

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

February 2019

**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: 18 and 20 December 2018  
 Date obtained: 27 December 2018  
 Date published: 21 February 2019

Table 1 - WCPL Surface and Mine Water Dam Results

Site	Date	pH	EC (µS/cm)	TSS (mg/L)	Comments
SW01	20 December				Pool
SW02	20 December				Dry
SW03	20 December				Pool
SW04	20 December				Dry
SW05	20 December				Dry
SW06	20 December				Dry
SW07	20 December				Dry
SW08	20 December				Unsafe Access
SW14	18 December	8.76	374	<5	
SW15	18 December	8.85	9140	55	
SW27	20 December				Pool
SW31	18 December	9.18	7780	62	
SW32a					Dry
SW38	18 December	9.04	8430	<5	
SW39					Dry
SW40					Pool
SW41					Dry
SW52	18 December	10.2	2470	40	
Montrose East 1	18 December	9.31	625	47	
Montrose East 2	18 December	9.18	598	97	
Milk Can Dam	18 December	9.14	4610	90	
Rug Dump Dam	18 December	9.37	2320	171	
Wombat Dam	18 December				Unsafe Access

Monitoring Frequency: Every 2 months  
 Sampling Method: Grab sample  
 Limits: Nil

Date sampled: 7, 12, and 18 December 2018  
 Date obtained: 3 and 5 January 2018  
 Date published: 21 February 2019

Site	Date	pH	EC ( $\mu\text{S}/\text{cm}$ )	Depth	Comments
P106	7 Dec 2018				Dry
P109	7 Dec 2018	6.6	771	6.46	
P114	12 Dec 2018				Dry
P116	7 Dec 2018	7.1	3070	7.12	
P202	7 Dec 2018	7.6	4370	9.38	
P206	7 Dec 2018	8.0	2090	21.39	
P301	7 Dec 2018	6.8	6670	17.66	
P315	7 Dec 2018				Dry
GW02	7 Dec 2018	7.0	582	9.34	
GW08	7 Dec 2018			7.56	Insufficient water
GW09	7 Dec 2018				Dry
GW11	7 Dec 2018	7.1	626	7.30	
GW12	7 Dec 2018			12.69	Insufficient Water
GW13	7 Dec 2018	7.0	3510	6.87	
GW15	7 Dec 2018	6.9	672	11.70	
GW16	7 Dec 2018	7.8	1327	11.71	
GW17	7 Dec 2018	7.2	5450	12.51	
GW21	7 Dec 2018				
GW22	7 Dec 2018			35.79	Insufficient Water
GW23	18 Dec 2018				Dry
GW24	18 Dec 2018	5.90	1728	21.90	
P1	18 Dec 2018	6.91	7055	12.40	
P11	18 Dec 2018			31.44	Mud
P16	18 Dec 2018	7.19	7505	9.33	
P20	18 Dec 2018	7.38	5190	8.73	

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

Date sampled: 14 December 2018  
Date obtained: 16 January 2019  
Date published: 21 February 2019

Table 2 - 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	14-Dec-2018	1.9	2.5	76.00	
D19	14-Dec-2018	2.6	4.4	59.09	
D21	14-Dec-2018	2.2	2.8	78.57	
D22	14-Dec-2018	2.6	3.5	74.29	

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: 21 February 2019

Table 3 - 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 December	25.9	25.27	24.2	23.54	18.1	18.27	34.8	25.04
2 December	43.3	25.32	35.7	23.58	29.6	18.30	30.9	25.06
3 December	23	25.31	20.6	23.57	18.5	18.30	18	25.04
4 December	43.1	25.37	30.8	23.59	30.4	18.34	30.4	25.05
5 December	32.9	25.39	20	23.58	23.5	18.35	22.8	25.04
6 December	22.3	25.38	19.2	23.56	18.8	18.35	20.9	25.03
7 December	23.75	25.37	21.06	23.56	15.4	18.35	20.5	25.02
8 December	31	25.39	33.3	23.59	25.5	18.37	36.3	25.05
9 December	44	25.45	33.7	23.61	33.9	18.41	48.2	25.12
10 December	34.8	25.47	36.7	23.65	31.6	18.45	36.7	25.15
11 December	17	25.45	16.3	23.63	14.5	18.44	15.9	25.13
12 December	16.5	25.42	13.1	23.60	12.5	18.42	14.4	25.10
13 December	17	25.40	15.3	23.58	11.1	18.40	13	25.06
14 December	23.7	25.39	17.3	23.56	16.6	18.40	19.3	25.04
15 December	25.5	25.39	23.9	23.56	24.3	18.41	27.1	25.05
16 December	27.7	25.40	28.7	23.57	28.4	18.44	NaN*	25.05
17 December	28.9	25.41	21.9	23.57	18.1	18.44	NaN*	NaN*
18 December	36.7	25.44	27.6	23.58	27.6	18.47	NaN*	25.05
19 December	27.2	25.45	23.8	23.58	27	18.49	18.1	25.03
20 December	21.8	25.44	21.2	23.58	15.5	18.48	14.3	25.00
21 December	20.1	25.42	13.4	23.55	16.2	18.48	15.4	24.97
22 December	13.8	25.39	7	23.50	8.7	18.45	14.2	24.94
23 December	18.7	25.37	15.9	23.48	14.7	18.44	17.5	24.92
24 December	25.8	25.37	18.7	23.47	17.6	18.44	24.1	24.92
25 December	12	25.33	13.5	23.44	11.4	18.42	12.6	24.88
26 December	20.9	25.32	19.9	23.43	20.2	18.42	29.8	24.90
27 December	53.4	25.40	35.7	23.46	29.7	18.45	39.5	24.94
28 December	50.4	25.47	35.4	23.49	36.3	18.50	42.7	24.99
29 December	49.8	25.54	33.1	23.52	29.7	18.53	41.2	25.03
30 December	60.7	25.63	31.3	23.54	32.8	18.57	41.7	25.08
31 December	43.7	25.68	41.9	23.59	41.6	18.64	43.7	25.13

NaN\* - Unit offline during storm

**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: 21 February 2019**

**Table 4 - WCPL Blast Monitoring Results**

Date & Time	ID	BM02 - Kelly		BM05 - Muller		BM07 - Thelander	
		dBL	mm/sec	dBL	mm/sec	dBL	mm/sec
3 December 2018	M_27WRA_330	94.4	0.07	98.1	0.26	96.7	0.20
8 December 2018	M_27WRC_336	93.8	0.07	104.1	0.95	97.4	0.70
8 December 2018	M_27WMA_343	96.2	0.05	104.9	0.75	102.2	0.56
17 December 2018	HD_WWA_338	90.5	0.04	95.7	0.64	90.1	0.41
17 December 2018	M_27WMA_345	103.5	0.14	105.2	0.72	100.5	0.39
28 December 2018	M_27WRA_344	104.6	1.82	97.8	0.13	67.4	0.12
28 December 2018	M_27WRA_337	93.3	0.04	103.5	0.43	103.4	0.58
28 December 2018	M_27WRC_339	94.6	0.05	114.0	0.62	108.7	0.45
28 December 2018	ME_WMA_342	95.9	0.15	110.6	1.40	101.5	1.12

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

Date sampled: Weather readings recorded daily  
 Date obtained: 1 January 2019  
 Date published: 21 February 2019

Table 5 - 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 December	11.9	23.2	35.2	12.6	23.2	34.8	11.8	61.4	98.2	397.7	1158.4	0	0.1	0.1	4.1
2 December	13.1	26.1	37.8	13.7	26.1	37.2	13.2	50.9	97.2	374.3	1161.5	0	0	3.3	100.5
3 December	15.4	24.6	33.4	15.7	24.3	32.5	12.4	44.6	89.7	402.9	1168.5	0	0.1	1	4.5
4 December	13.4	22.2	30	14.6	22.4	29.3	27	52.8	74.2	375.9	1151.4	0	0.1	2.1	7.1
5 December	18.2	20.5	23.3	18.2	20.3	22.7	56.2	68	81	121.9	729.2	0	1.5	3.4	5.3
6 December	16.2	21.9	27.8	16.4	21.6	27	36.1	60.5	85.9	308.3	1281.2	0	0.8	2.7	6
7 December	13.6	22.5	30.2	14.3	22.3	29.7	27.4	54.7	86	400	1159.3	0	0.2	1.7	5.6
8 December	13.3	24.3	33.2	14.2	24.2	32.5	22.8	55.4	93.5	395.1	1159.5	0	0.1	1.2	5.1
9 December	14.8	26	35.5	15.3	26	34.4	20.9	54.8	95.3	368.8	1190.6	0	0.1	1.3	5.8
10 December	17.9	26	33.5	18.5	25.8	32.6	28.1	56.8	92.5	271.1	1189.8	0	0.2	1.4	6.8
11 December	18.3	20.5	23.2	18.3	20.3	23.2	70	88.1	98.2	55.9	462.4	17.2	0.5	1.2	4
12 December	17.4	21.1	25	17.4	20.9	24.3	67.4	84.3	98.2	142.9	865.8	1.2	0.1	1.5	3.8
13 December	19.5	24.5	33.1	19.5	24.3	32.5	43	76.5	97.9	284.5	1273.9	4.2	0.1	1.8	57.2
14 December	20.3	23	26.9	20.3	22.9	26.6	66	85.3	96.4	130.3	1036.9	5	0.1	1	3.4
15 December	20.5	24.2	32	20.4	24	31.5	49.2	81.4	98.1	268	1199.8	7.8	0	0.1	22.4
16 December	19.7	25.6	34.7	20.1	25.5	34	37	73.7	99	330.1	1106.9	0.2	0.1	0.7	6.8
17 December	24.3	28.9	33.9	24.6	28.7	33.5	39.6	60.2	80.4	427.5	1250.7	1.2	0.5	0.2	5.8
18 December	21.4	25.8	30.6	21.5	25.6	30	53.4	68.7	85.5	285.4	1117.8	0	0.6	2.3	6
19 December	22.3	25.5	30.7	22.3	25.2	29.9	55.5	75.4	95.8	247.9	1295.4	3.6	0.5	1.9	5.4
20 December	19.9	26.6	38	19.8	26.5	37.5	36.2	74.8	99	322.1	1193.9	11.4	0.2	2.1	79.8
21 December	20.4	22.8	25.1	20.5	22.6	24.7	60.9	72.4	83	142.6	923.9	0	0.6	2.2	4.3
22 December	16.2	20.4	25.8	16.6	20.3	25.1	41.2	66.9	97.2	285.1	1281	0	0.1	2.2	5.8
23 December	15.2	20.2	25.8	15.7	20	24.9	38	59.7	82.5	334.9	1364.9	0	0.1	2.3	5.4
24 December	10.4	20.7	29	11.2	20.6	28.3	30.6	66.2	97.2	400.4	1179.6	0	0.1	1.4	5.2
25 December	12.9	24.6	34.6	13.7	24.7	33.6	26.2	56.7	97.3	398.3	1154.2	0	0	0.8	5.8
26 December	15.2	26.6	35.6	16	26.7	34.8	19.3	49.4	88.9	396.6	1151.7	0	0.1	1.3	5.2
27 December	15.6	28	38.6	16.1	28.1	37.7	17.4	49.9	88.7	387.4	1127.2	0	0.1	1.2	5.4
28 December	16.9	29.7	40.5	17.7	29.8	39.7	14.8	43.5	86.5	390.7	1152.4	0	0.1	0.9	5.2
29 December	16.4	29.7	40.4	17.4	29.8	39.6	15.4	45.3	90.6	395	1143.8	0	0	1.2	6.2
30 December	18.6	30.9	39.8	19.4	30.9	39.1	16.2	41.1	80.2	390	1137.8	0	0.1	1.6	5.7
31 December	20.6	29	40.5	20.4	29.1	39.2	17.2	53	97.4	298.5	1173	26.4	0.2	0.5	8.6
MONTH	11.9	24.7	40.5	11.2	24.6	39.6	11.8	62.3	98.2	313.9	1364.9	78.2	0	1.5	100.5

