2024 22:00	0.5	135	F	No	35	45	30	33	Nil	Nil
NM6	10/06/2024 23:55	0.3	0	F	No	35	45	<20	23	Nil	Nil

Notes: 1. Noise limits are adjusted by +5 dB during 'very enhancing meteorological conditions' in accordance with the NPfI.
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
April	SSE
May	SE
June	SSW

Blast Monitoring

There was 25 blasts at MCCM during Q2 2024. 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	25	92.41	109.90	120	No
Vibration	mm/s		25	0.10	0.26	10	No

Air Quality

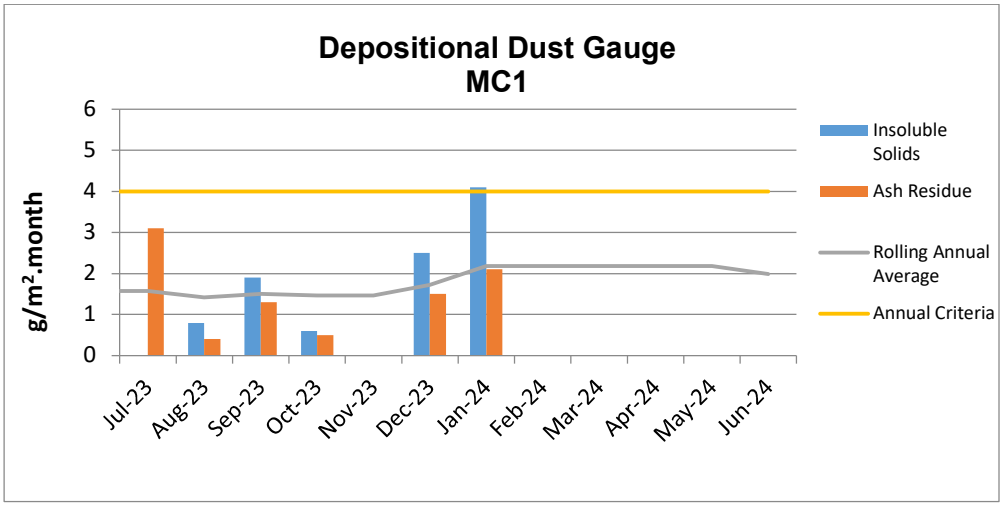
A. Total Depositional Dust

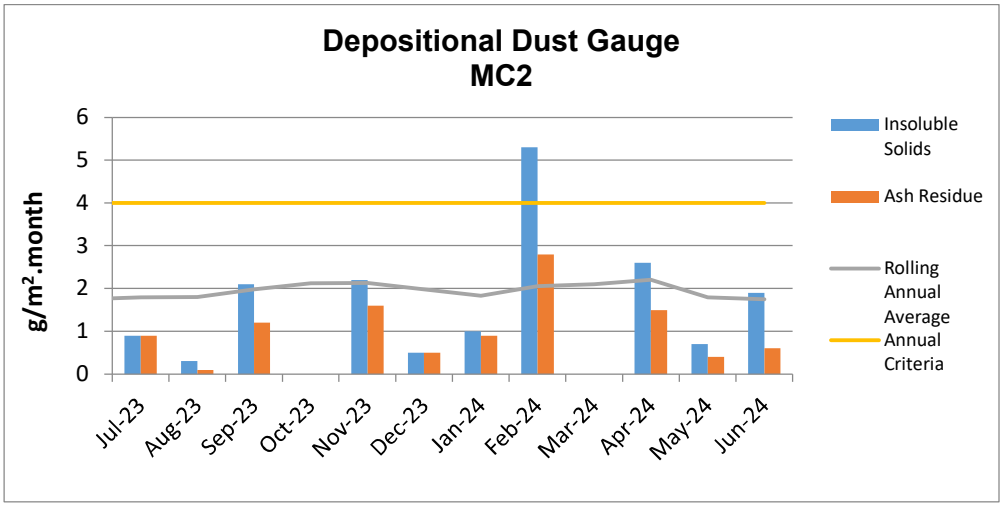
The 12 monthly rolling annual average remains below the relevant Project Approval (PA 10_0138) criteria of 4g/m^2/month for the respective monitoring points.

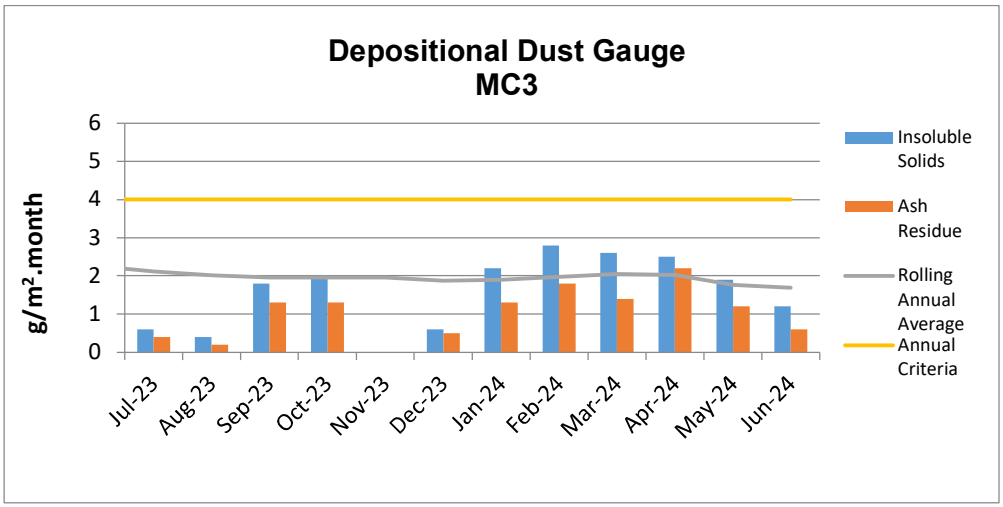
Table 6 – Deposited Dust Gauge Results [g/m^2/month]

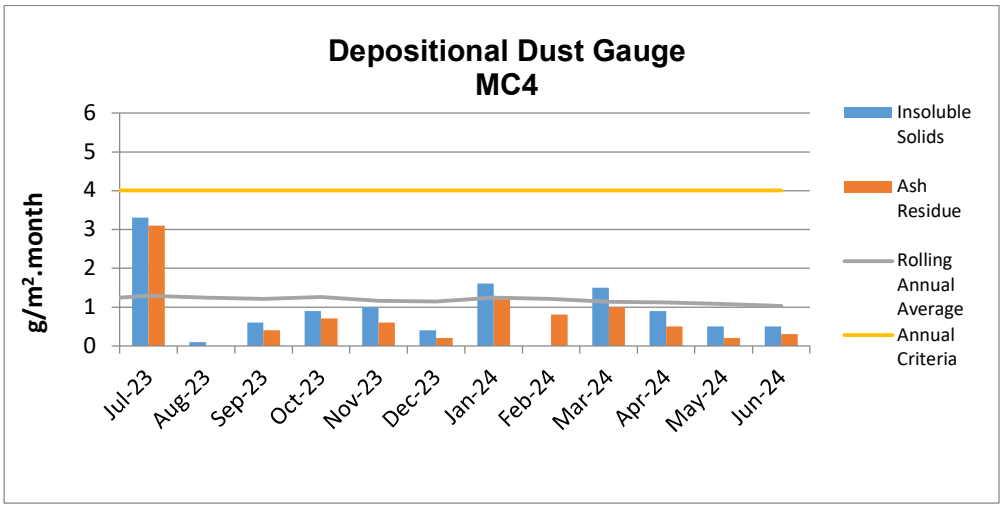
MONTH	MC1	MC2	MC3	MC4
April	21.5c	2.6	2.5	1.5
May	7.2c	0.7	1.9	0.5
June	7.8c	1.9	1.2	0.5
12 MONTH ROLLING AVERAGE	**2.0**	**1.9**	**1.2**	**0.5**

[c] *samples contaminated by bird dropping, decomposed insects or vegetable matter.*







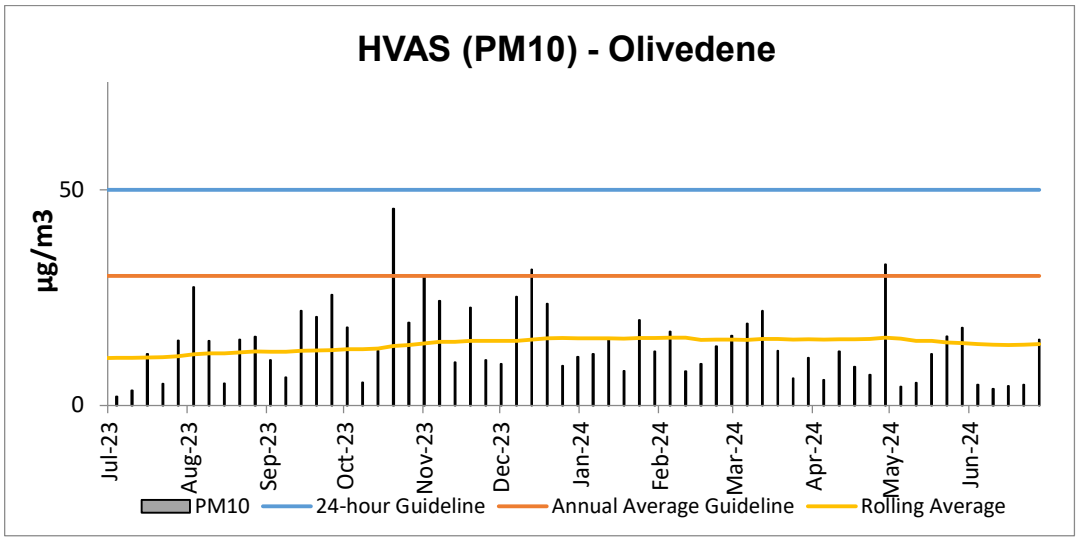


** Blank cells indicate sample periods where the sample has been contaminated and excluded from the results tables due to contaminated material (insect larvae, bird droppings, vegetation etc.).*

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/m^3.

HVAS PM_{10} Rolling Annual Average as of June was **14.2 µg/m^3**, which is below the Annual Average Guideline of 30 µg/m^3.



C. TEOM - PM10 Results

The annual rolling average for PM10 at the Maules Creek Coal for TEOM1 was **10.9 µg/m³** and at TEOM3 was **13.6 µg/m³** these are both 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 Q2.

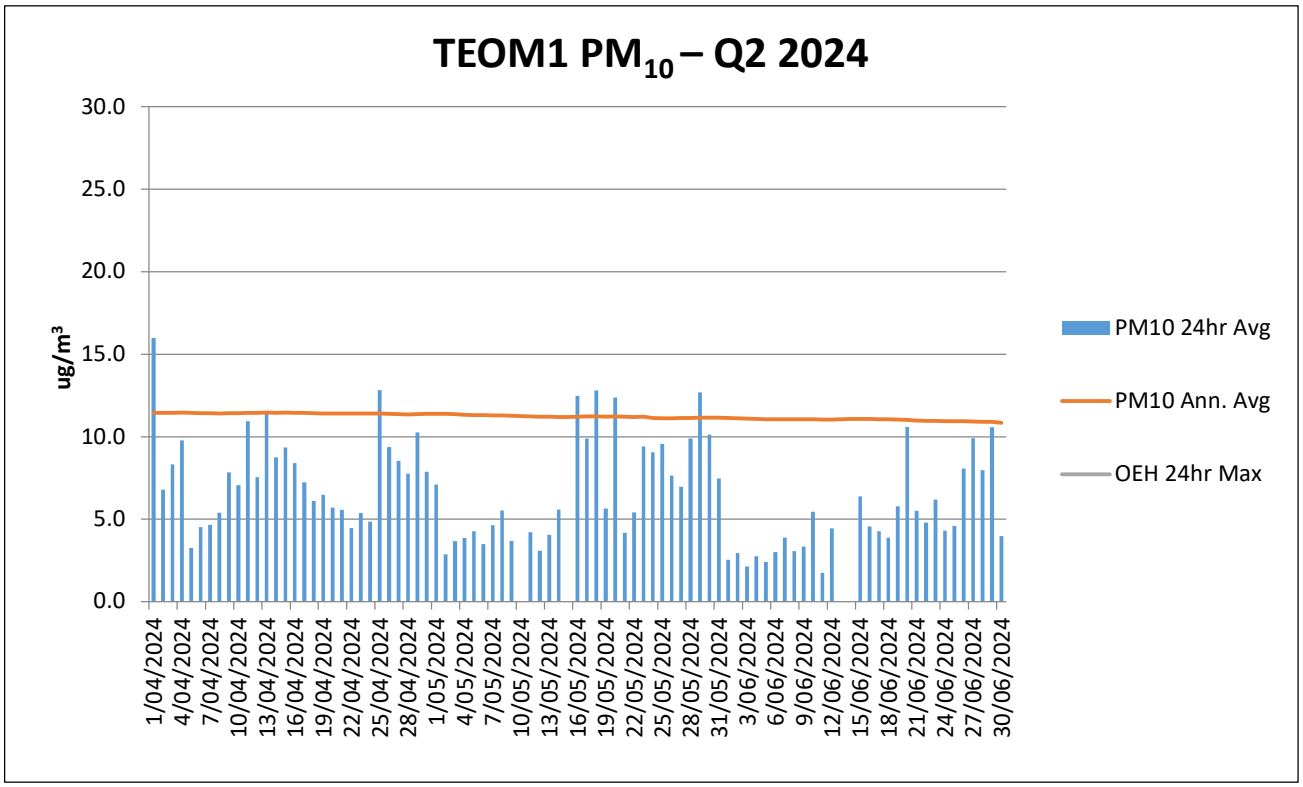


Figure 1 - TEOM Result – Particulate Matter $PM_{10\mu g/m^3}$

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

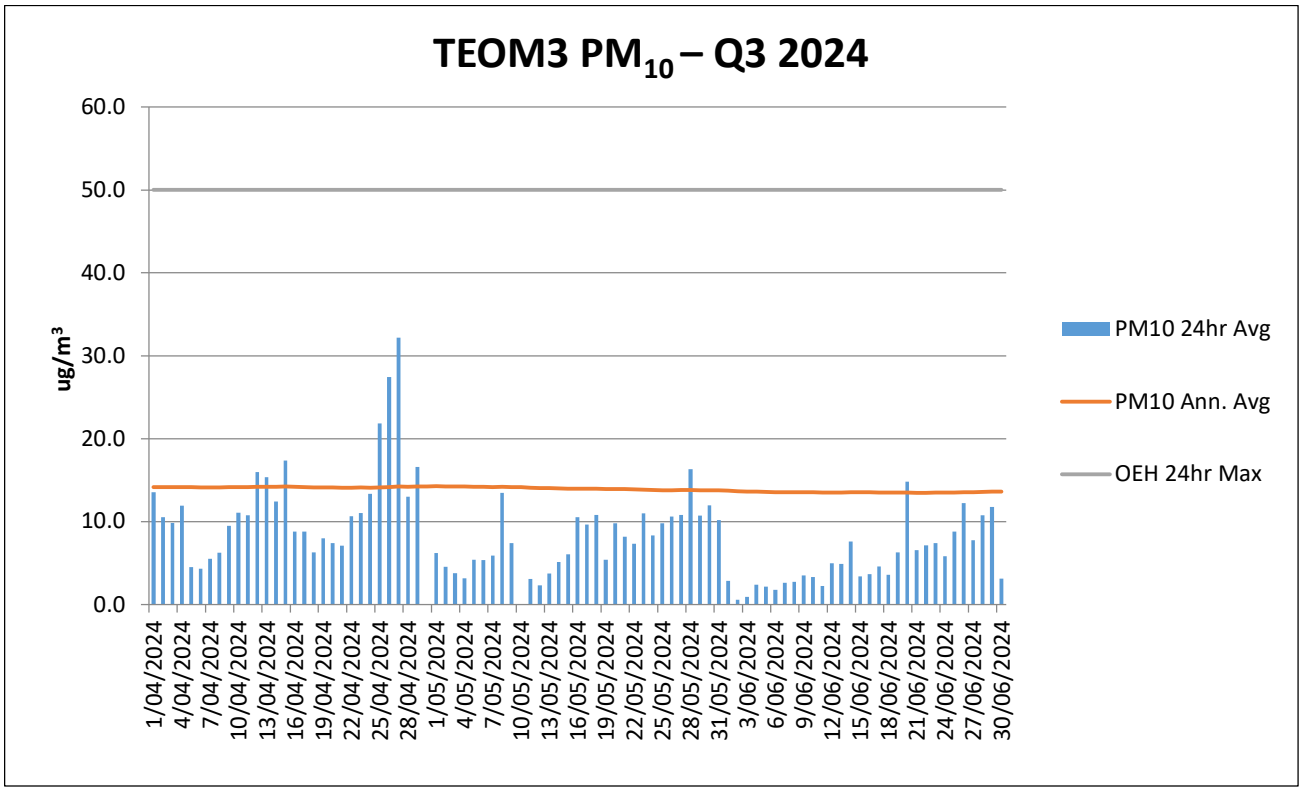


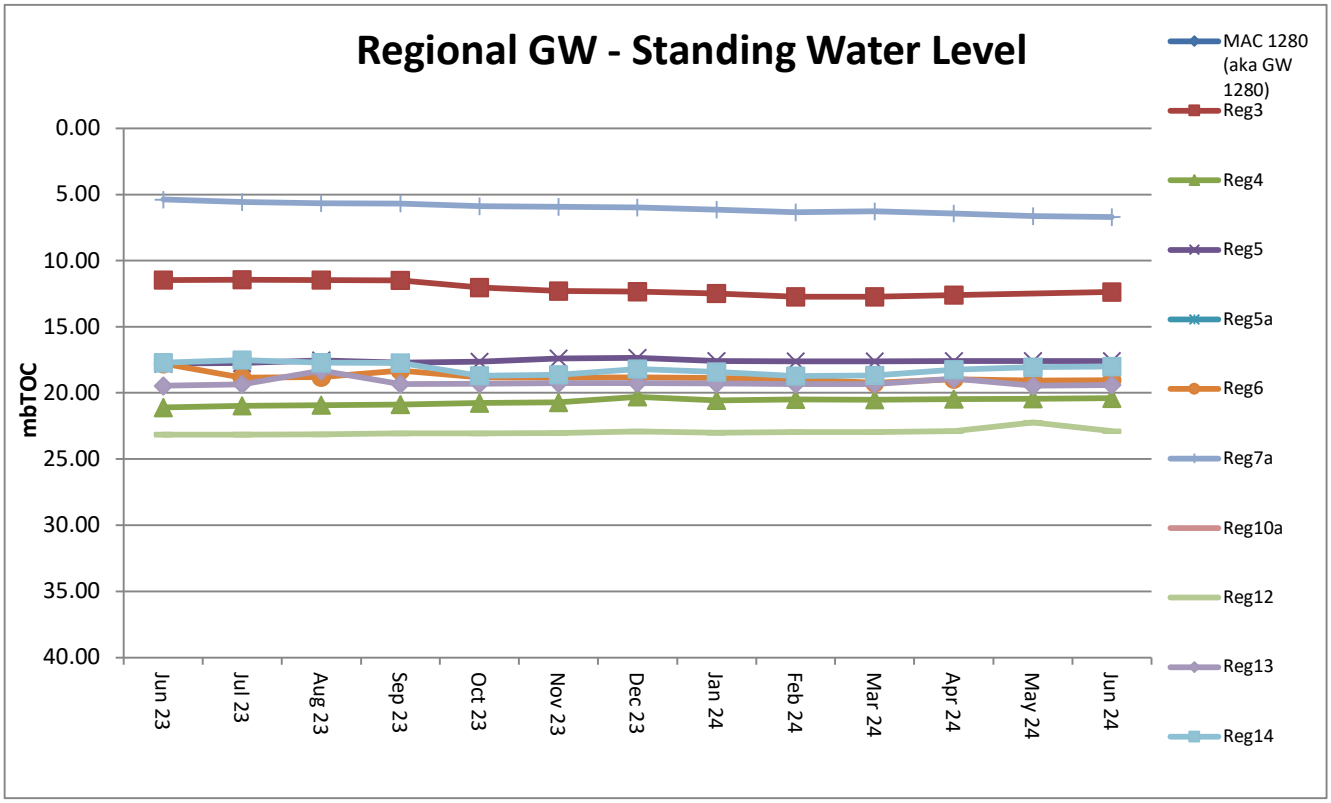
Figure 2 - TEOM Result – Particulate Matter $PM_{10\mu g/m^3}$

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

Water Monitoring

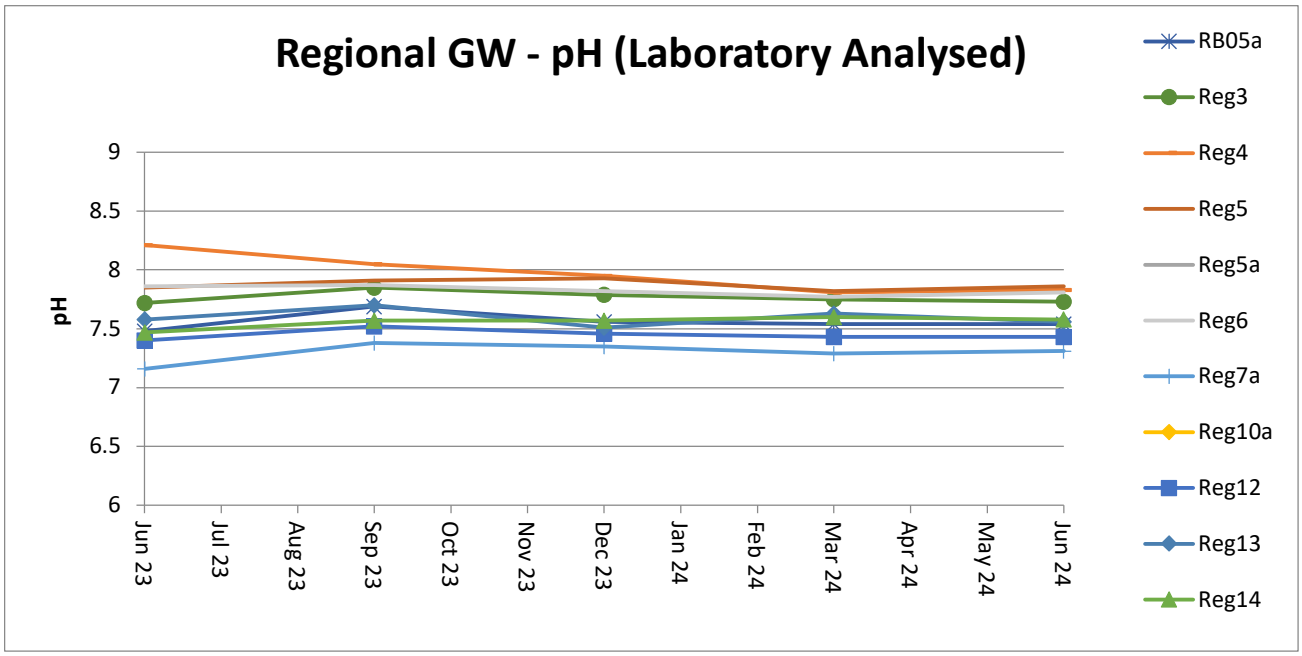
A. Groundwater

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.



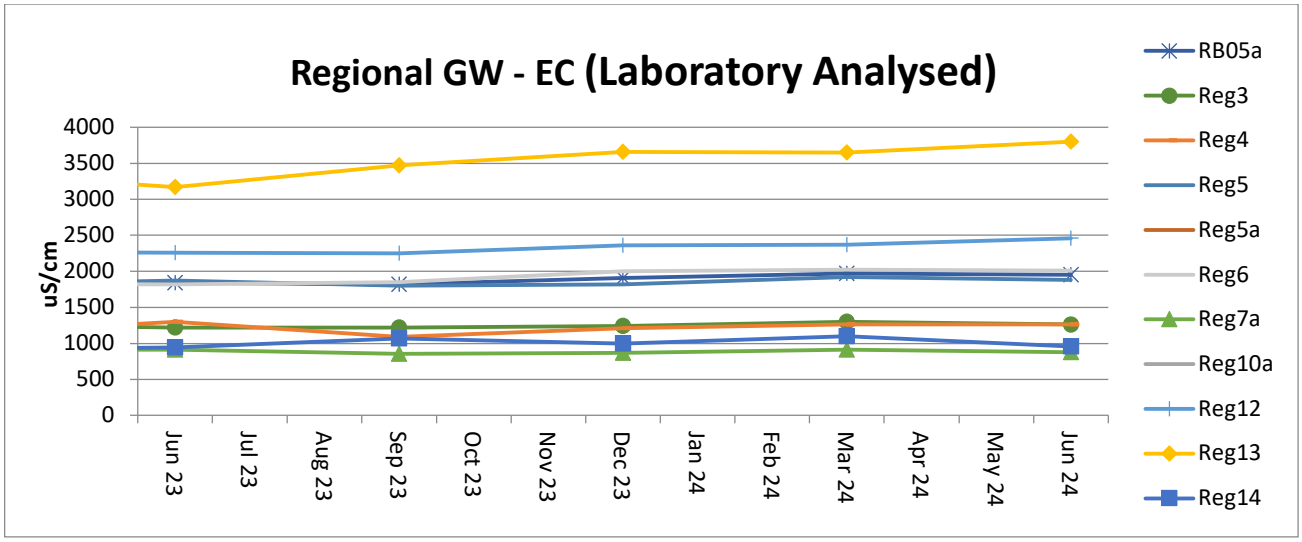
Acidity / Alkalinity (pH)

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 500µs/cm to 2,500µs/cm, with the exception of monitoring bore Reg13 which has a historic groundwater EC range of 2,500µs/cm to 4,100µs/cm. Within the last twelve months EC has remained static.

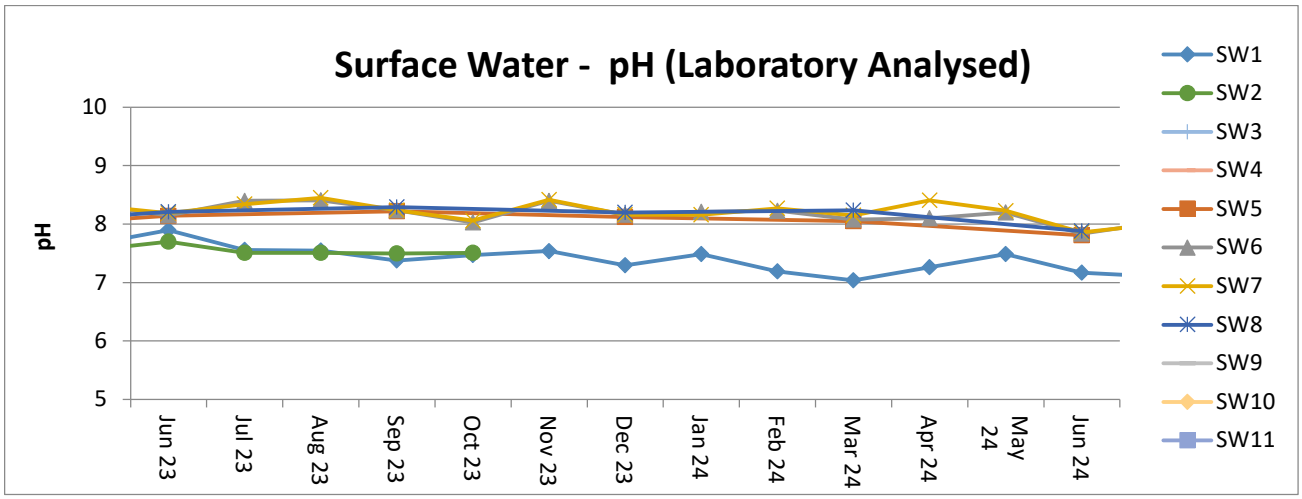


B. Surface Water – Creeks and Rivers

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.

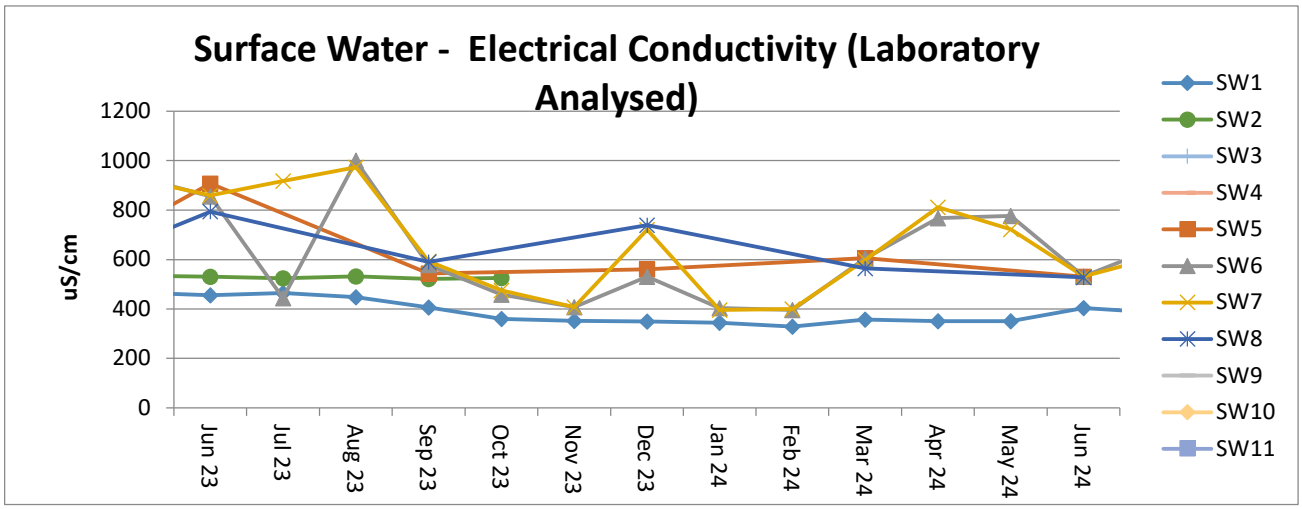
Acidity / Alkalinity (pH)

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



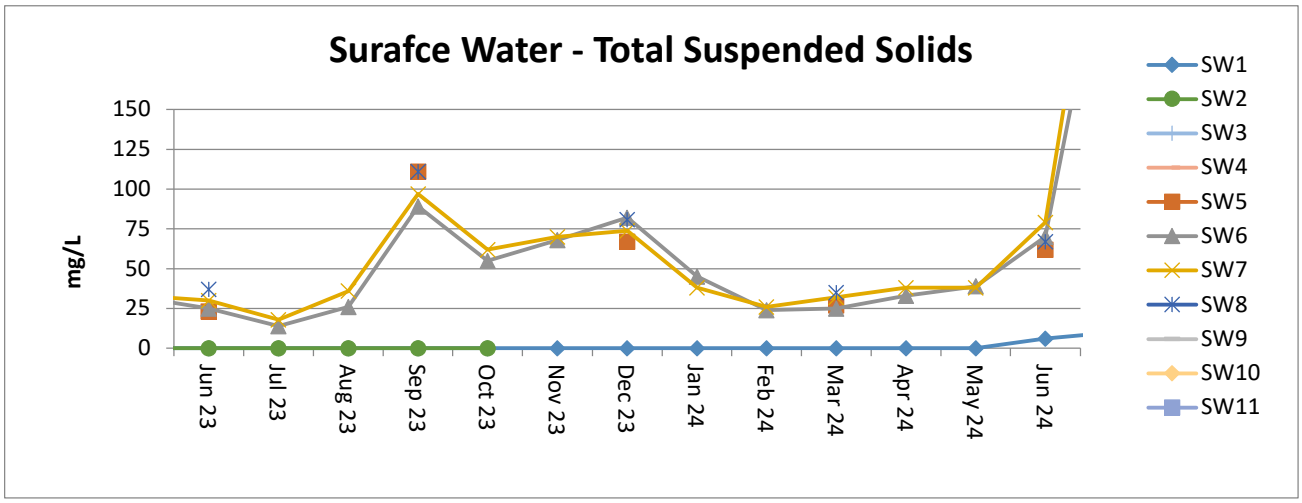
Electrical Conductivity

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.



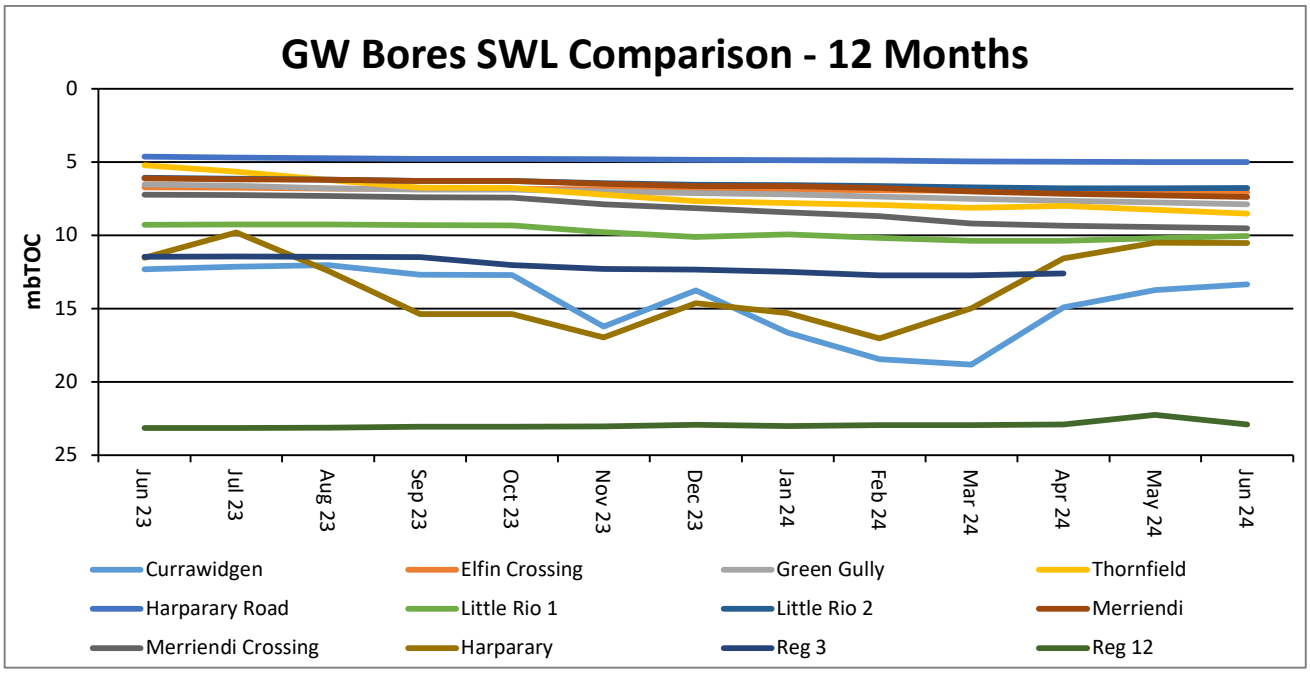
Total Suspended Solids (TSS)

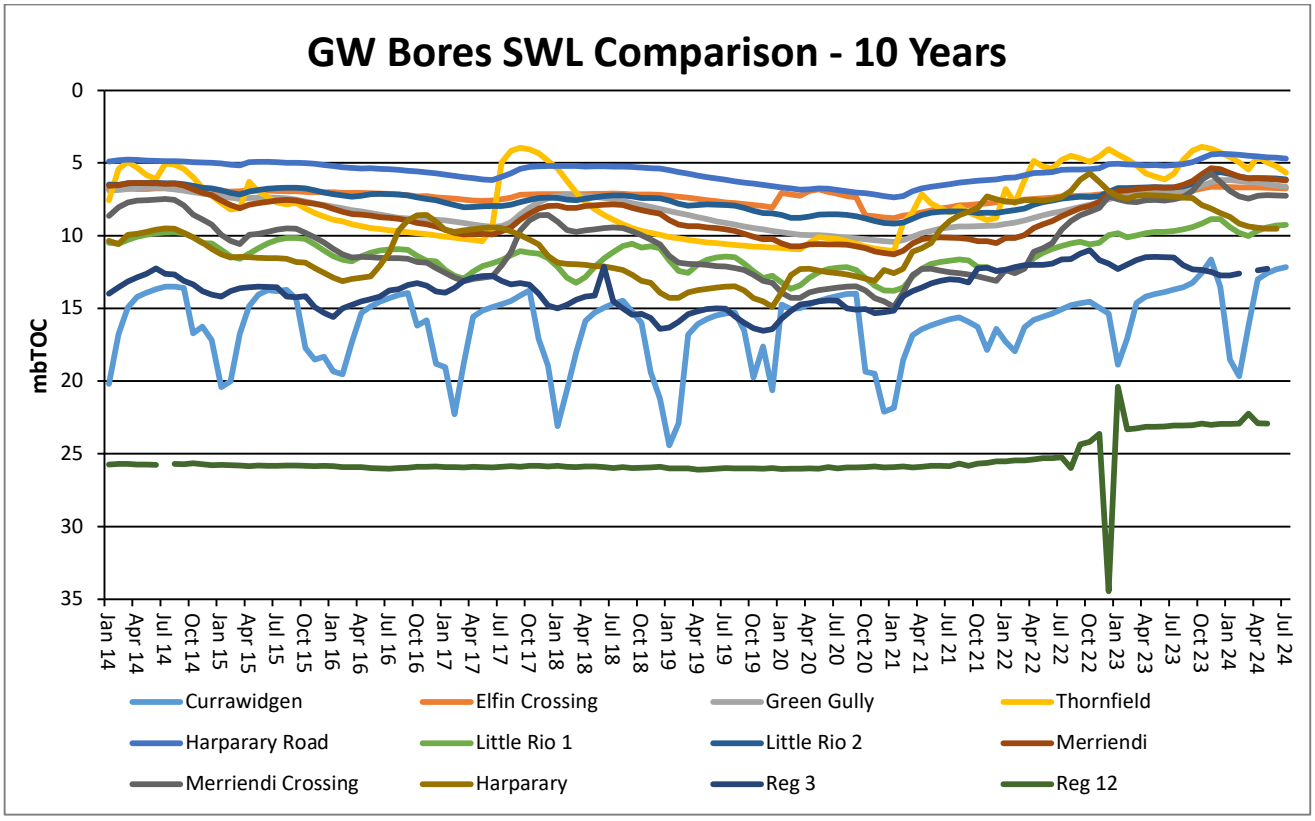
Surface water TSS trends have remained generally consistent with historical results. SW5, SW6, SW7 and SW8 are historically variable as they are located along the Namoi River which is subject to regulated and variable flow regimes.



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 (April to June 2024) results were:

1,259 out of total 2,091 feral pigs removed were from the Maules Biodiversity properties;

566 out of the total 594 feral goats removed were from the Maules Biodiversity properties;

98 out of total 258 Canid Pest Ejectors (1080) triggered were from the Maules Biodiversity properties;

3 Deer were removed from the Maules Biodiversity properties.

Weed Control

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

60ha of Broadleaf weeds such as General Broadleaf, Marshmallow, Cobblers Peg and Patterson's Curse were sprayed.

4.7ha of Exotic Invasive Grasses such as African Lovegrass, Buffel Grass and Rhodes Grass were sprayed.

0.3ha of Woody Weeds such as Boxthorn & Prickly Pear were sprayed, as well as cut & paint Willow Trees and Red Berry trees.

70ha of tracks sprayed as part of the track maintenance.

Community Complaints

There was one community complaint registered during the quarter, all community complaints are available on the company website at https://whitehavencoal.com.au/our-business/our-assets/maules-creek-mine /

MAULES CREEK COAL MINE 2024 Community Complaints Register				
Date received	**Method**	**Category**	**Nature of Complaint**	**MCCM Response**
23/05/2024	Email	Dust	DPHI received an enquiry to the publishing of dust data for the MCCM Project.	MCC compiled the appropriate information and replied to the DPHI.

Maules Creek Coal Mine
Community Consultative Committee
Meeting #48

Environmental Monitoring Report
For the Q3 period, July - September 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; July - September 2024 .

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 –July 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	24/07/2024 22:30	0.3	75	F	No	35	45	<20	25	Nil	Nil
NM2	24/07/2024 23:30	0.3	331	F	No	39	45	<20	<20	Nil	Nil
NM3	25/07/2024 00:21	0.5	136	F	No	35	45	IA	IA	Nil	Nil
NM4	24/07/2024 23:00	0.1	226	F	No	35	45	IA	IA	Nil	Nil
NM5	24/07/2024 22:01	0.5	68	F	No	35	45	25	30	Nil	Nil
NM6	24/07/2024 23:56	0.4	317	F	No	35	45	IA	IA	Nil	Nil

Table 2 – August 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	21/08/2024 22:30	0.3	316	F	No	35	45	<30	32	Nil	Nil
NM2	21/08/2024 23:00	0.6	242	F	No	39	45	<25	<25	Nil	Nil
NM3	21/08/2024 23:20	0.7	217	F	No	35	45	IA	IA	Nil	Nil
NM4	21/08/2024 23:47	0.6	33	F	No	35	45	IA	IA	Nil	Nil
NM5	21/08/2024 22:00	0.3	59	F	No	35	45	<25	27	Nil	Nil
NM6	21/08/2024 23:25	0.7	210	F	No	35	45	IA	IA	Nil	Nil

Table 3 – September 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	23/09/2024 22:30	0.3	4	F	No	35	45	<20	<20	Nil	Nil
NM2	23/09/2024 23:30	0.3	194	F	No	39	45	<20	<20	Nil	Nil
NM3	23/09/2024 23:45	0.3	85	F	No	35	45	IA	IA	Nil	Nil
NM4	23/09/2024 23:00	0.5	218	F	No	35	45	IA	IA	Nil	Nil
NM5	23/09/2024 22:00	0.2	36	F	No	35	45	<20	<20	Nil	Nil
NM6	23/09/2024 23:57	0.3	166	F	No	35	45	IA	IA	Nil	Nil

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
July	SSW
August	SE
September	SE

Blast Monitoring

There was 25 blasts at MCCM during Q3 2024. 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	25	95.186	113.3	120	No
Vibration	mm/s		25	0.1441	1.86	10	No

Air Quality

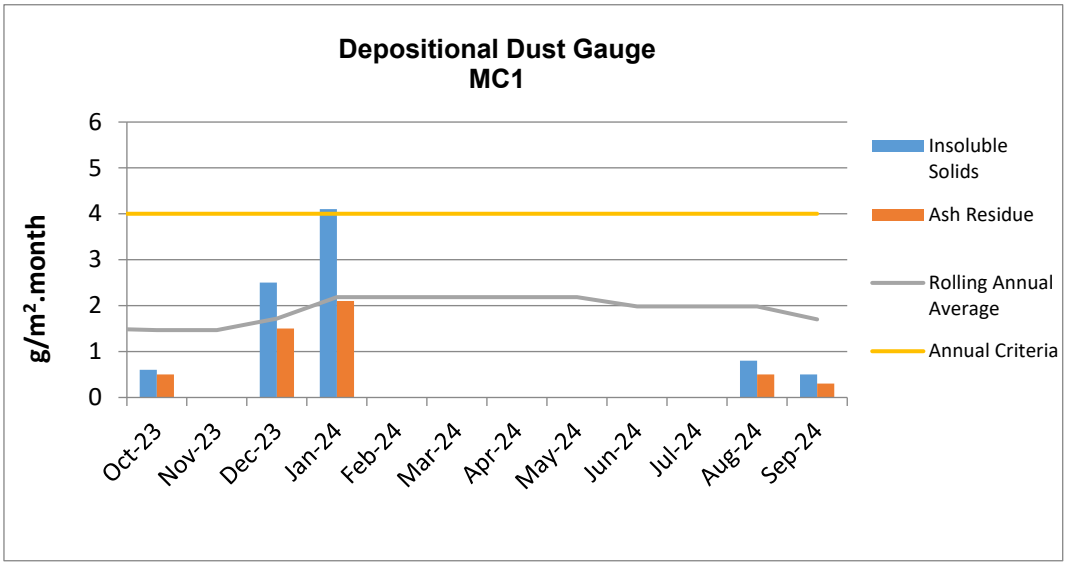
A. Total Depositional Dust

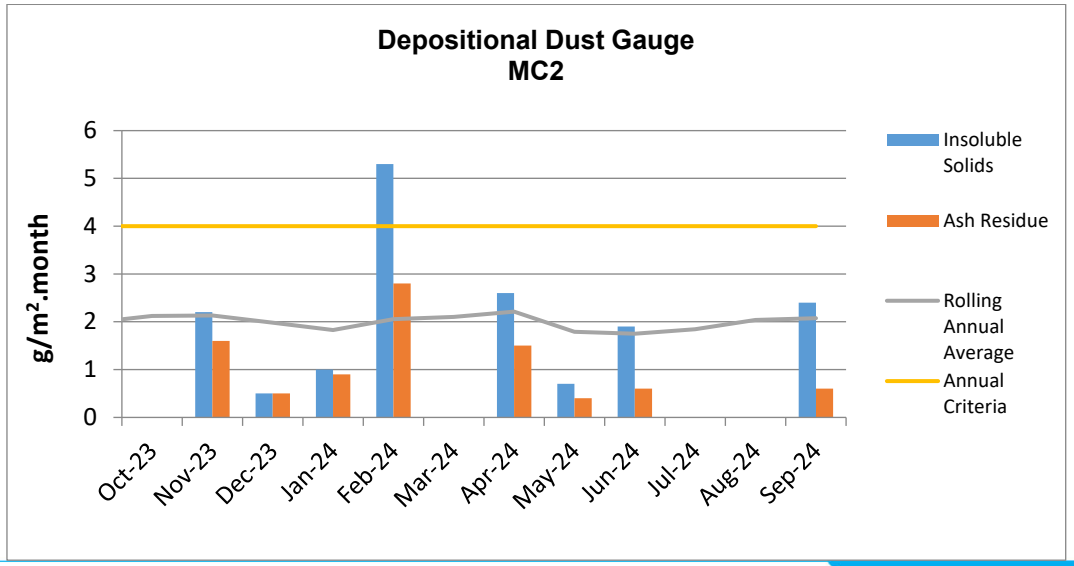
The 12 monthly rolling annual average remains below the relevant Project Approval (PA 10_0138) criteria of 4g/m^2/month for the respective monitoring points.

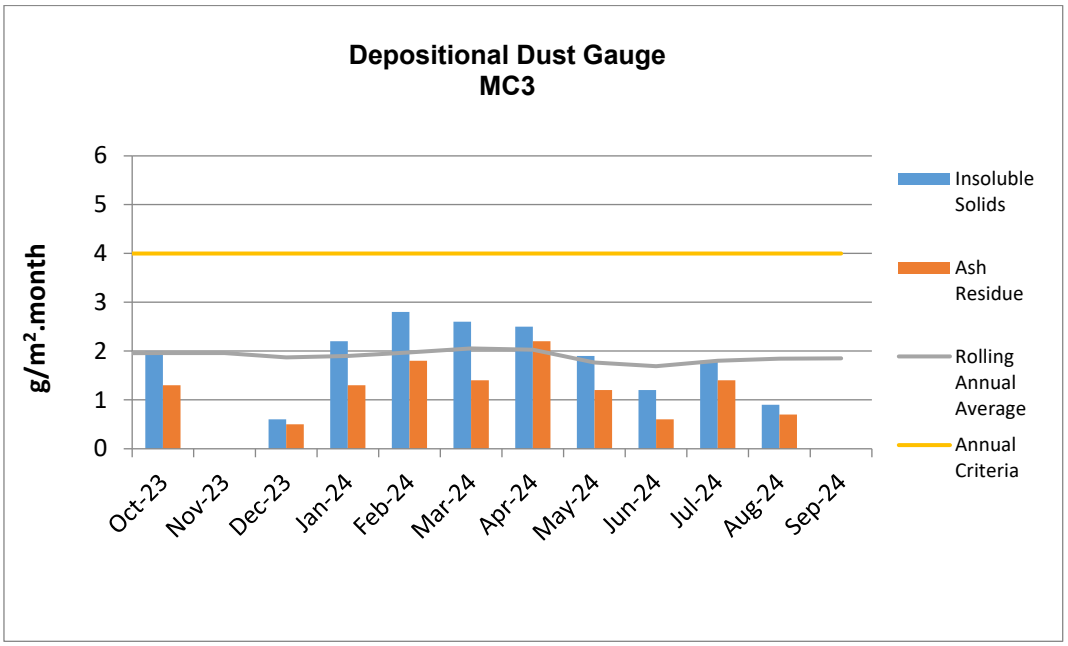
Table 6 – Deposited Dust Gauge Results [g/m^2/month]

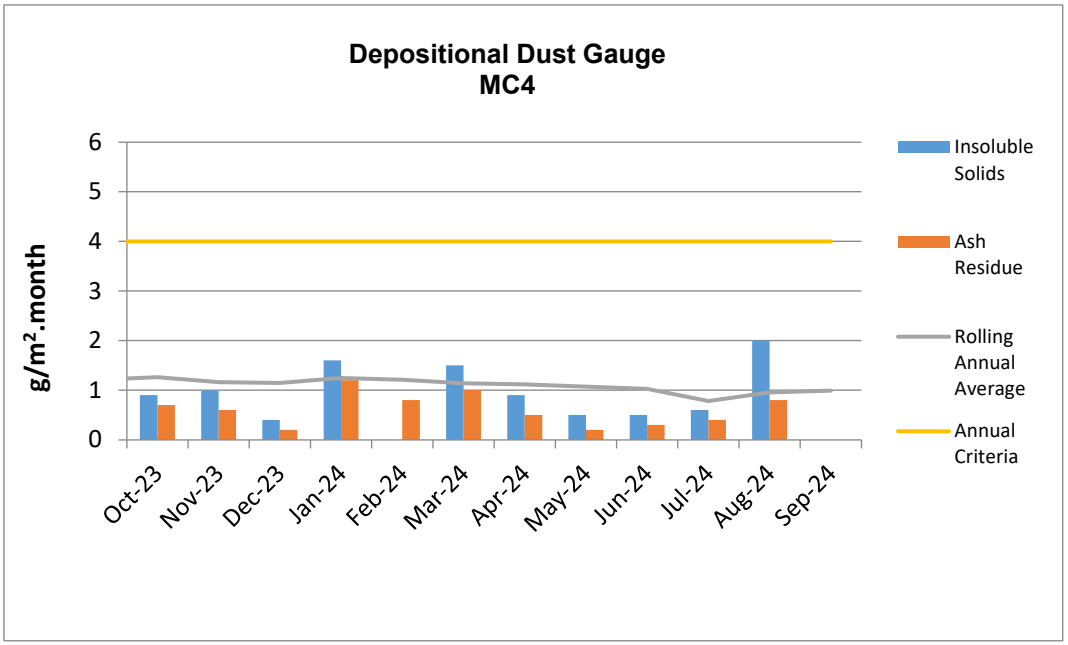
MONTH	MC1	MC2	MC3	MC4
July	38.0c	6.8c	1.8	0.6
August	0.8	8.1c	0.9	2.0
September	0.5	2.4	4.5c	4.1c
12 MONTH ROLLING AVERAGE	**1.7**	**2.1**	**1.9**	**1.0**

[c] *samples contaminated by bird dropping, decomposed insects or vegetable matter.*







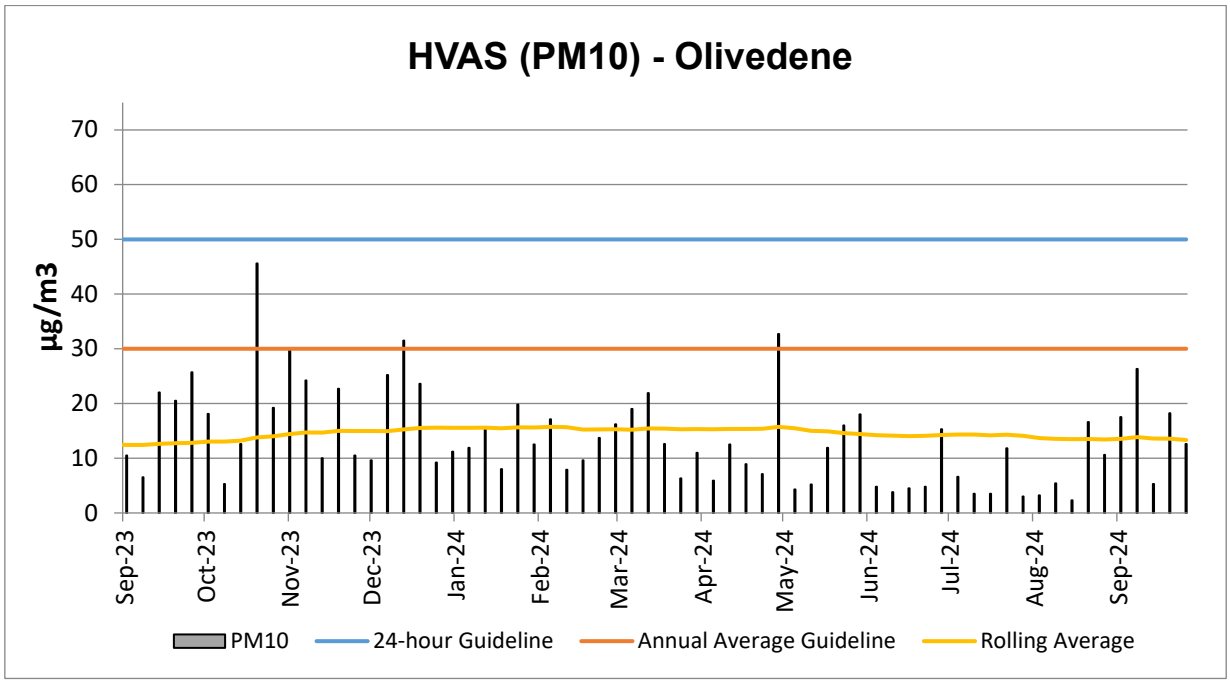


** Blank cells indicate sample periods where the sample has been contaminated and excluded from the results tables due to contaminated material (insect larvae, bird droppings, vegetation etc.).*

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/m^3.

HVAS PM_{10} Rolling Annual Average as of September was **13.3 µg/m^3**, which is below the Annual Average Guideline of 30 µg/m^3.



C. TEOM - PM10 Results

The annual rolling average for PM10 at the Maules Creek Coal for TEOM1 was **10.0 µg/m³** and at TEOM3 was **12.5 µg/m³** these are both 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 Q3.

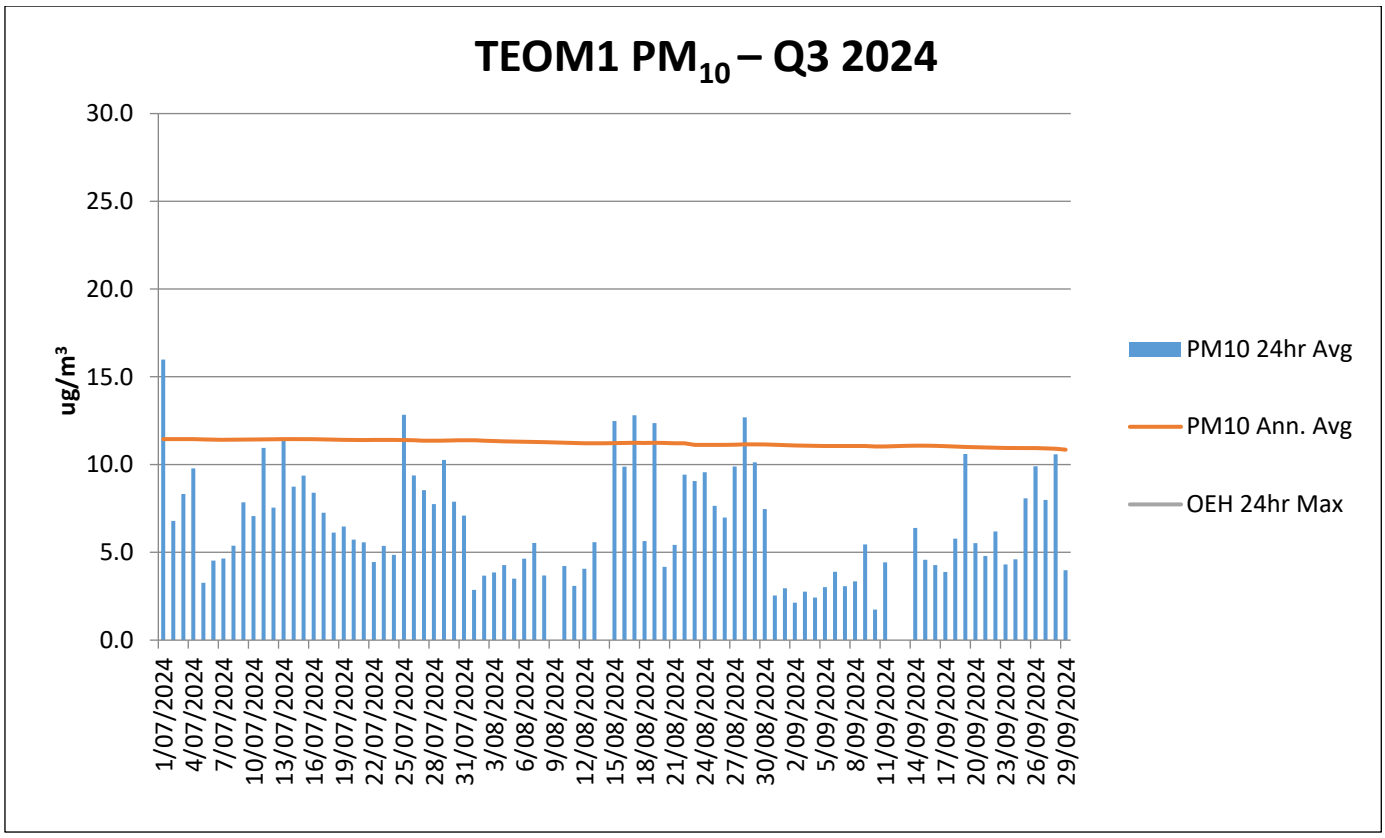


Figure 1 - TEOM Result – Particulate Matter $PM_{10 µg/m^3}$

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

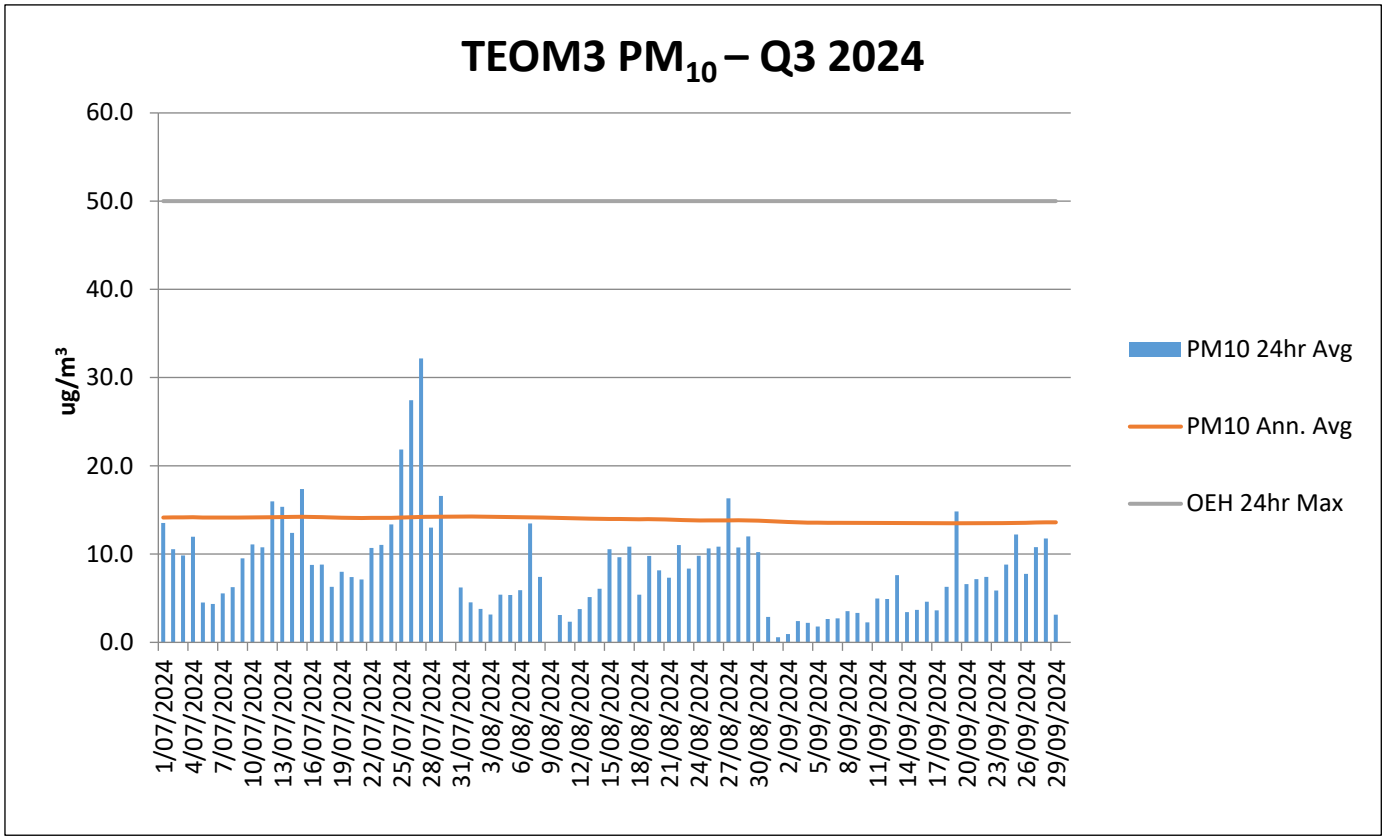


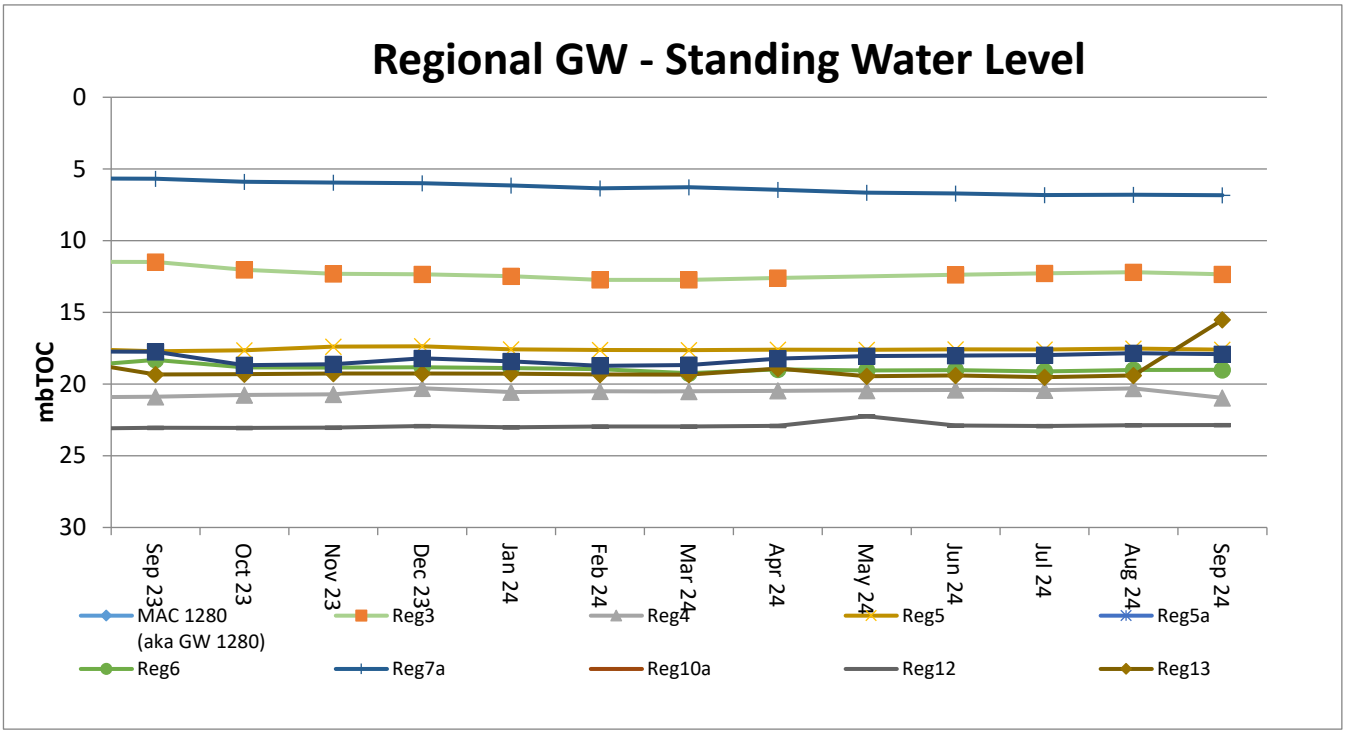
Figure 2 - TEOM Result – Particulate Matter $PM_{10\mu g/m^3}$

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

Water Monitoring

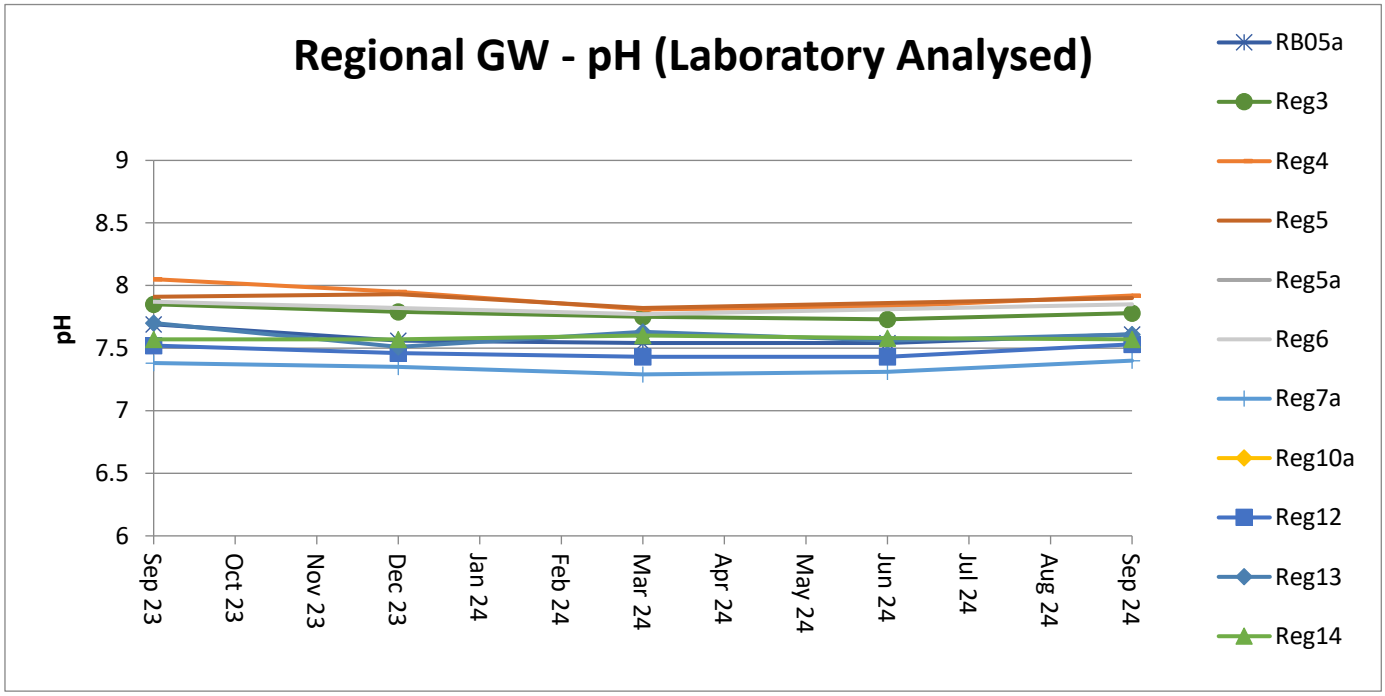
A. Groundwater

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.



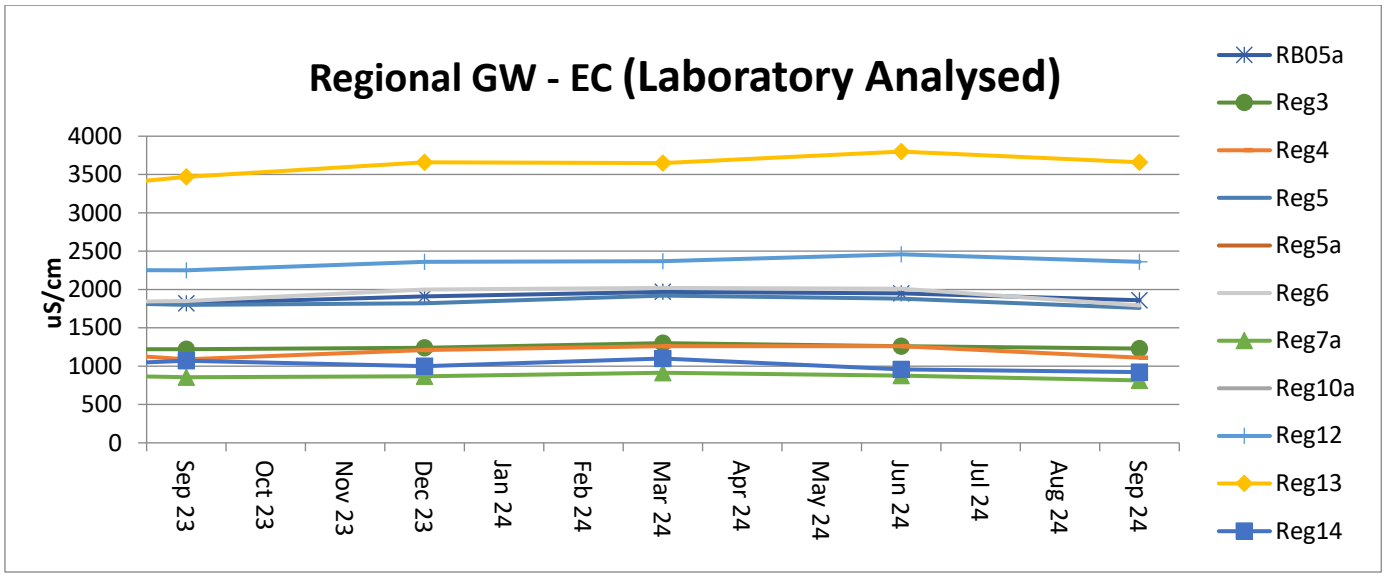
Acidity / Alkalinity (pH)

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$_{\mu s/cm}$ to 2,500$_{\mu s/cm}$, with the exception of monitoring bore Reg13 which has a historic groundwater EC range of 2,500$_{\mu s/cm}$ to 4,100$_{\mu s/cm}$. Within the last twelve months EC has remained static.



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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.

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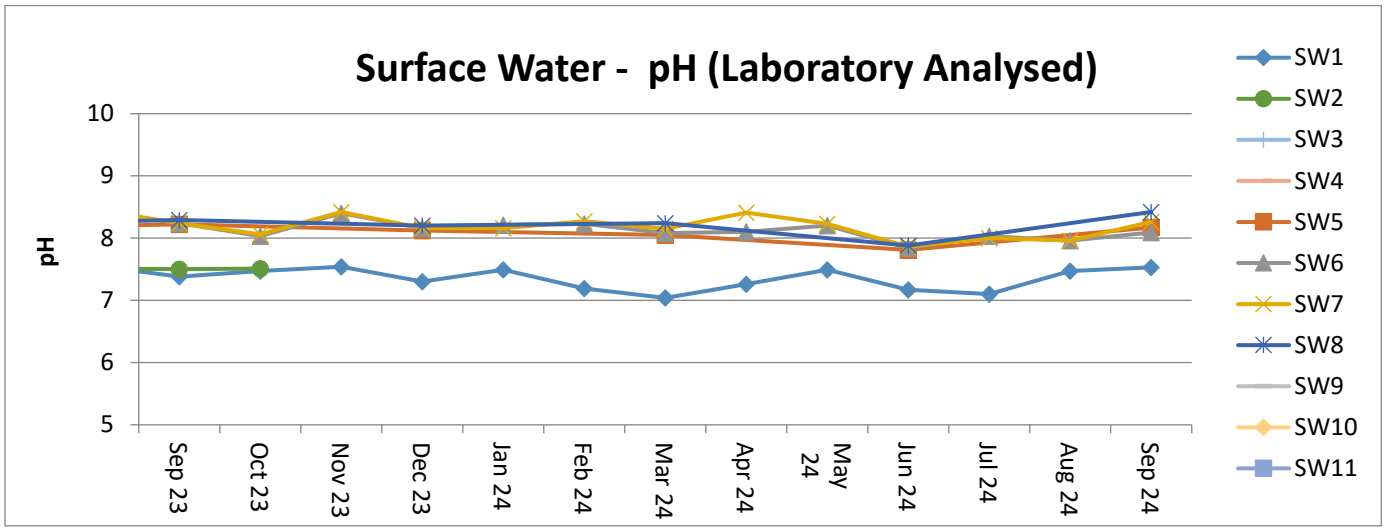
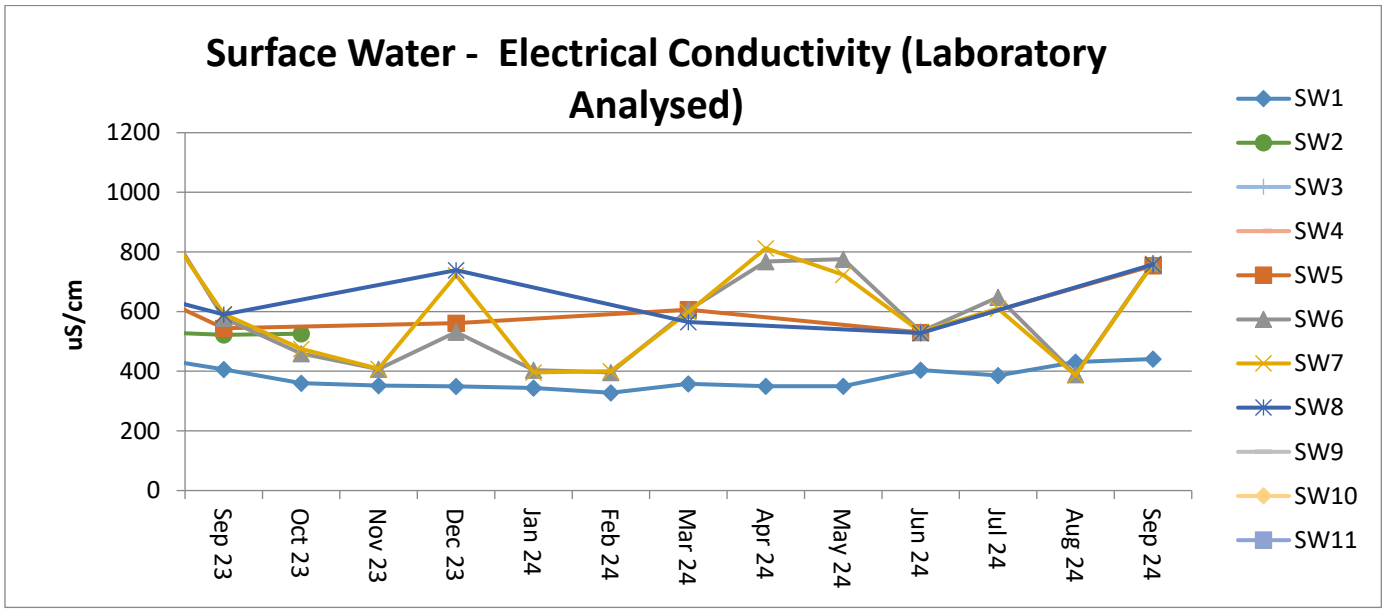
Monitoring results for pH in creeks and rivers surrounding MCCM are all trending within the ANZECC range for Irrigation, Ecosystem Health and Recreation.



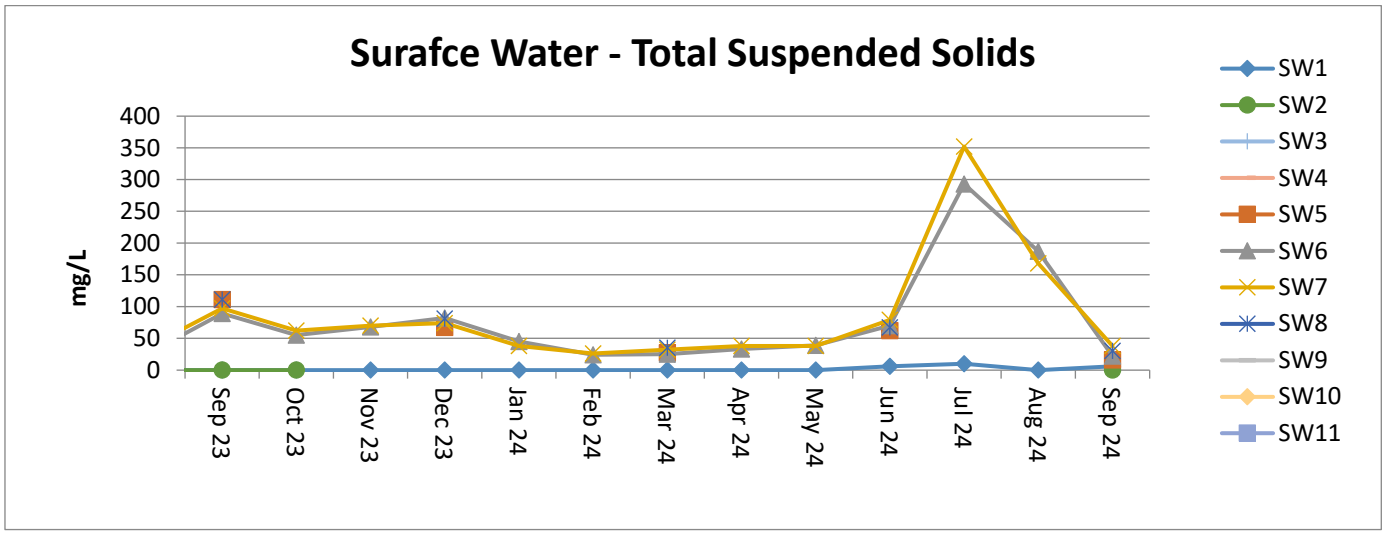
Electrical Conductivity

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.



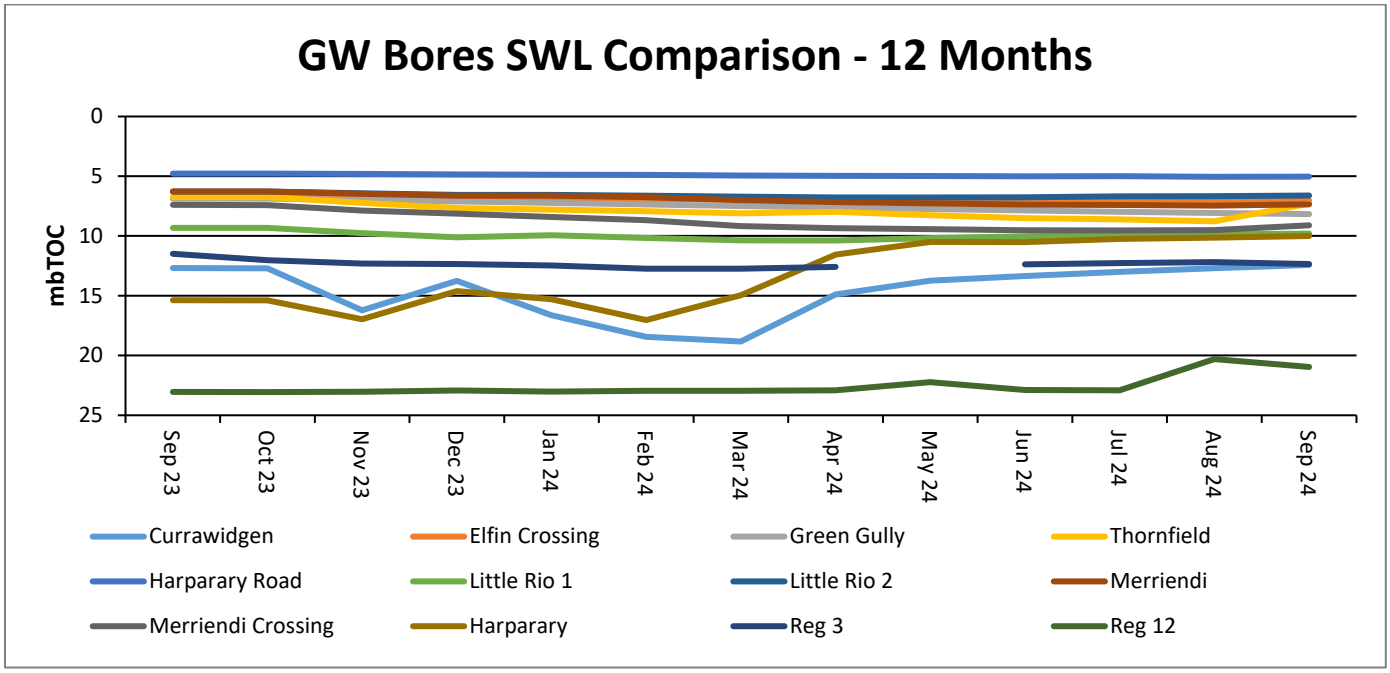
Total Suspended Solids (TSS)

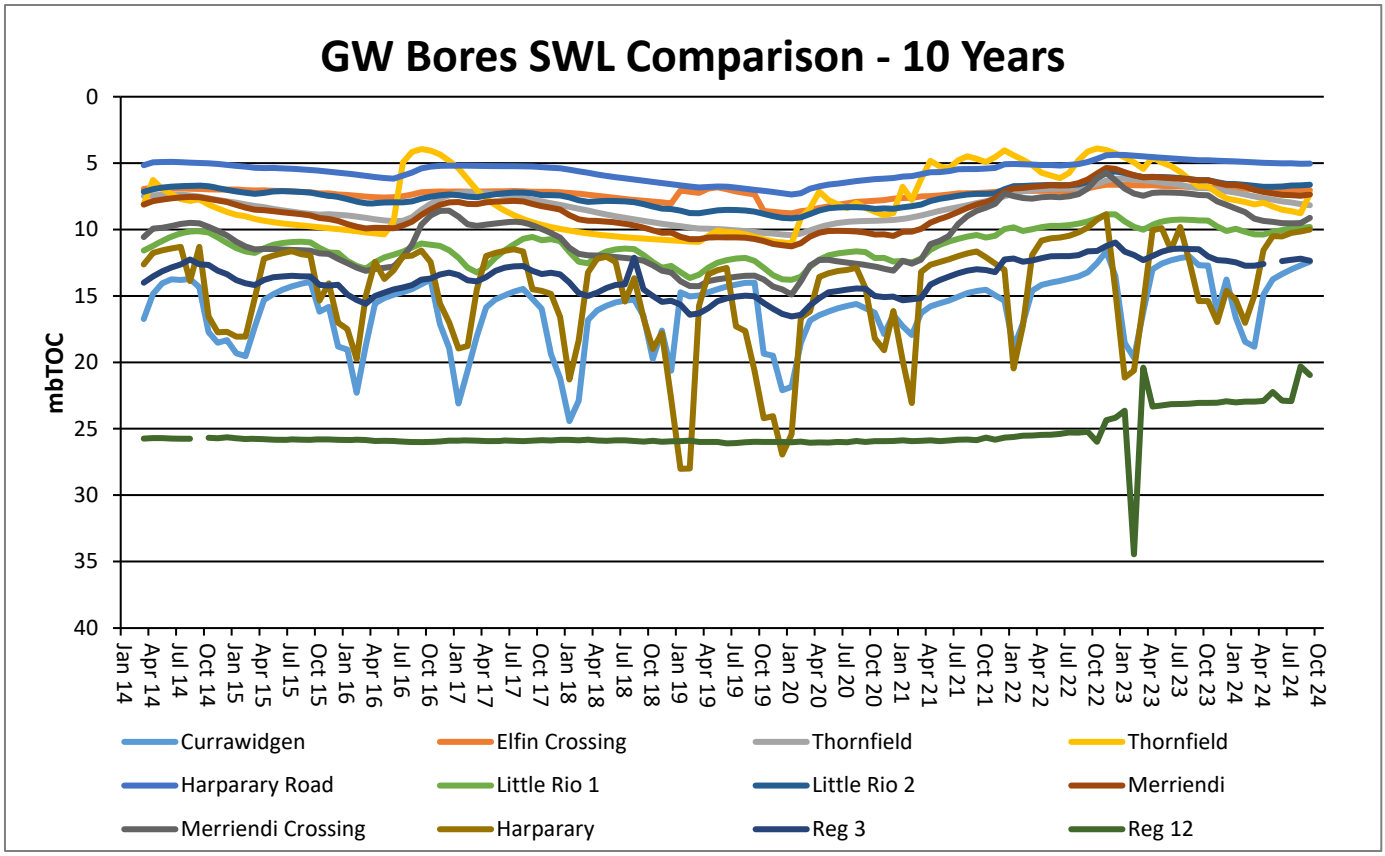
Surface water TSS trends have remained generally consistent with historical results. SW5, SW6, SW7 and SW8 are historically variable as they are located along the Namoi River which is subject to regulated and variable flow regimes.



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 (july to September 20243) results were:

- 1,911 out of total 4,081 feral pigs removed were from the Maules Biodiversity properties;
- 647 out of the total 957 feral goats removed were from the Maules Biodiversity properties;
- 85 out of total 213 Canid Pest Ejectors (1080) triggered were from the Maules Biodiversity properties;
- 11 Deer were removed from the Maules Biodiversity properties.

Weed Control

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

- 33ha of Broadleaf weeds such as General Broadleaf, Marshmallow, Saffron Thistle, Patterson's Curse, Turnip and Variegated Thistle were sprayed.
- 35ha of Woody Weeds such as Boxthorn, Prickly Pear, Red Berry Bush were sprayed.
- 163ha of tracks sprayed as part of the track maintenance.

2024 Annual Fauna Monitoring Bird Surveys

The 2024 Spring Bird Survey program so far undertaken monitoring of 155 sites with 608 surveys completed for interim species richness total of 139 and 13 threatened species detected. Interim results indicate that species richness in 2024 is on track to be higher than 2022 and 2023.

Upcoming Biodiversity Projects and Works

- Continue Pest Animal Management Program October to December 2024.
- Complete 2024 Revegetation Program and continue Tree Watering Program.
- Continue Seasonal Weed Control Programs.
- Continue Fire Break Track Maintenance Program.
- Continue and completed 2024 Spring Flora Monitoring.
- Continue other Annual Fauna Monitoring Programs.
- Commence 2024 / 2025 Bushfire preparation and Fuel Load Assessments

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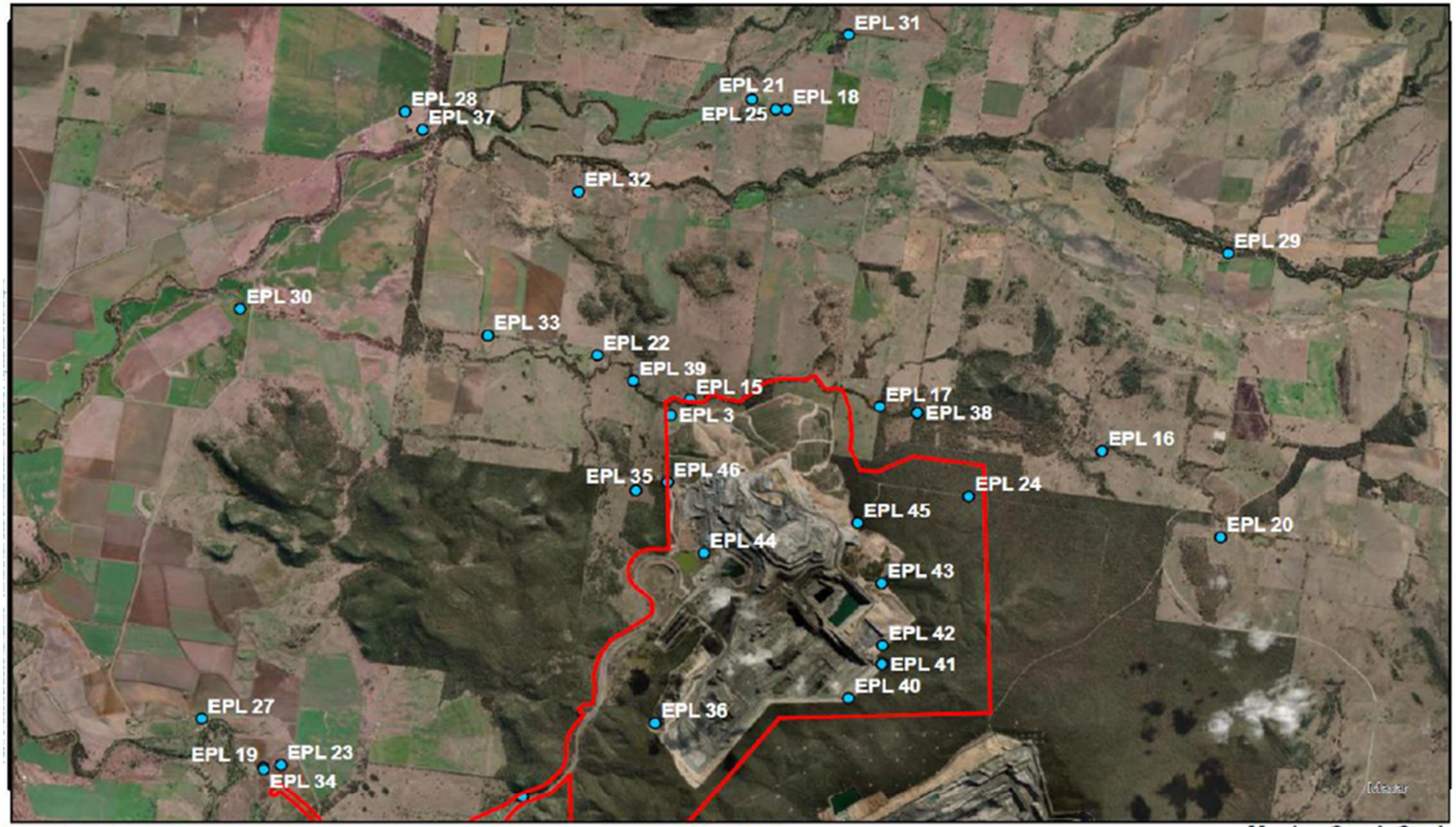
Community Complaints

There was one community complaint registered during the quarter, all community complaints are available on the company website at https://whitehavencoal.com.au/our-business/our-assets/maules-creek-mine /

Date received	Category	Nature of Complaint	MCCM Response
8/07/2024	Groundwater	Concerns from a local landholder regarding groundwater levels in their stock and domestic bore	MCC have been in contact with the landholder and have commissioned an independent review into the water levels. A letter has been provided reiterating MCC's compliance with relevant criteria.

12/07/2024	Groundwater	Complainant provided an email stating that they act as executor for the late owner of a nearby property. The complainant noted that they seek compensation because an alleged lack of water impacted the recent sale price of the property.	MCC have provide advice to the complainant.
24/07/2024	Weeds and Groundwater	Complaint received regarding weeds growing in a Whitehaven owned property and complainant also asking for a guarantee that exploration drilling in the area will not adversely impact the groundwater.	MCC have informed complainant of the extensive weed management conducted on the property. MCC has also provided advice that exploration boreholes are managed in line with the regulators code of practice.
3/08/2024	Traffic	Worker's bus was parking in complainant's front driveway of a morning resulting in members of the household being woken up.	MCC has altered the bus route, removing the need to park in this location.
30/08/2024	CCC	The DPHI received a complaint regarding inadequate consultation on the MCC BMP through the CCC process. The complaint also enquired about the lack of Aboriginal representation on the committee	MCC compiled the appropriate information and replied to the DPHI.


EPL 31
EPL 28
EPL 37
EPL 21
EPL 25
EPL 18
EPL 32
EPL 29
EPL 30
EPL 33
EPL 22
EPL 39
EPL 15
EPL 3
EPL 17
EPL 38
EPL 16
EPL 35
EPL 46
EPL 24
EPL 45
EPL 20
EPL 44
EPL 43
EPL 42
EPL 41
EPL 40
EPL 27
EPL 36
EPL 19
EPL 23
EPL 34
EPL 20221 Monitoring Locations - 16/05/2024
EPL Monitoring Locations
MCCM Project Boundary MOD 9
Scale: 1:33,944,857,333
Author: EGibson
Date Printed: 26/03/2021
Spatial Reference
Name: WGS 1984 Web Mercator Auxiliary Sphere
Maules Creek Coal
WHITEHAVEN
Disclaimer: Map for reference only and subject to survey. MCC makes no guarantee of the accuracy of this map and data within. MCC shall have no liability for any decisions made or actions taken based upon this map.

Maules Creek Coal Mine
Community Consultative Committee
Meeting #48

Environmental Monitoring Report
For the Q4 period, October - December 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; October - December 2024 .

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 –October 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	22/10/2024 22:30	0.3	20	F	No	35	45	<25	25	Nil	Nil
NM2	22/10/2024 23:30	0.4	125	F	No	39	45	28	<30	Nil	Nil
NM3	22/10/2024 23:29	0.4	125	F	No	35	45	<20	<20	Nil	Nil
NM4	22/10/2024 23:00	0.5	170	F	No	35	45	<20	<20	Nil	Nil
NM5	22/10/2024 22:00	0.2	249	F	No	35	45	<25	29	Nil	Nil
NM6	23/10/2024 00:02	0.4	170	F	No	35	45	<25	<25	Nil	Nil

Table 2 – November 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	5/11/2024 22:30	2.6	166	D	No	35	45	IA	IA	Nil	Nil
NM2	5/11/2024 23:30	2.8	188	D	No	39	45	<20	<25	Nil	Nil
NM3	5/11/2024 23:17	2.2	182	E	No	35	45	IA	IA	Nil	Nil
NM4	5/11/2024 23:00	2.3	157	E	No	35	45	IA	IA	Nil	Nil
NM5	5/11/2024 22:00	2.9	170	D	No	35	45	<20	<20	Nil	Nil
NM6	6/11/2024 00:00	2.2	162	E	No	35	45	IA	IA	Nil	Nil

Table 3 – December 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	19/12/2024 22:32	3.5	142	D	Yes	40	50	<25	<25	Nil	Nil
NM2	19/12/2024 23:30	4.6	133	D	Yes	44	50	<25	27	Nil	Nil
NM3	19/12/2024 23:19	4.4	132	D	Yes	40	50	<25	30	Nil	Nil
NM4	19/12/2024 23:00	2.9	133	D	No	35	45	<25	<25	Nil	Nil
NM5	19/12/2024 22:00	3.4	147	D	Yes	40	50	IA	IA	Nil	Nil
NM6	19/12/2024 23:59	4.2	136	D	Yes	40	50	<25	<25	Nil	Nil

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
October	SSE
November	S
December	S

Blast Monitoring

There was 31 blasts at MCCM during Q4 2024. 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	31	94.74	111.5	120	No
Vibration	mm/s		31	0.10	0.43	10	No

Air Quality

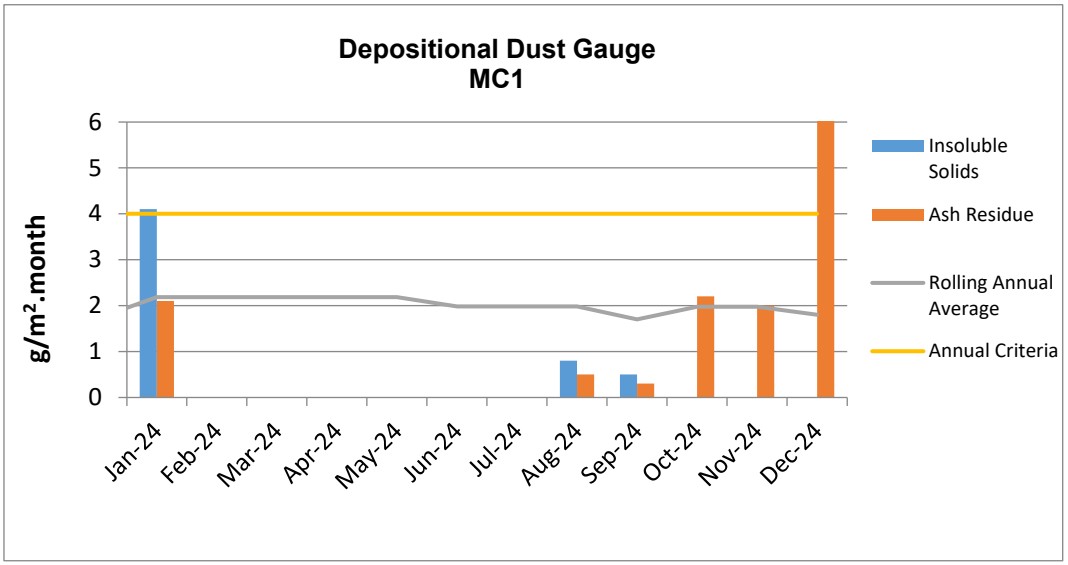
A. Total Depositional Dust

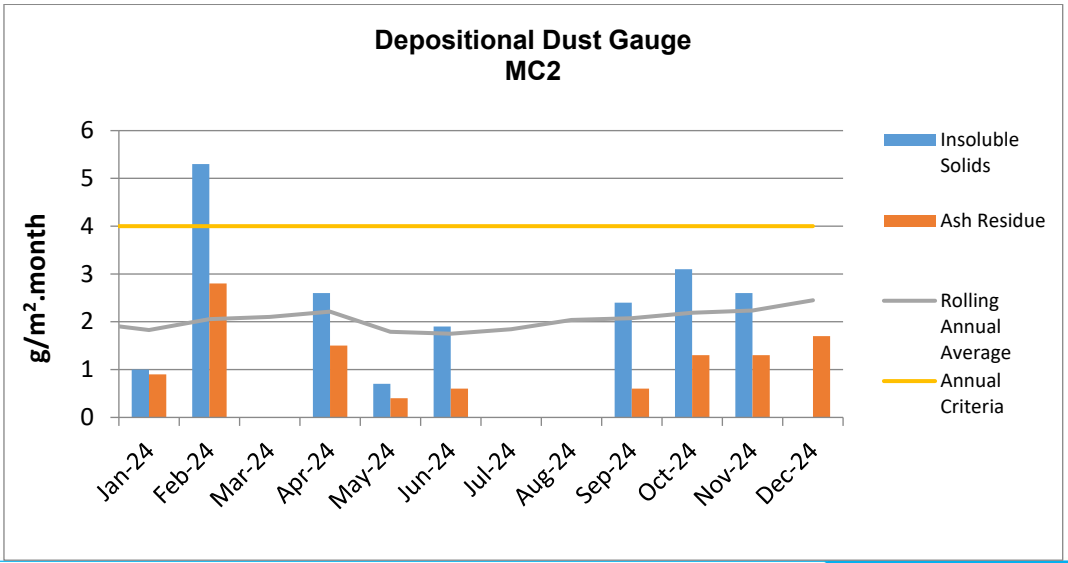
The 12 monthly rolling annual average remains below the relevant Project Approval (PA 10_0138) criteria of 4g/m^2/month for the respective monitoring points.

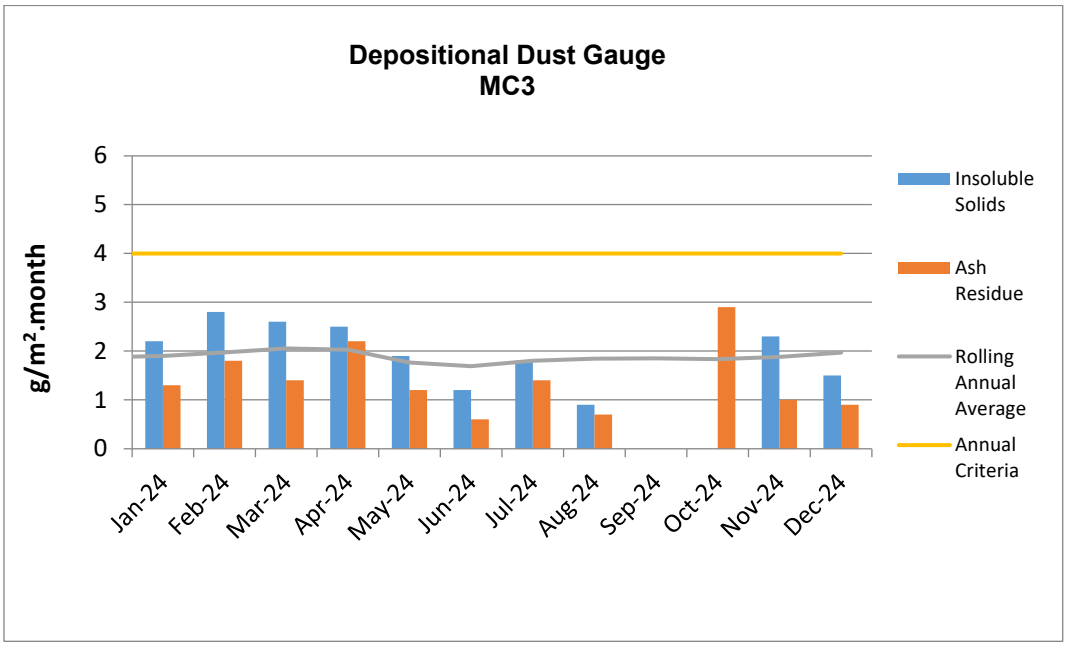
Table 6 – Deposited Dust Gauge Results [g/m^2/month]

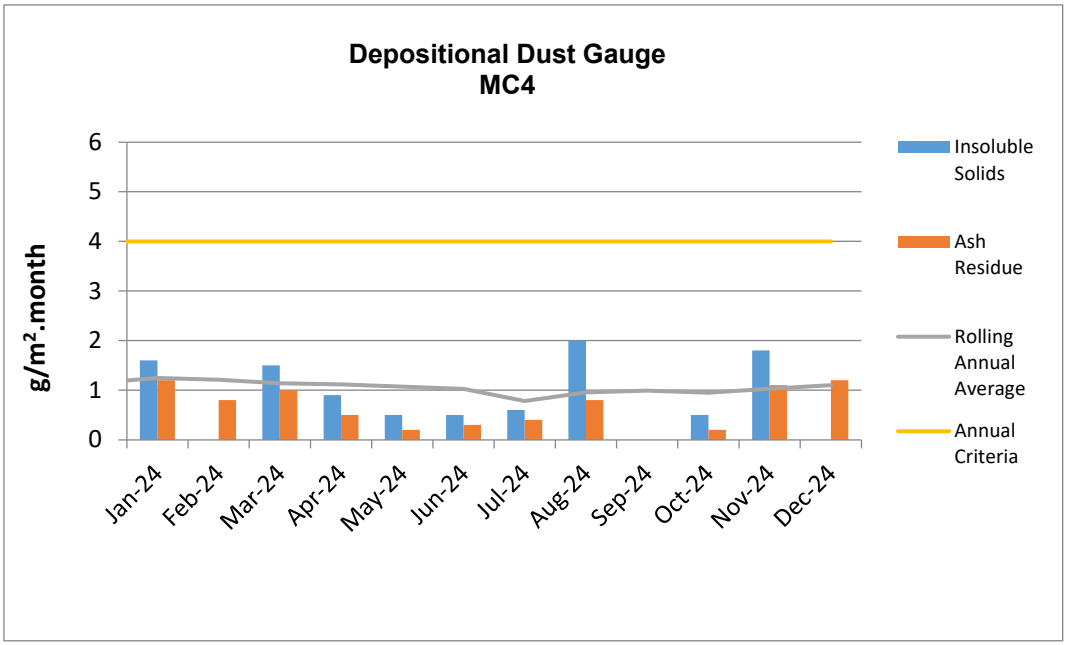
MONTH	MC1	MC2	MC3	MC4
October	15.9c	3.1	9.0c	0.5
November	11.6c	2.6	2.3	1.8
December	32.4c	8.1c	1.5	15.3c
12 MONTH ROLLING AVERAGE	**1.8**	**2.5**	**2.0**	**1.1**

[c] *samples contaminated by bird dropping, decomposed insects or vegetable matter.*







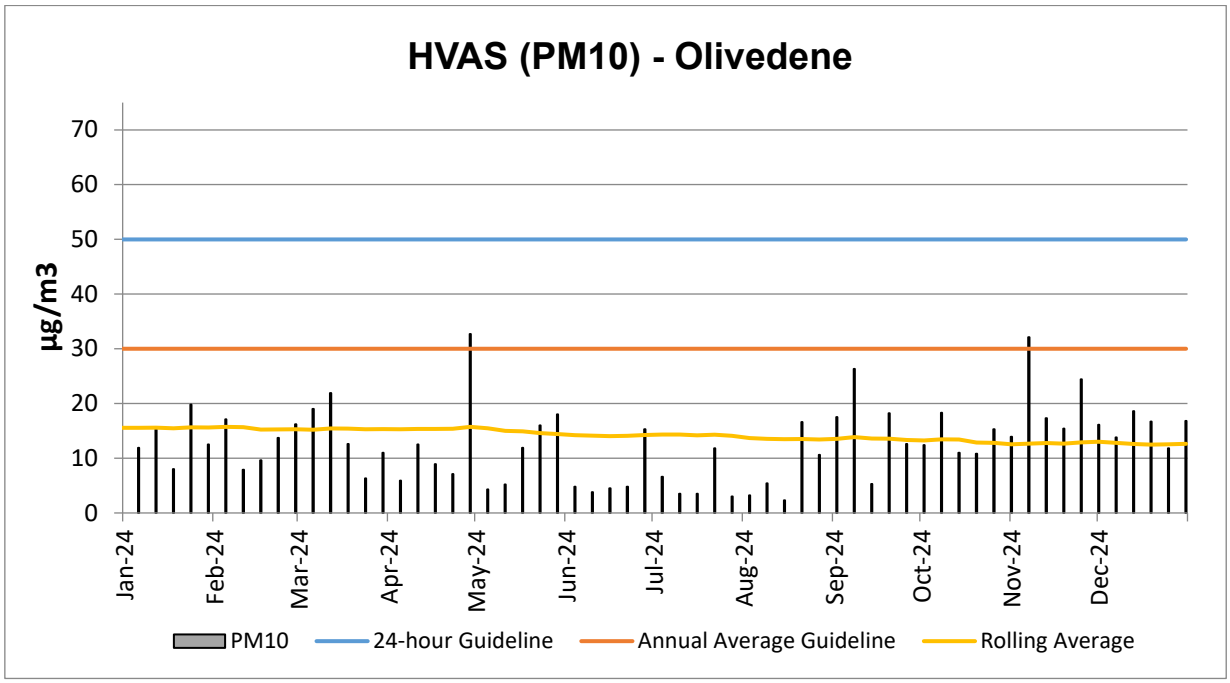


** Blank cells indicate sample periods where the sample has been contaminated and excluded from the results tables due to contaminated material (insect larvae, bird droppings, vegetation etc.).*

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/m^3.

HVAS PM_{10} Rolling Annual Average as of December was **12.6 µg/m^3**, which is below the Annual Average Guideline of 30 µg/m^3.



C. TEOM - PM10 Results

The annual rolling average for PM10 at the Maules Creek Coal for TEOM1 was **9.3 µg/m³** and at TEOM3 was **12.5 µg/m³** these are both 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 Q4.

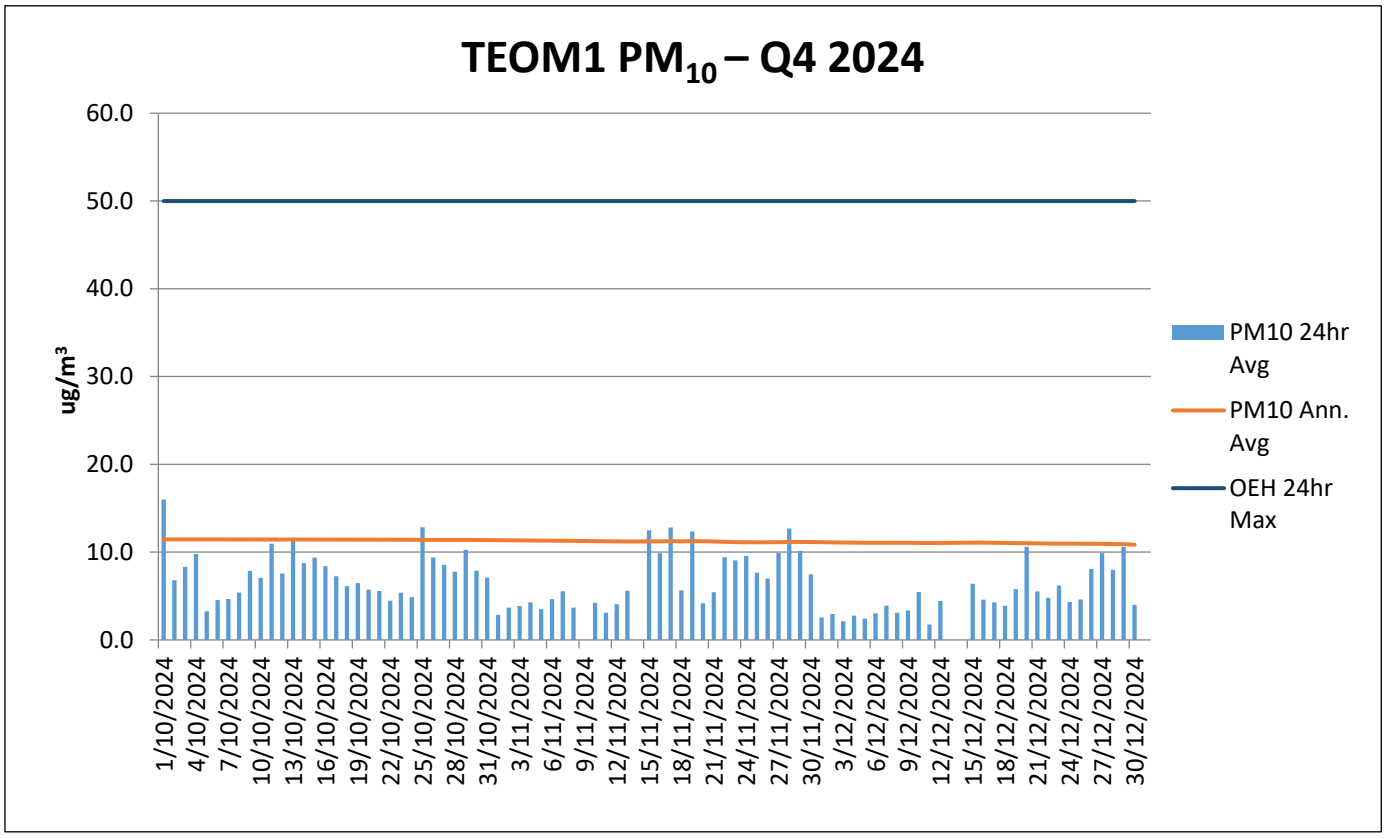


Figure 1 - TEOM Result – Particulate Matter $PM_{10 µg/m^3}$

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

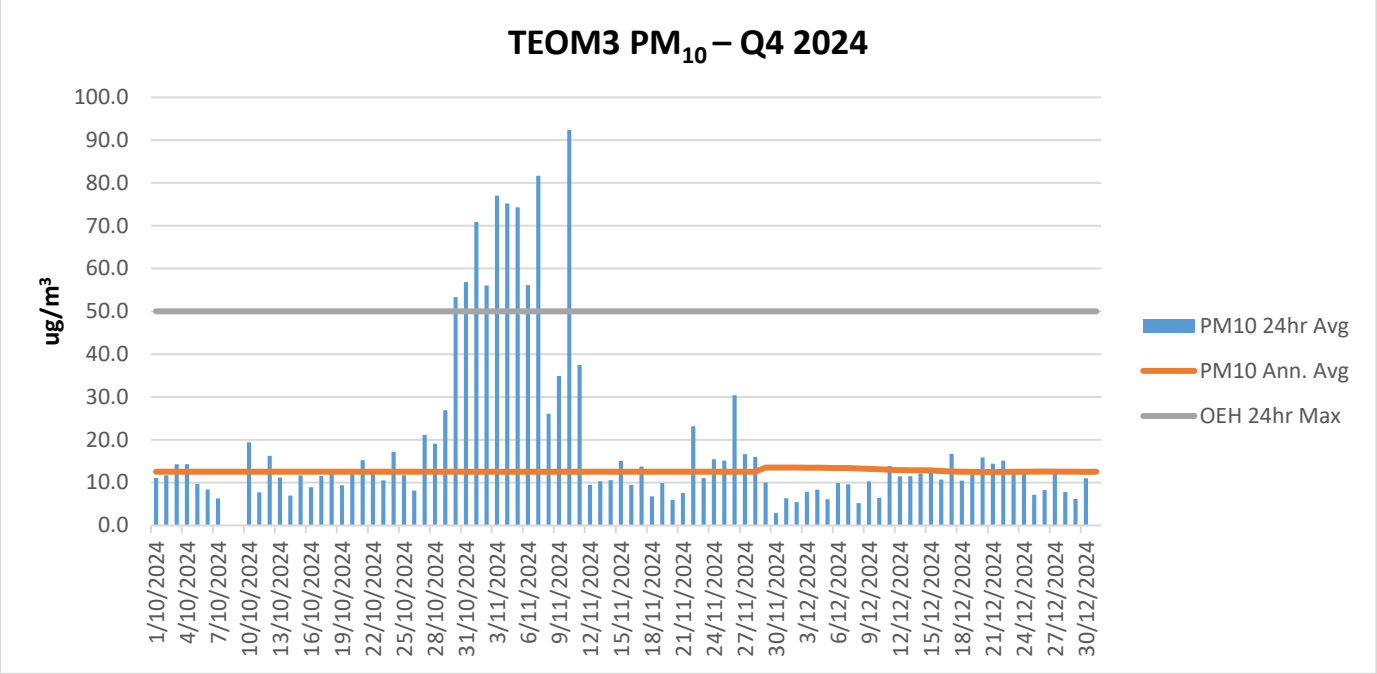


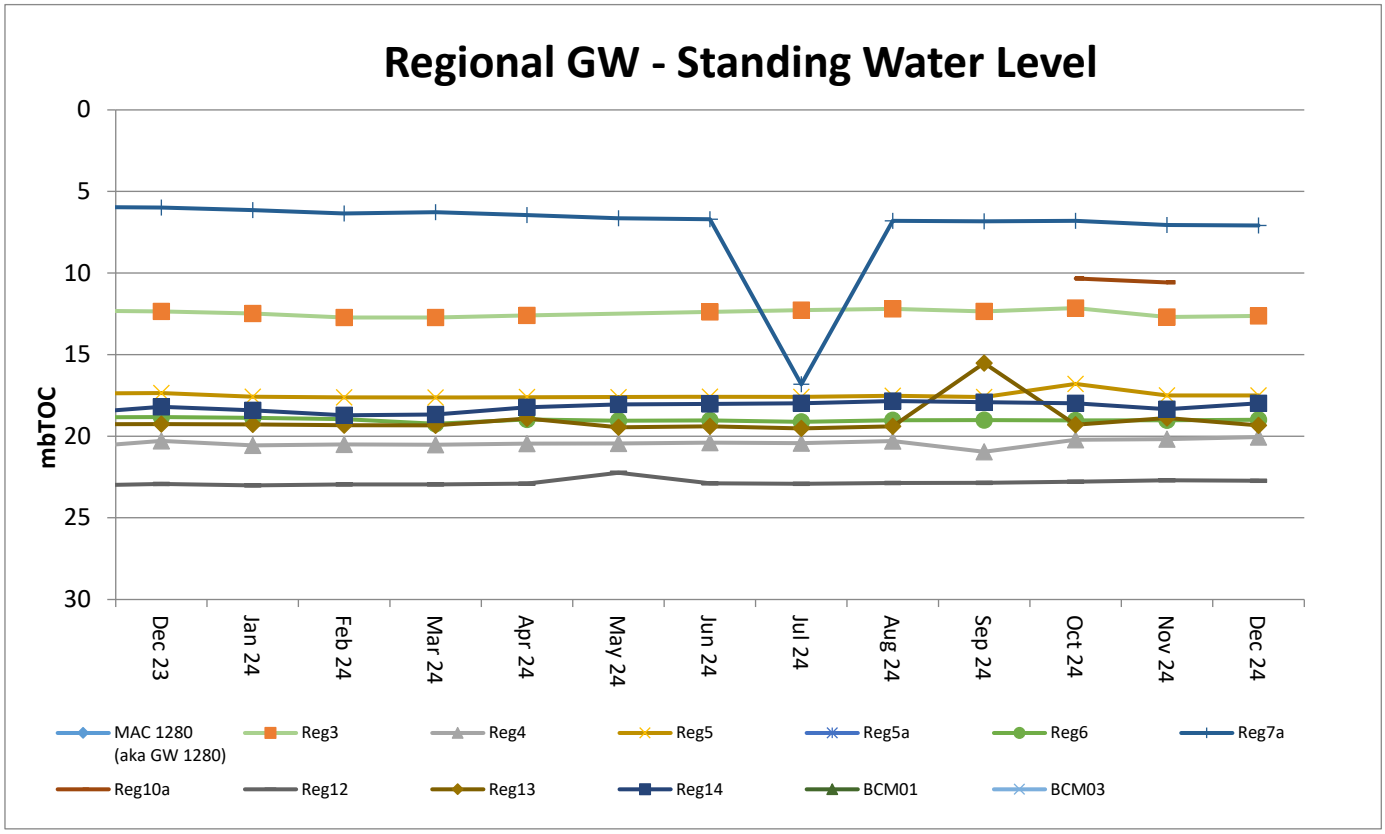
Figure 2 - TEOM Result – Particulate Matter $PM_{10\mu g/m^3}$

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

Water Monitoring

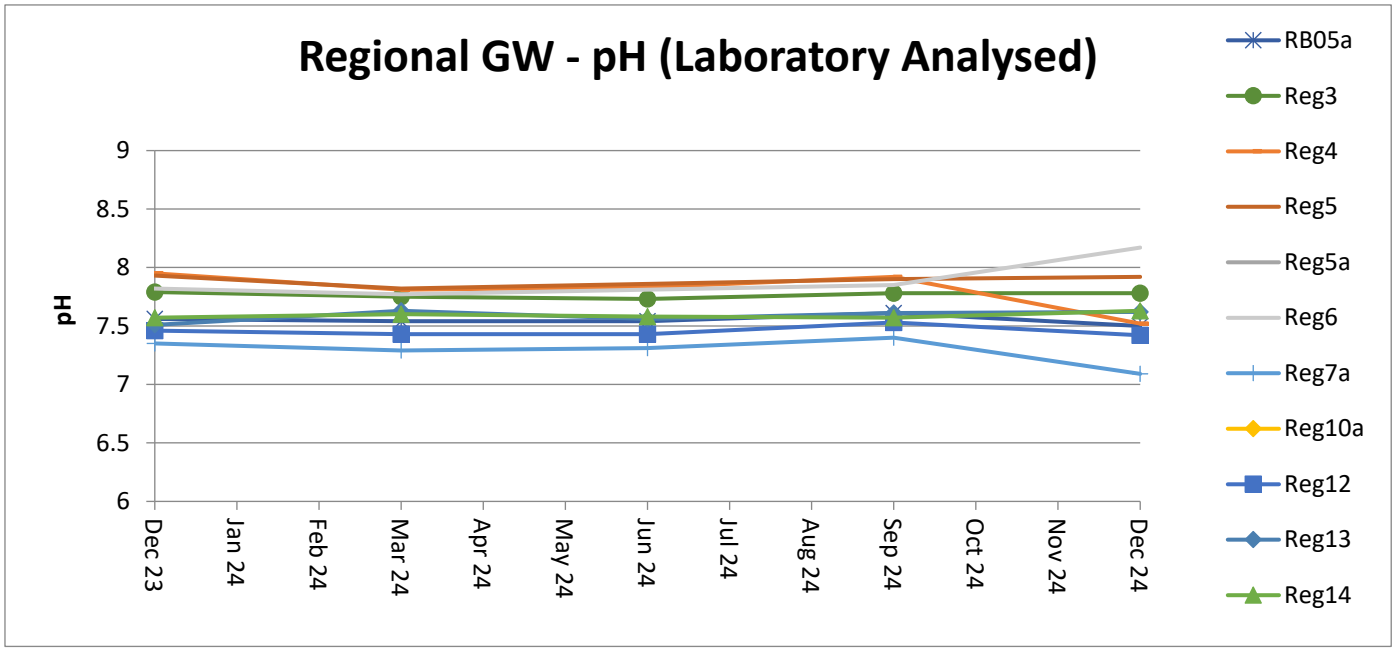
A. Groundwater

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.



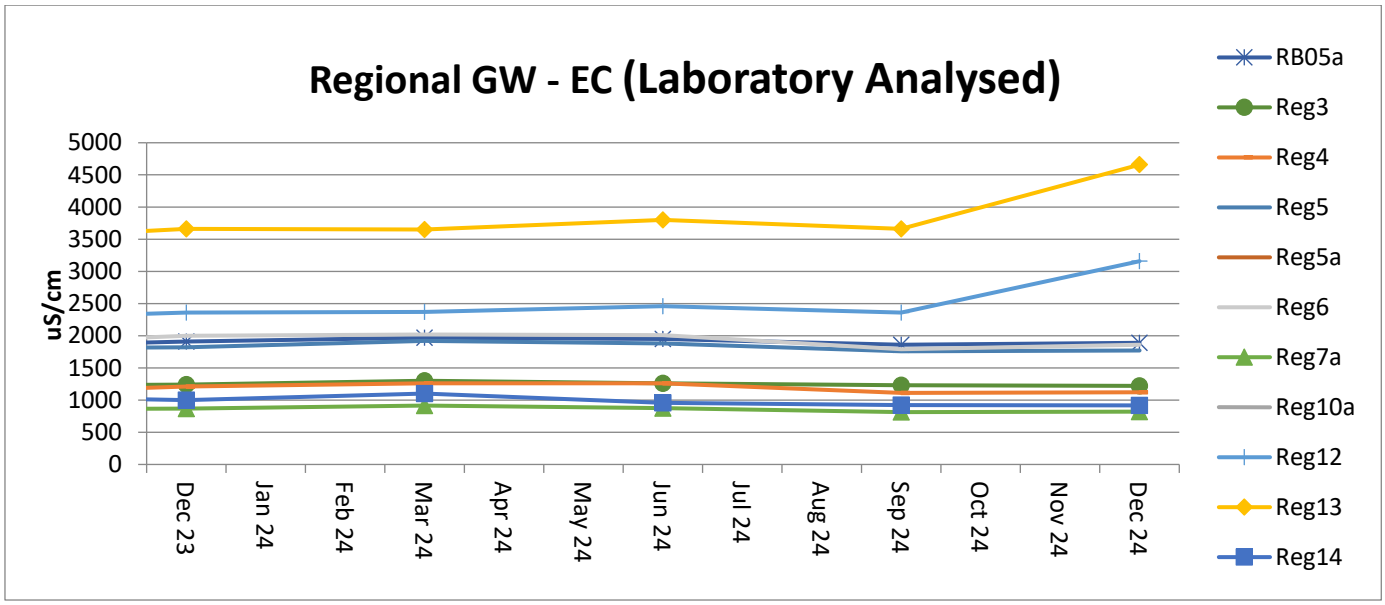
Acidity / Alkalinity (pH)

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$_{\mu s/cm}$ to 2,500$_{\mu s/cm}$, with the exception of monitoring bore Reg13 which has a historic groundwater EC range of 2,500$_{\mu s/cm}$ to 4,100$_{\mu s/cm}$. Within the last twelve months EC has remained static.

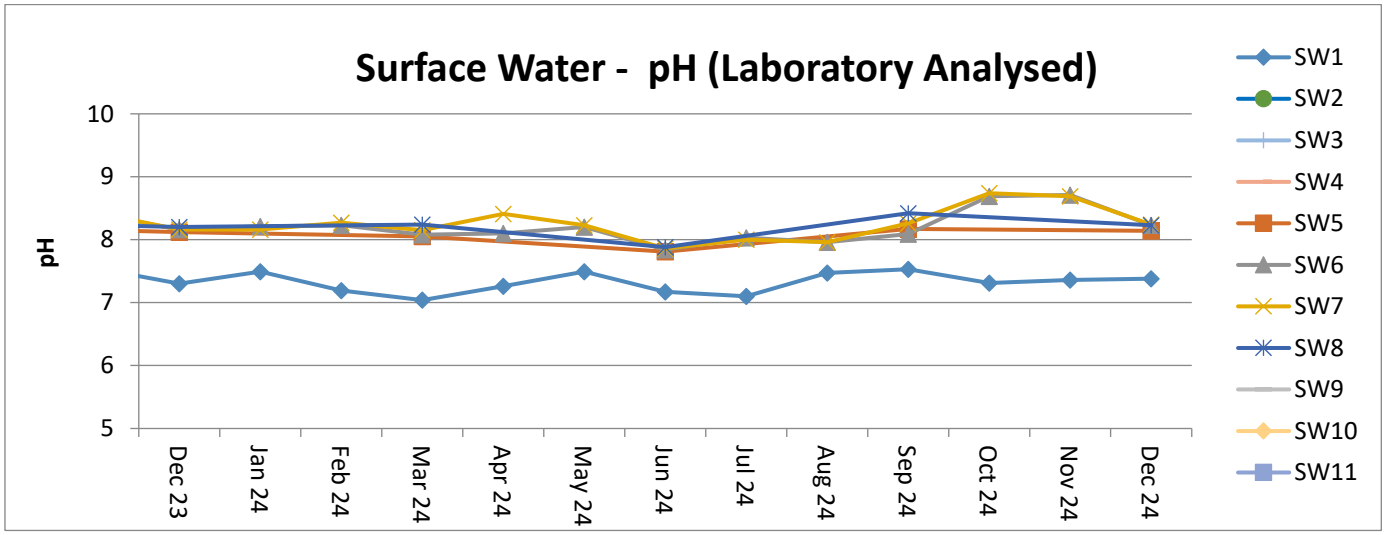


B. Surface Water – Creeks and Rivers

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.

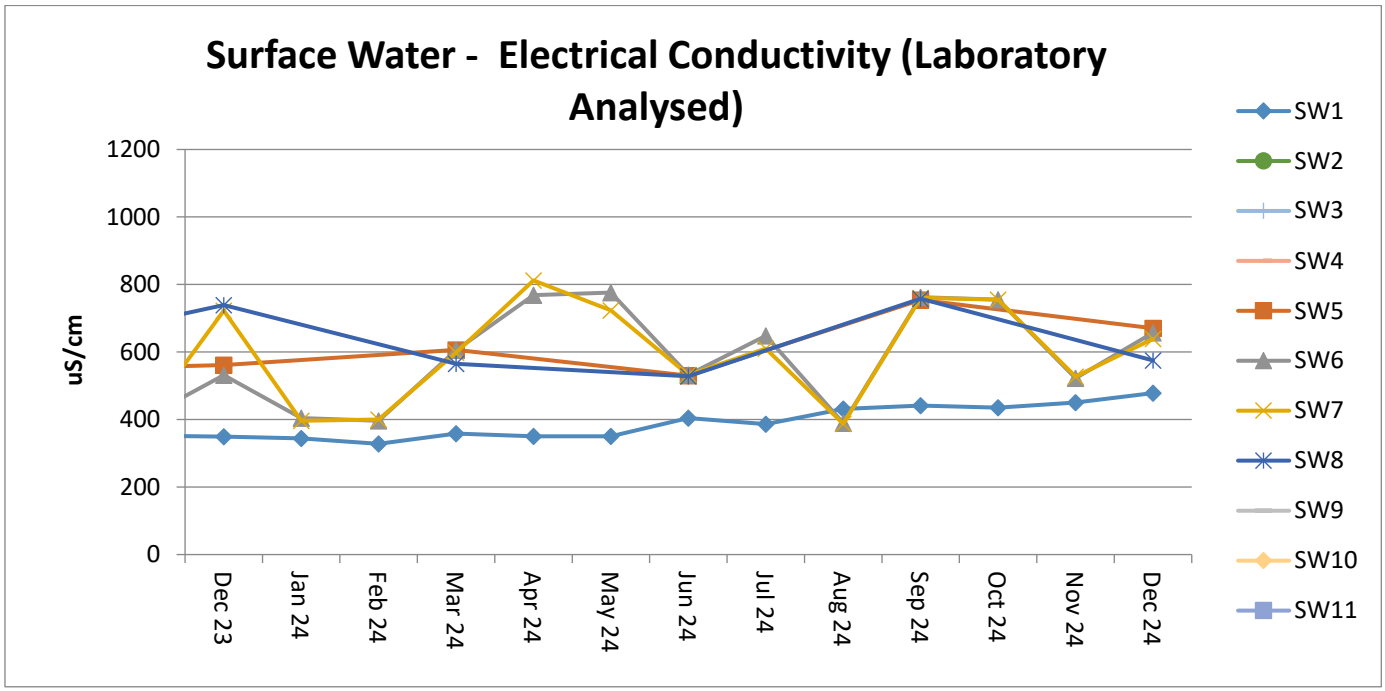
Acidity / Alkalinity (pH)

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



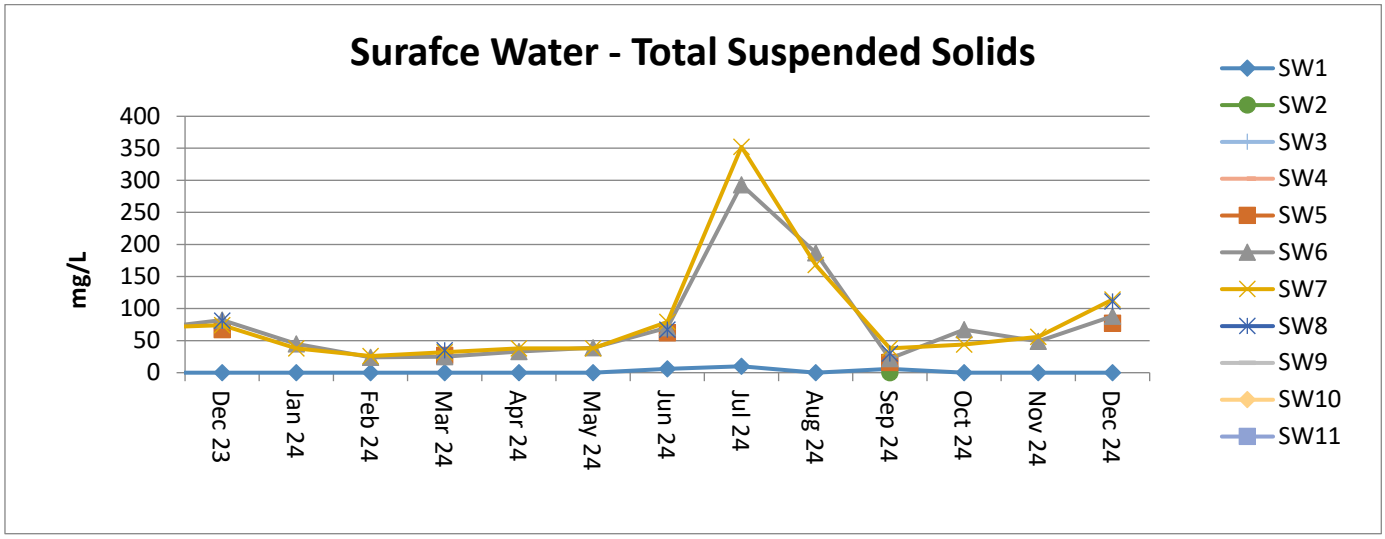
Electrical Conductivity

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.



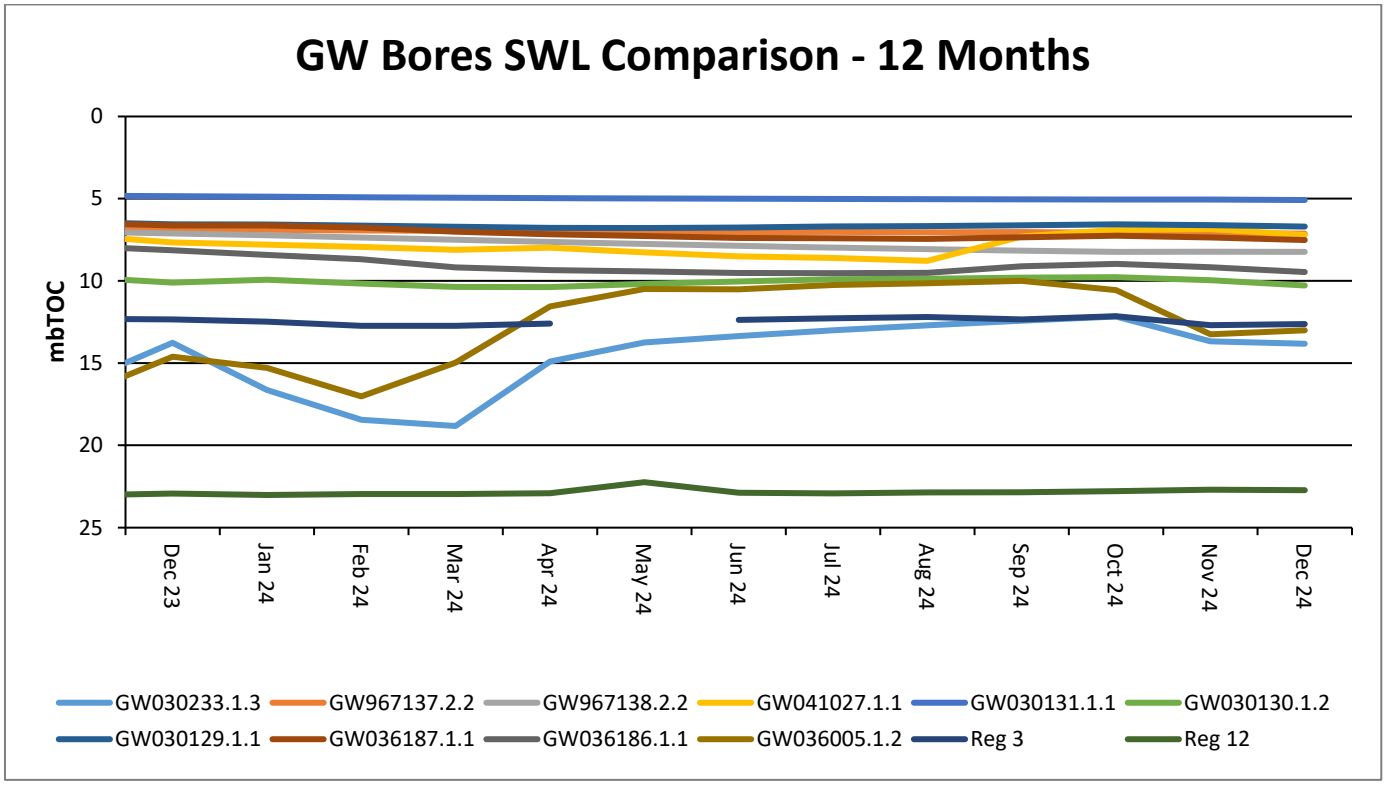
Total Suspended Solids (TSS)

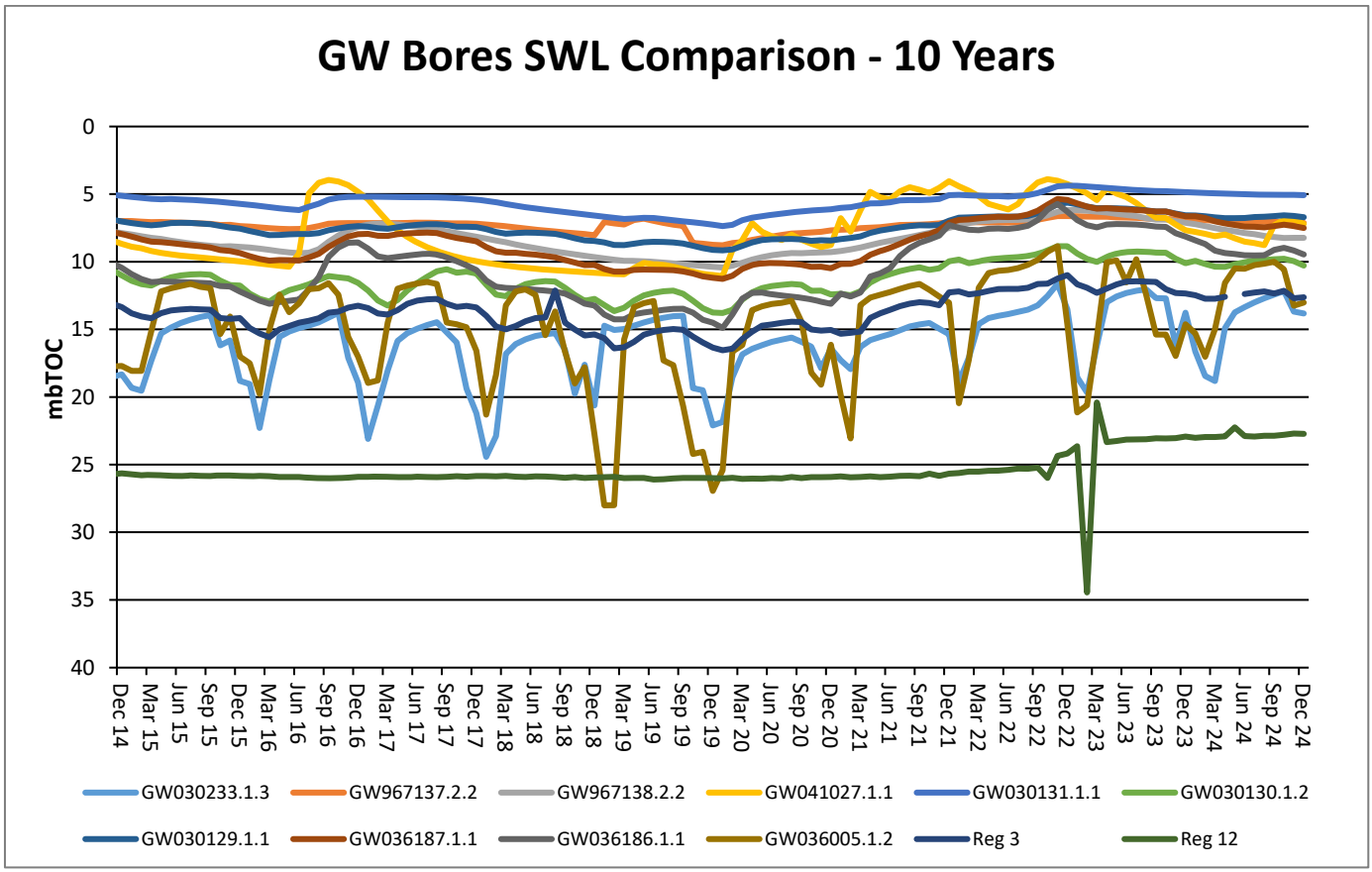
Surface water TSS trends have remained generally consistent with historical results. SW5, SW6, SW7 and SW8 are historically variable as they are located along the Namoi River which is subject to regulated and variable flow regimes.



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 (October to December 2024) results were:

- 1,887 out of total 2,535 feral pigs removed were from the Maules Biodiversity properties;
- 56 out of the total 111 feral goats removed were from the Maules Biodiversity properties;
- 88 out of total 182 Canid Pest Ejectors (1080) triggered were from the Maules Biodiversity properties.

Weed Control

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

- 86ha of Broadleaf weeds such as Pattersons Curse, Turnip, Cobblers Peg, Saffron Thistle, Cockspurr and St Johns Wort were sprayed.
- 16ha of Woody Weeds such as Sweet Briar, Blackberry, Prickly Pear and Tiger Pear were sprayed.
- 22ha of Grasses such as African Lovegrass, Rhodes grass and Coolatai grass were sprayed.
- 294ha of tracks sprayed as part of the track maintenance.

2024 Spring Flora Monitoring

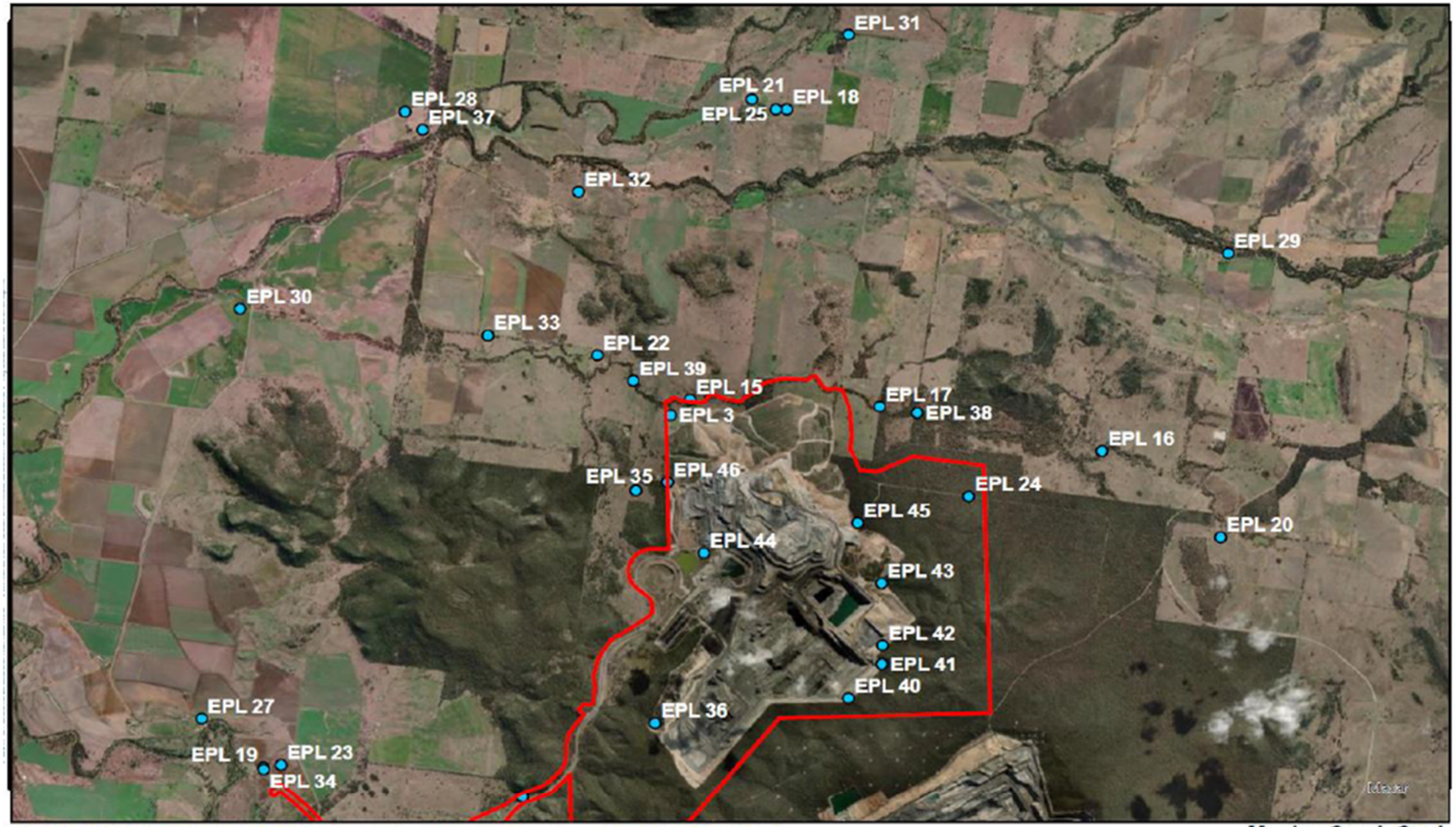
2024 Spring Flora Monitoring was completed across the Maules Biodiversity Properties between September – October 2024. A total of 420 native species were detected across 115 monitoring plots competed during the survey period.

Upcoming Biodiversity Projects and Works

- Continue Pest Animal Management Program January to March 2025.
- Commence 2025 revegetation program and continue 2024 Tree Watering Program.
- Continue Seasonal Weed Control Programs.
- Continue Fire Break Track Maintenance Program.
- Continue other Annual Fauna Monitoring Program.
- Prepare for upcoming 2025 Ecological Burn Program.

Community Complaints

No complaints were received during the quarter. All community complaints are available on the company website at https://whitehavencoal.com.au/our-business/our-assets/maules-creek-mine /.


EPL 31
EPL 21
EPL 18
EPL 25
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EPL 37
EPL 32
EPL 29
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EPL 33
EPL 22
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EPL 17
EPL 38
EPL 3
EPL 16
EPL 35
EPL 46
EPL 24
EPL 45
EPL 20
EPL 44
EPL 43
EPL 42
EPL 41
EPL 40
EPL 27
EPL 36
EPL 19
EPL 23
EPL 34
EPL 20221 Monitoring Locations - 16/05/2024
EPL Monitoring Locations
MCCM Project Boundary MOD 9
Scale: 1:33,944,857,333
Author: EGibson
Date Printed: 26/03/2021
Spatial Reference
Name: WGS 1984 Web Mercator Auxiliary Sphere
Maules Creek Coal
WHITEHAVEN
Disclaimer: Map for reference only and subject to survey. MCC makes no guarantee of the accuracy of this map and data within. MCC shall have no liability for any decisions made or actions taken based upon this map.