

**WAMBO COAL
ENVIRONMENTAL REPORTING
1 FEBRUARY – 28 FEBRUARY 2019**

April 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

Table 1 - WCPL Surface and Mine Water Dam Results

Site	Date	pH	EC ($\mu\text{S}/\text{cm}$)	TSS (mg/L)	Comments
SW01	27 Feb 2019	6.1	1990		Pool
SW02	27 Feb 2019				Pool
SW03	27 Feb 2019				No Flow
SW04	27 Feb 2019				Dry
SW05	27 Feb 2019				No Flow
SW06	27 Feb 2019				Dry
SW07	27 Feb 2019				Dry
SW08	27 Feb 2019				Dry
SW12	20 Feb 2019	8.56	6000	56	
SW14	20 Feb 2019	9.29	415	24	
SW15	20 Feb 2019	8.72	6240	46	
SW27	27 Feb 2019				Dry
SW31	20 Feb 2019	9.23	5420	44	
SW32a	27 Feb 2019	7.4	327	470	
SW38	20 Feb 2019	9.14	9000	10	
SW39	20 Feb 2019				Dry
SW40	20 Feb 2019				Pool
SW41	20 Feb 2019				Dry
SW51	20 Feb 2019	9.35	3010	313	
SW52	20 Feb 2019	10.0	2430	33	
Wombat Dam	20 Feb 2019				Dry
Milk Can Dam	20 Feb 2019	9.41	8250	107	
Rug Dump Dam	20 Feb 2019	9.42	8170	320	
Montrose East 1	20 Feb 2019	8.18	571	298	
Montrose East 2	20 Feb 2019	9.24	595	72	

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

Date sampled: 8 February 2019
Date obtained: 8 February 2019
Date published: 16 April 2019

Table 2 - WCPL Groundwater Results

Site	Date	pH	EC ($\mu\text{S}/\text{cm}$)	Depth	Comments
P106	8 Feb 2019				Dry
P109	8 Feb 2019	6.0	764	24.9	
P114	8 Feb 2019				Dry
P116	8 Feb 2019	7.1	2740	24.9	
P202	8 Feb 2019	7.5	3960	25.1	
P206	8 Feb 2019	8.0	2080	25.4	
P301	8 Feb 2019	6.8	6430	25.2	
P315	8 Feb 2019				Dry
GW02	8 Feb 2019	7.0	592	24.2	
GW08	8 Feb 2019				Dry
GW09	8 Feb 2019				Dry
GW11	8 Feb 2019	6.7	582	24.0	
GW12	8 Feb 2019				Dry
GW13	8 Feb 2019	7.0	3620	25.0	
GW15	8 Feb 2019	6.8	691	25.7	
GW16	8 Feb 2019	7.7	1432	20.0	
GW17	8 Feb 2019	7.2	5360	20.7	
GW21	8 Feb 2019				Insufficient Water
GW22	8 Feb 2019	8.4	6820	24.8	
GW23 (Site 4A)	8 Feb 2019				Dry
GW24 (Site 4B)	8 Feb 2019	6.1	1761	21.2	
GW25 (Site 9A)	8 Feb 2019				Dry
GW26 (Site 9B)	8 Feb 2019	7.2	1093	21.2	
GW27 (Instream 1)	8 Feb 2019				Insufficient Water
GW28 (Instream 3)	8 Feb 2019				Dry
GW29 (Site 7b)	8 Feb 2019				Dry
GW30 (Site 11)	8 Feb 2019				Dry
P1	13 Feb 2019	6.93	8310	28.16	
P3	13 Feb 2019				
P11	13 Feb 2019				Mud
P16	13 Feb 2019	7.28	7410	9.45	
P20	13 Feb 2019	7.52	5120	8.81	

Monitoring Frequency: Once per month
Sampling Method: AM19
Limits: 4g / m² / month EPA Guideline

Date sampled: 15 Feb 2019
Date obtained: 19 Feb 2019
Date published: 16 April 2019

Table 3 - WCPL Depositional Dust Gauges

Site	Date	Ash (g/m2)	Total Insoluble Matter (g/m2)	AR/IS Ratio	Comment
D11	15 Feb 2019	2.6	3.3	78.79	
D19	15 Feb 2019	3.6	5.1	70.59	
D21	15 Feb 2019	2.2	2.9	75.86	
D22	15 Feb 2019	3.6	5.1	70.59	

Monitoring Frequency: Continuous
Sampling Method: AM22
Limits: Nil

Date sampled: Continuous
Date obtained: Continuous
Date published: 16 April 2019

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 ³)	YTD Average	PM10 24 Hour Result (ug/m ³)	YTD Average	PM10 24 Hour Result (ug/m ³)	YTD Average	PM10 24 Hour Result (ug/m ³)	YTD Average
1/02/2019	12.5	33.37	15.2	26.56	10.4	25.89	28	33.10
2/02/2019	16.1	32.85	9.4	26.04	9.7	25.40	16.2	32.59
3/02/2019	31	32.79	18.1	25.81	20.5	25.25	33.7	32.62
4/02/2019	41	33.03	24.7	25.78	24.5	25.23	41.6	32.88
5/02/2019	39.7	33.21	23.7	25.72	24.4	25.21	44.2	33.19
6/02/2019	39.6	33.38	19.2	25.54	18.2	25.02	30.9	33.13
7/02/2019	28.2	33.25	20.8	25.42	17.6	24.82	31.3	33.08
8/02/2019	29	33.14	22.7	25.35	19.3	24.68	23.8	32.84
9/02/2019	17.5	32.75	15.9	25.11	11.1	24.34	10.5	32.29
10/02/2019	56.1	33.32	48.8	25.69	18.9	24.21	52.2	32.77
11/02/2019	27.5	33.18	22.3	25.61	19.2	24.09	31	32.73
12/02/2019	32.9	33.17	30.7	25.73	26.4	24.14	28.7	32.63
13/02/2019	74.2	34.10	60.3	26.51	69.5	25.18	64.9	33.37
14/02/2019	39.1	34.22	33	26.66	34.4	25.38	32.6	33.35
15/02/2019	31.8	34.16	20.9	26.53	27.9	25.43	34.8	33.38
16/02/2019	30.7	34.09	18.1	26.35	18.5	25.29	18.1	33.06
17/02/2019	26.4	33.93	24.2	26.31	17.8	25.13	29.9	32.99
18/02/2019	35.6	33.96	33.8	26.46	25.1	25.13	52.5	33.39
19/02/2019	53.8	34.36	55.7	27.05	18.8	25.00	55.7	33.84
20/02/2019	11.5	33.91	13.4	26.78	11.8	24.75	28.9	33.74
21/02/2019	18.9	33.62	11.5	26.48	12.3	24.51	18.7	33.45
22/02/2019	19.2	33.35	12	26.21	12.5	24.28	24.2	33.28
23/02/2019	13.8	32.99	8.3	25.88	8.5	23.99	16.2	32.96
24/02/2019	24.9	32.84	18	25.74	17.2	23.86	32.5	32.95
25/02/2019	31.4	32.82	20.7	25.65	26.2	23.91	30.8	32.91
26/02/2019	26.7	32.71	23.3	25.61	22.7	23.88	33.9	32.93
27/02/2019	28	32.63	18.5	25.48	26.6	23.93	29.4	32.87
28/02/2019	20.7	32.43	15.7	25.32	18.4	23.84	20.1	32.65

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

Date sampled: Continuous
Date obtained: Continuous
Date published: 16 April 2019

Table 5 - WCPL Blast Monitoring Results

Date & Time	ID	BM02 - Kelly		BM05 - Muller		BM07 - Thelander	
		dBL	mm/sec	dBL	mm/sec	dBL	mm/sec
2019-02-08 14:28:14	WMB0VS	98.1	0.24	99.1	0.37	94.1	0.24
2019-02-08 14:34:29	WMB0VT	101.9	0.11	106.6	0.43	104.0	0.39
2019-02-08 14:43:54	WMB0VU	104.7	0.18	106.0	0.37	98.3	0.19
2019-02-18 11:00:41	WMB0W0	108.7	0.12	108.9	1.96	100.7	2.23
2019-02-18 11:10:08	WMB0W1	96.0	0.06	105.7	0.31	96.2	0.20

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

Date sampled: Continuous
Date obtained: Continuous
Date published: 16 April 2019

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
1/02/2019	19.7	21.8	25.2	19.4	21.5	24.4	58.2	74.8	91.5	104.8	797.2	0	1.3	2.8	4.8
2/02/2019	19.7	24	29.6	19.6	23.8	29.1	59.6	81.9	97.2	136.2	968.8	2	0.8	2.1	4.8
3/02/2019	19.5	27.2	35.2	20.4	27.1	34.4	30.9	63	96.8	364.6	1116	0	0	1.4	5.3
4/02/2019	19.5	28	38.3	19.9	28	37.5	23.4	61.1	91.9	318.2	1092	0	0	0	4.3
5/02/2019	23.5	27.8	34.7	24	27.6	33.8	33.4	60.8	84.5	280.7	1175.1	0	0.5	2.3	6.1
6/02/2019	20.9	26.8	33	21.2	26.5	32.2	37	61.7	87.8	321.8	1185.9	0	0.4	2.9	6.5
7/02/2019	19.9	27.4	34.9	20.3	27.1	33.7	27.4	57	89.2	351.6	1168.6	0	0.4	1.6	5.3
8/02/2019	20.5	25.9	36.1	20.3	25.9	35.1	29.9	67.1	97.6	193.1	1168.2	12.2	0.1	0.2	6.7
9/02/2019	20.8	26.5	35	20.5	26.4	34.3	31.9	59	95.7	311.8	1169.3	1	0.4	2.8	7.2
10/02/2019	15.9	23.1	30.6	17	23.1	30	23.6	48.2	83.1	373.9	1113.1	0	0.2	0.8	5.1
11/02/2019	16.3	25.2	36.6	17	25.4	36	8.7	46.9	85.9	377.4	1132.3	0	0.1	1	4.6
12/02/2019	11.9	26.3	38.3	13	26.7	37.6	9.2	36.2	81.3	380.2	1136.4	0	0	2.3	10.9
13/02/2019	19.7	24.1	31.3	20.7	24	30.5	38.9	54	68.1	269.5	989.5	0	0.1	2.2	6.8
14/02/2019	19.1	22.7	26.3	19.2	22.4	25.5	42.2	53.2	67	193.8	1240.8	0	0.9	3.1	5.8
15/02/2019	16.6	22.7	29.1	17	22.3	28	33.8	55.9	77.7	364.9	1124.7	0	0.8	3	6.3
16/02/2019	14.5	23.1	30.1	15.7	22.9	29.2	34	61.2	90.3	319.4	1160.2	0	0.1	2	5.5
17/02/2019	14.1	25.5	35.3	15.2	25.4	34.4	24.9	57.2	95.6	357.4	1099.5	0	0	0.8	5.4
18/02/2019	15.3	28.4	39.7	16	28.5	38.9	15.6	49.3	92.9	340.8	1074.5	0	0	0.7	3.7
19/02/2019	22.4	29.1	41.3	23.1	29	40.6	15.1	49.5	79	258.4	1138.6	2.4	0.1	0.5	7
20/02/2019	21.3	24.5	29.1	21.2	24	28.3	54.8	72.3	84.5	287.8	1102.8	0	1.5	2.8	4.7
21/02/2019	20.5	22.9	25.9	20.3	22.7	25.5	59.1	76.9	97.4	92.1	991.7	6	1.2	2.5	5.1
22/02/2019	18.5	21.6	26.5	18.4	21.3	25.8	45.5	75.9	94.4	202.5	1063.6	2.4	1	2.6	6.8
23/02/2019	17.5	20.7	26.7	17.4	20.5	26.1	45	76.9	97.1	180.4	1119.4	2.2	0.8	2.4	5.8
24/02/2019	17.9	20.3	24.5	17.6	20.1	23.8	54.1	72	88.9	189.4	1035.1	1	1	2.8	5.8
25/02/2019	19.1	23.7	26.8	19.5	23.3	26	40.4	52.8	72.6	347.6	1062	0	0	2.9	5.5
26/02/2019	12.7	22.4	30.3	13.4	22.4	29.7	28.2	62.2	96.3	311.3	1099.3	0	0.1	0.8	5
27/02/2019	14.5	23.1	30.4	15.3	23.1	29.3	34.4	62.6	94.8	295.5	1126.8	0	0.3	2.4	6.7
28/02/2019	15.8	23.4	30.4	16.1	23.2	29.3	35.1	62.6	93.7	260.1	1119.2	0	0.1	2	5.5
	11.9	24.56	41.3	13	24.44	40.6	8.7	61.15	97.6	278.04	1240.8	29.2	0	1.92	10.9

