

**WAMBO COAL  
ENVIRONMENTAL REPORTING  
1 AUGUST – 31 AUGUST 2018**

10 September 2018

**Environment Protection Licence Number: 529  
Licensee: Wambo Coal Pty Limited, PMB 1, Singleton NSW 2330  
Premises: Wambo Coal Pty Limited, Jerrys Plains Road, Warkworth NSW 2330**

Monitoring Frequency: Once per month  
 Sampling Method: Grab sample  
 Limits: Nil

Date sampled: 1, 2 and 13 August 2018  
 Date obtained: 2 August and 7 September 2018  
 Date published: 10 September 2018

Table 1 - WCPL Groundwater Results

Site	Date	pH	EC ( $\mu\text{S}/\text{cm}$ )	Depth	Comments
P106	1 August				Dry
P109	1 August	6.6	742	6.34	
P114	1 August				Dry
P116	1 August	7.0	2520	6.99	
P118	1 August				Dry
P202	1 August	7.8	4060	9.25	
P206	1 August	7.9	2010	20.79	
P301	1 August	6.9	6080	16.82	
P315	1 August				Dry
GW02	2 August	7.0	513	8.97	
GW08	1 August	8.1	2230	7.37	
GW09	1 August				Dry
GW11	2 August	7.2	619	7.03	
GW12	1 August				Dry
GW13	1 August	7.0	4030	6.56	
GW15	1 August	7.0	621	11.53	
GW16	2 August	7.6	1196	11.37	
GW17	2 August	7.2	5320	12.31	
GW21	2 August				Dry
GW22	1 August	8.4	6660	35.64	
GW23	2 August				Insufficient Water
GW24	2 August	6.2	1698	8.83	
GW25	2 August				Dry
GW26	2 August	7.2	1065	7.91	
P1	13 August	6.73	3640	27.19	
P3	13 August				Removed
P11	13 August				Mud
P16	13 August	7.29	8430	9.17	
P20	13 August	7.35	6700	8.67	

Monitoring Frequency: Once per month  
 Sampling Method: Grab sample  
 Limits: Nil

Date sampled: 21 and 31 August 2018  
 Date obtained: 27 August and 6 September 2018  
 Date published: 10 September 2018

Table 2 - WCPL Surface and Mine Water Dam Results

Site	Date	pH	EC ( $\mu\text{S}/\text{cm}$ )	TSS (mg/L)	Comments
SW01	21 August				Pool
SW02	21 August				Pool
SW03	21 August				Pool
SW04	21 August				Dry
SW05	21 August				Dry
SW06	21 August				Dry
SW07	21 August				Dry
SW08	21 August				Dry
SW14	21 August	8.63	533	15	
SW15	31 August	9.17	8830	122	
SW27	21 August				Pool
SW31	21 August	9.14	8480	20	
SW32a	21 August				Dry
SW38	21 August	9.06	8900	74	
SW39	21 August				Dry
SW40	21 August				Pool
SW41	21 August				Dry
SW52	21 August	9.31	3170	45	

**Monitoring Frequency: Once per month**  
**Sampling Method: AM19**  
**Limits: 4g / m<sup>2</sup> / month EPA Guideline**

**Date sampled: 15 August 2018**  
**Date obtained: 21 August 2018**  
**Date published: 10 September 2018**

**Table 3 - WCPL Depositional Dust Gauges**

Site	Date	Ash (g/m <sup>2</sup> )	Total Insoluble Matter (g/m <sup>2</sup> )	AR/IS Ratio	Comment
D11	15 August	1.60	2.20	72	
D19	15 August	1.80	2.70	66	
D21	15 August	0.60	0.90	66	
D22	15 August	1.80	2.40	75	

Monitoring Frequency: Continuous

Sampling Method: AM22

Limits: Nil

Date sampled: Dust readings recorded daily

Date obtained: The next day for the preceding day's result

Date published: 10 September 2018

Table 4 - WCPL PM10 Results

Date of Run	PM01 - Coralie (Sentinex 19)		PM02 - Wambo Road (Caban) (Sentinex 20)		PM03 - Thelander (Sentinex 21)		PM04 - Muller (Sentinex 22)	
	PM10 24 Hour Result (ug/m <sup>3</sup> )	YTD Average	PM10 24 Hour Result (ug/m <sup>3</sup> )	YTD Average	PM10 24 Hour Result (ug/m <sup>3</sup> )	YTD Average	PM10 24 Hour Result (ug/m <sup>3</sup> )	YTD Average
1 August	18.8	25.15	21.5	23.71	12.2	17.88	23.8	25.24
2 August	26.6	25.16	20.7	23.69	28.4	17.93	48.6	25.35
3 August	29	25.17	31.4	23.73	18.1	17.93	30.6	25.37
4 August	50	25.29	49	23.85	42.6	18.04	44.8	25.46
5 August	22.1	25.28	27	23.86	18.4	18.05	32.7	25.50
6 August	20	25.25	18.3	23.84	15.2	18.03	17.6	25.46
7 August	27.4	25.26	29	23.86	25.3	18.07	22.4	25.45
8 August	13.7	25.21	10.7	23.80	7.3	18.02	7.7	25.36
9 August	22	25.19	20.9	23.79	10.6	17.98	18.6	25.33
10 August	16.5	25.15	16	23.75	9.3	17.94	12.1	25.27
11 August	30.2	25.18	33.2	23.79	15.9	17.93	18.4	25.24
12 August	15.6	25.13	9.2	23.73	5.1	17.88	7.9	25.17
13 August	14.6	25.09	22	23.72	7.5	17.83	13.1	25.11
14 August	13.8	25.04	29.3	23.75	7.1	17.78	13.2	25.06
15 August	14.5	24.99	35.6	23.80	11.5	17.75	16.4	25.02
16 August	19.8	24.97	31.5	23.83	16.3	17.75	27.3	25.03
17 August	22.2	24.96	29.7101	23.86	11.3	17.72	17.4	25.00
18 August	24.7	24.96	34.4	23.90	15.5	17.71	27.6	25.01
19 August	22.4	24.94	14.8	23.87	9.8	17.67	21	24.99
20 August	18.5	24.92	20.5	23.85	7.4	17.63	19	24.97
21 August	13.8	24.87	32.1	23.89	10.1	17.60	19.4	24.94
22 August	15.6	24.83	21.4	23.88	14	17.58	23.7	24.94
23 August	30.2	24.85	23.4	23.87	24	17.61	47.2	25.03
24 August	26.43	24.86	27.3	23.89	26.2	17.65	42.1	25.10
25 August	22.4	24.85	14.9	23.85	19.2	17.65	34.9	25.15
26 August	15.5	24.81	10.2	23.79	13	17.63	16.1	25.11
27 August	17.9	24.78	14	23.75	12.6	17.61	14.5	25.06
28 August	21.2	24.77	17.8	23.73	14.7	17.60	22.9	25.05
29 August	21.3	24.75	16.8757	23.70	13.6	17.58	22.2	25.04
30 August	21.2	24.74	17.7	23.67	19.2	17.59	27.2	25.05
31 August	30.2	24.76	26.4	23.68	23.9	17.62	34.1	25.09

Monitoring Frequency: Every blast  
 Airblast Overpressure Limit: 120 dBL  
 Ground Vibration Limit: 10mm/s

Date sampled: After each blast event  
 Date obtained: After each blast event  
 Date published: 10 September 2018

Table 5 - WCPL Blast Monitoring Results

Date & Time	ID	BM02 - Kelly		BM05 - Muller		BM07 - Thelander	
		dBL	mm/sec	dBL	mm/sec	dBL	mm/sec
2018-08-10 14:33:35	MW_WWA_291	108.6	0.28	109.8	1.03	105.3	1.43
2018-08-10 14:45:47	M_27RCA_296	95.3	0.10	104.4	0.56	99.8	0.52
2018-08-17 15:04:39	ME_WMA_293	100.0	0.18	108.3	0.29	100.7	0.27
2018-08-17 15:18:32	M_27_WMA_295	96.6	0.05	97.0	0.62	93.1	0.56
2018-08-17 15:15:27	HD_WWA_330	95.0	0.03	98.0	0.17	89.7	0.09
2018-08-21 10:32:04	M_27WWA_298	88.6	0.10	102.1	0.43	104.3	0.56
2018-08-29 11:42:32	M-24_WMA_306	96.8	0.03	102.7	0.35	96.4	0.24
2018-08-29 11:46:32	M_27 RCA_301	93.8	0.09	109.8	0.60	101.6	0.65
2018-08-29 11:54:59	M_27WRA_299	93.8	0.05	103.6	0.45	99.8	0.57

Monitoring Frequency: Continuous  
 Sampling Method: Site Meteorological Station  
 Limits: Nil

Date sampled: Weather readings recorded daily  
 Date obtained: 3 September 2018  
 Date published: 10 September 2018

Table 6 - WCPL Meteorology

Date	Temperature (2m)			Temperature (10m)			Humidity			Solar Radiation		RAIN mm	Wind Speed		
	Min	Average	Max	Min	Average	Max	Min	Average	Max	Average	Max		Min	Average	Max
1 August	6	14.9	22.1	8.5	15.2	21.3	25.9	41.1	69.4	177.9	674.2	0	0.2	2.3	4.6
2 August	3.2	11.8	20.6	4.1	12.4	19.9	39.8	68.1	94.6	179	735.7	0	0.1	0.8	4
3 August	1	13.3	23.5	1.5	13.7	22.8	29.9	64.6	99.6	171.4	656.1	0	0.1	1.4	5.9
4 August	5.4	13.4	19.4	7	13.5	18.8	34.6	60.6	83.1	185.9	711	0	0.1	2.7	6.1
5 August	-0.8	9.8	22.5	0.4	10.7	21.7	26.2	62.6	94.7	185.1	694.2	0	0.1	0.8	4
6 August	1.9	10.1	16.3	3	10.5	16.3	51.4	79.2	98.4	70	558.8	8.8	0.1	1.7	4.2
7 August	4.6	12.3	17.9	6.4	12.4	17.1	31.2	50.2	81.4	177.7	826.7	0	0.4	3.2	6.9
8 August	3	11.8	19.2	4.9	12	18.6	29.6	53.6	86.4	197.2	769.6	0	0.1	2.4	6.8
9 August	0.4	10.7	20.5	2.5	11.3	19.8	31.1	64.8	95.8	195.3	725.7	0	0.2	0.2	2.8
10 August	-0.4	10.2	23.4	0.5	11	22.8	22.9	66	99.6	195.4	729	0	0	0.8	4.3
11 August	-0.2	14.4	25.2	0.7	14.8	24.6	23	52.1	96	178.7	713.3	0	0.1	2.1	6.6
12 August	6.5	12.9	17.7	7.9	12.8	17.7	23.8	43	63.5	175.2	785.8	0	0.1	2.2	5.7
13 August	6	11.9	20.3	5.8	11.9	19.6	30.8	51.3	77.7	197.9	721.9	0	0.5	3	5.7
14 August	7.9	14.7	22.7	8	14.6	22.1	25.1	50	73.5	203.6	745.4	0	0.1	3	5.2
15 August	10	17.1	23.9	10	16.8	23.2	12.4	34.4	63.4	204.2	745.3	0	0.3	4.6	8.5
16 August	7	18.1	25.4	8.1	17.9	24.5	19.1	33.9	78.5	200.8	746.9	0	0.4	3	6.5
17 August	2.7	11.1	20.1	3.8	11.7	19.1	24	54.8	93.4	205.6	753.8	0	0.1	0.8	4.9
18 August	-1.6	12.4	22.3	0	12.8	21.5	21.4	46	86.3	201.3	753	0	0.1	3	7.1
19 August	6.1	12.9	17.6	7.5	12.6	16.5	22.8	36.5	57.3	204.5	847	0	0.5	3.3	8
20 August	1	9.4	17.7	2.6	10	16.9	19.1	44.5	82.5	213.9	778.9	0	0.2	0.8	4.3
21 August	-0.1	11.1	18.3	2	11.3	17.4	30.2	46.4	76.5	208.6	751.3	0	0.1	3	5.9
22 August	4.8	12.6	18.6	6.1	12.4	17.7	34.1	51.4	89.4	162.8	959.8	0	0.1	1.8	4.4
23 August	0.3	10.3	19.2	1.2	10.5	18.2	31.1	69.8	97.6	174.1	792.7	0	0	1.2	4.8
24 August	3.5	12.8	20.8	4	12.8	20	36.3	73.7	98.7	178.6	735	0	0.1	1.2	4.7
25 August	10.2	14.9	19.8	11.5	14.8	19.3	47.4	71.9	90.8	102.2	883.9	0	0.1	0.9	4.5
26 August	10.2	12.4	17.2	10.2	12.2	16.5	65.3	90.7	99	80.8	692.8	12.2	0	0.2	2.8
27 August	10.6	13.1	17.7	10.9	13	16.8	55.4	74.5	97.8	113.6	968.3	0.4	0.2	1.2	4.7
28 August	4.1	11.5	17.4	4.9	11.5	16.7	38.4	63.9	93.6	201.6	962	0	0	0.2	4.2
29 August	-0.6	9.2	19.6	-0.1	9.4	18.8	20.9	66.1	99.2	238.2	831.9	0	0.1	0.5	5
30 August	-1.9	10	19.8	-1.2	10.1	19	20.8	60.7	98	237	828.8	0	0	0.2	3.4
31 August	5.2	11.9	17.7	5.4	12.1	17.1	45.5	78.3	97.8	81.2	526.1	5.2	0	0.7	4.8
MONTH	-1.9	12.3	25.4	-1.2	12.5	24.6	12.4	58.2	99.6	177.3	968.3	26.6	0	1.71	8.5

