MAULES CREEK COAL MINE – MONTHLY MONITORING SUMMARY

Site Information

EPL No: 20221
EPA Website Link: **Hyperlink to Maules Creek Coal, Environment Protection Licence**
Licensee: Maules Creek Coal Mine Pty Ltd
Licensee Address: Maules Creek Coal Mine, Therribri Road, BOGGABRI NSW 2382
EPL Monitoring Points: See Figure 1 below
Sampling Period: October 2022
Obtained Date: 15th November 2022
Publication Date: 20th November 2022

Context: This Monthly Monitoring Summary aligns with the Environment Protection Licence (EPL) No. 20221 – Maules Creek Coal Mine issued 2nd August 2022 by the NSW Environment Protection Authority (EPA).

Monthly Monitoring Summary

Ground Water Monitoring

Table 1 – Groundwater Quality Monitoring

ID EPL (Bore)	Parameters	Units	Frequency	Samples	Date	Laboratory Results Received	Min	Mean	Max / Only Value
15 (BCM01)	pH	pH	Quarterly	Next sample in December 2022					
	Conductivity	µs/cm							
	TDS	mg/L							
16 (BCM03)	pH	pH	Quarterly						
	Conductivity	µs/cm							
	TDS	mg/L							
17 (REG10A)	pH	pH	Quarterly						
	Conductivity	µs/cm							
	TDS	mg/L							
24 (RB05A)	pH	pH	Quarterly						
	Conductivity	µs/cm							
	TDS	mg/L							

Surface Water Monitoring

Table 2 – Surface Water Monitoring – Mine Void

ID EPL (Site)	Parameter	Units	Frequency	Samples	Date	Laboratory Results Received	Min	Mean	Max / Only Value
12 (Mine Void)	TSS	mg/L	Every 2 months	1	13/10/2022	15/11/2022	NA	NA	9
	Conductivity	µs/cm							1080
	Oil & Grease	mg/L							<5
	pH	pH							8.59

Table 3 – Wet Weather Discharge - Surface Water Monitoring

ID EPL (Site)	Parameter	Units	Frequency	Samples	Date	Laboratory Results Received	Min Value	Mean Value	Median Value	Max / Only Value
3 (SD3)	Conductivity	µs/cm	Special Frequency 1 - within 12 hours of discharge from EPL 3 or 36.	No discharge at these locations this month						
	Nitrate	mg/L								
	Nitrogen (total)	mg/L								
	Oil & Grease	mg/L								
	pH	pH								
	Phosphorous	mg/L								
	Reactive Phosphorous	mg/L								
	TSS	mg/L								
36 (SD12)	Conductivity	µs/cm	Special Frequency 1 - within 12 hours of discharge from EPL 3 or 36							
	Nitrate	mg/L								
	Nitrogen (total)	mg/L								
	Oil & Grease	mg/L								
	pH	pH								
	Phosphorous	mg/L								
	Reactive Phosphorous	mg/L								
	TSS	mg/L								
	Conductivity	µs/cm								

WHITEHAVEN COAL

Table 4 – Clean Water Discharge - Surface Water Monitoring

ID EPL (Site)	Parameter	Units	Frequency	Samples	Date	Laboratory Results Received	Min Value	Mean Value	Median Value	Max / Only Value
38 (Flow Meter Upstream)	Conductivity	µs/cm	Special Frequency 3 - within 12 hours of discharge from any discharge location.	1	10/10/2022	YES	NA			174
	Nitrate	mg/L								<0.01
	Nitrogen (total)	mg/L								1.3
	Oil & Grease	mg/L								<5
	pH	pH								7.55
	Phosphorous	mg/L								0.12
	Reactive Phosphorous	mg/L								0.03
	TSS	mg/L								14
	Conductivity	µs/cm		1	18/10/2022	YES	NA			211
	Nitrate	mg/L								0.01
	Nitrogen (total)	mg/L								0.7
	Oil & Grease	mg/L								<5
	pH	pH								7.63
	Phosphorous	mg/L								0.06
	Reactive Phosphorous	mg/L								0.01
	TSS	mg/L								5
	Conductivity	µs/cm		1	21/10/2022	YES	NA			158
	Nitrate	mg/L								0.08
	Nitrogen (total)	mg/L								2.3
	Oil & Grease	mg/L								<5
	pH	pH								7.63
	Phosphorous	mg/L								0.66
	Reactive Phosphorous	mg/L								0.33
	TSS	mg/L								181
39 (Flow Meter downstream)	Conductivity	µs/cm	Special Frequency 3 - within 12	1	10/10/2022	YES	NA			181
	Nitrate	mg/L								0.04
	Nitrogen (total)	mg/L								1.3

	Oil & Grease	mg/L	hours of discharge from any discharge location.					<5
	pH	pH						7.36
	Phosphorous	mg/L						0.15
	Reactive Phosphorous	mg/L						0.03
	TSS	mg/L						10
	Conductivity	µs/cm		1	18/10/2022	YES	NA	251
	Nitrate	mg/L						20
	Nitrogen (total)	mg/L						0.60
	Oil & Grease	mg/L						<5
	pH	pH						7.84
	Phosphorous	mg/L						0.09
	Reactive Phosphorous	mg/L						0.03
	TSS	mg/L						5
	Conductivity	µs/cm		1	21/10/2022	YES	NA	110
	Nitrate	mg/L						0.08
	Nitrogen (total)	mg/L						1.7
	Oil & Grease	mg/L						<5
	pH	pH						7.47
	Phosphorous	mg/L						0.30
	Reactive Phosphorous	mg/L						0.10
	TSS	mg/L						88
40 (HWD8)	TSS	mg/L	Special Frequency 2 – prior to discharging from EPL 45 and/or 46 or within 12hours of discharge caused by 38.4mm in a 5 Day	No discharge occurred from this monitoring location during September 2022				
	Conductivity	µs/cm						
	Oil & Grease	mg/L						
	pH	pH						

			consecutive period					
41 (HWD9)	TSS	mg/L	Special Frequency 2 – prior to discharging from EPL 45 and/or 46 or within 12hours of discharge caused by 38.4mm in a 5 Day consecutive period	No discharge occurred from this monitoring location during September 2022				
	Conductivity	µs/cm						
	Oil & Grease	mg/L						
	pH	pH						
42 (HWD10)	TSS	mg/L	Special Frequency 2 – prior to discharging from EPL 45 and/or 46 or within 12hours of discharge caused by 38.4mm in a 5 Day consecutive period	1	10/10/2022	YES	NA	66
	Conductivity	µs/cm						124
	Oil & Grease	mg/L						<5
	pH	pH						6.82
	TSS	mg/L		1	21/10/2022	YES	NA	130
	Conductivity	µs/cm						120
	Oil & Grease	mg/L						<5
	pH	pH						7.22
43 (HWD11)	TSS	mg/L	Special Frequency 2 – prior to discharging from EPL 45 and/or 46 or	1	10/10/2022	Yes	NA	34
	Conductivity	µs/cm						166
	Oil & Grease	mg/L						<5

	pH	pH	within 12hours of discharge caused by 38.4mm in a 5 Day consecutive period					6.85
	TSS	mg/L		1	18/10/2022	YES	NA	14
	Conductivity	µs/cm						169
	Oil & Grease	mg/L						<5
	pH	pH						6.72
	TSS	mg/L		1	21/10/2022	YES	NA	64
	Conductivity	µs/cm						141
	Oil & Grease	mg/L						<5
	pH	pH						7.26
44 (WCWD)	TSS	mg/L	Special Frequency 2 – prior to discharging from EPL 45 and/or 46 or within 12hours of discharge caused by 38.4mm in a 5 Day consecutive period	1	10/10/2022	YES	NA	32
	Conductivity	µs/cm						637
	Oil & Grease	mg/L						<5
	pH	pH						7.83
	TSS	mg/L		1	21/10/2022	YES	NA	88
	Conductivity	µs/cm						963
	Oil & Grease	mg/L						<5
	pH	pH						7.70
45	Oil & Grease	mg/L		1	10/10/2022		NA	<5

(ECWDP)	pH	pH	not more than 12 hours after discharge commences					6.86
	TSS	mg/L						21
	Oil & Grease	mg/L		1	18/10/2022		NA	<5
	pH	pH						7.12
	TSS	mg/L						5
	Oil & Grease	mg/L		1	21/10/2022		NA	<5
	pH	pH						6.55
	TSS	mg/L						112
46 (WCWDP)	Oil & Grease	mg/L	not more than 12 hours after discharge commences	1	10/10/2022	YES	NA	<5
	pH	pH						7.77
	TSS	mg/L						26
	Oil & Grease	mg/L		1	21/10/2022	YES	NA	<5
	pH	mg/L						7.91
	TSS	pH						183

Noise Monitoring

Table 6 – Noise Monitoring (Attended – Measured)

MCC ID	Date	Start Time	Wind Speed (m/s)	MCCP $L_{Aeq\ 15min}$ dB	Limit $L_{Aeq\ 15min}$ (dB) Operations Criteria	MCCP $L_{Aeq\ 1min}$ dB	Limit $L_{A1\ (1\ min)}$ (dB) Operations Criteria	Weather Rain (mm)	Exceedance (Yes / No)
NM1	4/10/2022	23:00	0.9	29	35	34	45	0.0	No
NM2	4/10/2022	23:45	0.3	32	39	35	45	0.0	No
NM3	5/10/2022	00:04	0.3	IA	35	IA	45	0.0	No
NM4	5/10/2022	00:15	0.4	25	35	26	45	0.0	No
NM5	4/10/2022	22:18	0.5	<20	35	<20	45	0.0	No
NM6	5/10/2022	00:46	0.5	<25	35	27	45	0.0	No

MCC ID = Locations as per the EPL No.20221.
ND = No data due to high prevailing winds during the attended noise monitoring event.
Italicised text indicates wind speed exceeds the 3.0m/s maximum for noise monitoring.
NM = Not Measurable. If site noise is noted as NM, <20 dB or <30 dB, this means some noise was audible but could not be quantified.
IA = Site noise was inaudible at the monitoring location.
N/A in exceedance column means criterion was not applicable due to atmospheric conditions outside those specified in the project approval.

Table 7 - Noise Monitoring (Attended - Low Frequency Assessment)

None of the measurements satisfied the conditions for further assessment when assessed for the applicability of low frequency modification factors in accordance with the EPA's Noise Policy for Industry. Therefore, no further assessment of low frequency noise was required to be undertaken.

Blast Monitoring

Table 8 – Blast Monitoring (Blasts – Limits Apply)

Location	Parameter	Units	Frequency	Number	Average	Max	100% Limit	Exceedance (Yes / No)
Operations Blasts	Overpressure	Db (Lin Peak)	All	8	93.3	106.6	120	No
	Vibration	mm/s		8	0.17	0.81	10	No

Note: As of March 2018, in accordance with the requirements of the approved variation of EPL 20221; M7.1 blast monitoring results are for four blast monitoring points 31 (BM1), 32 (BM2), 33 (BM3) and 34 (BM4).

Air Quality Monitoring

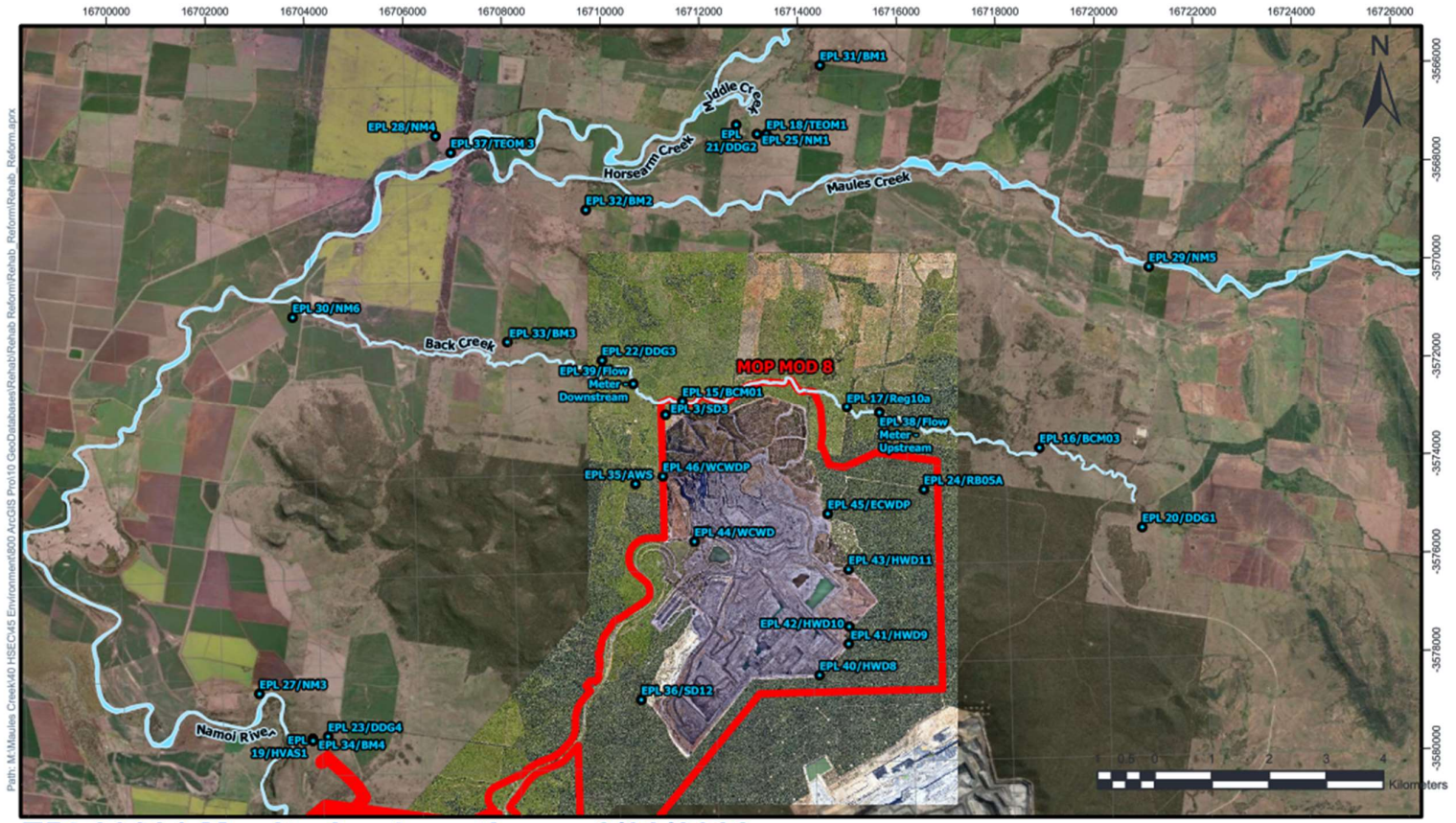
Table 9 – PM_{10} (Limits Apply)

ID EPL (Site)	Sample period	Unit	Parameter	Rolling Annual Average	NEPM Annual Criteria	Exceedance (Yes / No)
18 (TEOM1)	Continuous	µg/m³ month	PM_{10}	5.1	30	No
37 (TEOM3)	Continuous	µg/m³ month	PM_{10}	14.2	30	No
19 (HVAS)	5 days	µg/m³	PM_{10}	7.9	30	No

Table 10 – Depositional Dust (Limits Apply)

ID EPL (Site)	Sample period	Particulates Deposited Matter	Rolling Annual Average Insoluble Solids	Criteria	Exceedance (Yes / No)
20 (DDG1/MC1)	Monthly	g/m² month	0.8	4	No
21 (DDG2/MC2)	Monthly	g/m² month	0.9	4	No
22 (DDG3/MC3)	Monthly	g/m² month	2.1	4	No
23 (DDG4/MC4)	Monthly	g/m² month	1.1	4	No

Figure 1 – EPL 20221 Monitoring Locations



EPL20221 Monitoring Locations - 2/08/2022

Maules Creek Coal

Legend

- EPL Monitoring locations

05 Project Boundary_Boundaries

- MCCM Project Boundary (Mod 8)

Scale: 1:88,442

Author: shenanewman

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Spatial Reference
Name: GDA2020 MGA Zone 56