

**WAMBO COAL
ENVIRONMENTAL REPORTING
1 JUNE – 30 JUNE 2019**

July 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	24 June 2019				Pool
SW02	24 June 2019				No Flow
SW03	24 June 2019				Dry
SW04	24 June 2019				Dry
SW05	24 June 2019				Dry
SW06	24 June 2019				Dry
SW07	24 June 2019				Dry
SW08	24 June 2019				Dry
SW12	25 June 2019	8.6	7000	21	
SW14	25 June 2019				No access
SW15	25 June 2019	8.6	3580	30	
SW27	24 June 2019				Dry
SW31	25 June 2019	8.7	1480	22	
SW32a	24 June 2019				Dry
SW38	25 June 2019	8.7	8380	26	
SW39	24 June 2019				Dry
SW40	24 June 2019				Dry
SW51	25 June 2019	8.8	1330	212	
SW52	25 June 2019	8.8	874	43	
Wombat Dam	24 June 2019				No access
Milk Can Dam	25 June 2019	8.5	3310	172	
Rug Dump Dam	25 June 2019	8.5	1090	20	
Montrose East 1	25 June 2019	8.5	562	41	
Montrose East 2	25 June 2019	8.7	500	14	

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

Date sampled: 5 June 2019
 Date obtained: 7 June 2019
 Date published: 11 July 2019

Table 2 - WCPL Groundwater Results

Site	Date	pH	EC ($\mu\text{S}/\text{cm}$)	Depth	Comments
P106	5 June 2019				Dry
P109	5 June 2019	6.5	661	6.60	
P114	5 June 2019				Dry
P116	5 June 2019	7.0	1900	7.15	
P202	5 June 2019	7.5	3850	9.57	
P206	5 June 2019	7.9	2020	22.10	
P301	5 June 2019	6.7	6770	19.52	
P315	5 June 2019				Dry
GW02	5 June 2019	7.1	531	9.56	
GW08	5 June 2019				Dry
GW09	5 June 2019				Dry
GW11	5 June 2019	7.6	597	7.70	
GW12	5 June 2019				Insufficient water
GW13	5 June 2019	7.0	3360	7.20	
GW15	5 June 2019	6.9	620	11.95	
GW16	5 June 2019	7.8	1493	11.90	
GW17	5 June 2019	7.1	5150	12.95	
GW21	5 June 2019				Dry
GW22	5 June 2019	8.4	6830	36.09	
GW23 (Site 4A)	5 June 2019				Dry
GW24 (Site 4B)	5 June 2019	6.20	1720	9.54	
GW25 (Site 9A)	5 June 2019				Dry
GW26 (Site 9B)	5 June 2019	7.3	1119	8.46	
GW27 (Instream 1)	5 June 2019				Dry
GW28 (Instream 3)	5 June 2019				Dry
GW29 (Site 7b)	5 June 2019				Dry
GW30 (Site 11)	5 June 2019				Dry
P1	5 June 2019	6.8	8550	29.0	
P11	5 June 2019				Dry
P16	5 June 2019	7.21	7400	9.62	
P20	5 June 2019	7.36	5060	8.94	

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

Date sampled: 18 June 2019
Date obtained: 24 June 2019
Date published: 11 July 2019

Table 3 - WCPL Depositional Dust Gauges

Site	Date	Ash (g/m ²)	Total Insoluble Matter (g/m ²)	AR/IS Ratio	Comment
D11	18/06/2019	1.1	1.5	73.33	Insects
D19	18/06/2019	0.7	1.1	70.00	Insects/leaves
D21	18/06/2019	0.6	1.0	60.00	Insects
D22	18/06/2019	1.9	2.6	73.08	Insects

Monitoring Frequency: Continuous
 Sampling Method: AM22
 Limits: Nil

Date sampled: Continuous
 Date obtained: Continuous
 Date published: 11 July 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
1/06/2019	22.5	26.67	27.5	24.87	25.6	20.41	25.7	27.58
2/06/2019	23.8	26.65	25.8	24.88	23.1	20.42	22.8	27.55
3/06/2019	8.3	26.53	13.3	24.80	6.2	20.33	7.5	27.42
4/06/2019	8.2	26.41	12.3	24.72	5.1	20.23	7.0	27.28
5/06/2019	8.3	26.30	13.3	24.64	6.6	20.14	13.3	27.19
6/06/2019	14.7	26.22	21.7	24.63	6.4	20.05	13.1	27.10
7/06/2019	30.4	26.25	22.4	24.61	17.5	20.04	32.2	27.14
8/06/2019	28.1	26.26	20.7	24.59	23.5	20.06	33.2	27.17
9/06/2019	11.3	26.17	17.0	24.54	12.5	20.01	9.0	27.06
10/06/2019	13.9	26.09	14.4	24.47	7.3	19.93	12.8	26.97
11/06/2019	14.7	26.02	21.9	24.46	9.7	19.87	22.5	26.94
12/06/2019	21.7	25.99	21.1	24.44	12.0	19.82	16.2	26.87
13/06/2019	17.4	25.94	24.0	24.44	10.2	19.76	12.8	26.79
14/06/2019	9.7	25.84	15.3	24.38	9.9	19.70	13.5	26.71
15/06/2019	18.3	25.79	27.5	24.40	10.4	19.64	24.5	26.69
16/06/2019	22.5	25.77	28.9	24.43	17.6	19.63	27.3	26.70
17/06/2019	9.1	25.67	25.7	24.43	5.5	19.54	9.0	26.59
18/06/2019	17.9	25.62	26.3	24.44	7.1	19.47	13.2	26.51
19/06/2019	9.7	25.53	11.9	24.37	7.6	19.40	25.3	26.50
20/06/2019	12.8	25.45	43.4	24.48	15.2	19.37	24.2	26.49
21/06/2019	9.3	25.36	38.3	24.56	13.7	19.34	15.3	26.42
22/06/2019	14.5	25.30	17.4	24.52	7.8	19.27	19.6	26.38
23/06/2019	9.9	25.21	12.6	24.45	8.4	19.21	14.0	26.31
24/06/2019	5.1	25.09	4.7	24.34	5.6	19.13	9.8	26.22
25/06/2019	6.1	24.98	4.3	24.22	5.6	19.05	13.4	26.14
26/06/2019	15.2	24.93	5.3	24.11	9.9	19.00	15.1	26.08
27/06/2019	14.4	24.87	6.6	24.02	9.7	18.95	18.6	26.04
28/06/2019	9.0	24.78	11.5	23.94	10.5	18.90	29.1	26.05
29/06/2019	9.7	24.69	13.6	23.89	8.6	18.84	14.2	25.99
30/06/2019	16.9	24.65	14.9	23.84	10.0	18.79	11.8	25.91

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

Date sampled: Continuous
 Date obtained: Continuous
 Date published: 11 July 2019

Table 5 - WCPL Blast Monitoring Results

Date	Time	ID	BM02 - Kelly		BM05 - Muller		BM07 - Thelander	
			dBL	mm/sec c	dBL	mm/sec	dBL	mm/sec
6/06/2019	11:12	M_27WRC_396 & M_27WMA_399	8.2	0.21	107.2	0.99	99.3	0.95
6/06/2019	11:24	M_27WRC_402	79.5	0.14	99.4	0.28	95.6	0.21
12/06/2019	14:21	M_27WMA_401	78.9	0.04	94.7	0.41	90.7	0.33
12/06/2019	14:35	HD_RCA_395	77.0	0.05	97.1	0.10	91.3	0.07
18/06/2019	14:26	M_27WMA_397	79.2	0.21	98.9	2.45	96.2	2.65
29/06/2019	12:03	M_27WMA_403	80.7	0.24	104.8	2.71	96.6	1.87
29/06/2019	12:12	M_27WMA_407	89.4	0.28	113.6	1.04	100.8	1.20
29/06/2019	12:25	M_27WRA_404	79.5	0.08	98.7	0.34	93.8	0.19



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

Date sampled: continuous
 Date obtained: continuous
 Date published: 11 July 2019

Table 6 - WCPL Meteorology

Date	Temperature (2m)			Temperature (10m)			Humidity			Solar Radiation		RAIN	Wind Speed		
	Average	Min	Max	Average	min	Max	Average	Min	Max	Average	Max	Sum (mm)	Average	Min	Max
1/06/2019	11.3	0.8	20.2	11.3	2.0	19.2	77.8	49.3	98.3	127.4	658.9	0.0	0.3	0.1	3.7
2/06/2019	13.7	8.1	19.6	13.4	8.5	18.6	86.8	62.8	99.5	79.5	722.2	0.0	0.3	0.0	2.0
3/06/2019	13.3	8.1	18.4	12.8	7.7	17.3	71.7	43.2	98.1	115.4	635.2	0.0	2.8	0.2	5.7
4/06/2019	11.9	7.5	16.6	11.3	7.0	15.6	63.4	46.8	79.5	62.6	472.3	0.0	2.2	0.7	7.7
5/06/2019	12.5	4.8	16.7	12.3	5.7	15.7	65.7	51.2	97.4	96.5	614.5	0.0	2.4	0.1	5.8
6/06/2019	9.1	0.3	19.9	9.7	2.3	19.3	72.0	30.1	99.8	148.1	581.5	0.0	0.6	0.0	3.8
7/06/2019	11.4	3.2	19.1	11.3	3.6	18.0	79.7	58.3	96.6	76.4	507.1	0.0	0.2	0.1	2.8
8/06/2019	11.6	7.5	15.7	11.5	7.8	15.0	93.6	77.8	99.8	30.6	240.1	0.2	0.0	0.1	1.7
9/06/2019	14.8	8.0	22.1	14.7	8.4	21.1	78.6	47.1	98.3	142.2	561.3	0.0	1.4	0.1	5.0
10/06/2019	13.7	3.9	22.5	13.7	4.2	21.8	77.0	48.6	99.2	132.2	653.6	0.0	1.4	0.0	4.7
11/06/2019	17	9.5	26.0	17.1	10.2	25.1	72.7	42.9	94.6	145.5	559.9	0.0	0.7	0.0	4.7
12/06/2019	13.4	4.2	23.9	13.9	5.0	23.1	77.4	43.1	99.9	109.6	592.5	0.0	0.8	0.0	4.5
13/06/2019	17.8	9.7	25.5	17.7	10.5	24.5	61.6	38.1	91.0	124.6	665.9	0.0	2.0	0.3	4.9
14/06/2019	11.6	2.9	20.2	12.0	3.7	19.5	75.3	35.9	100.0	123.9	626.2	0.0	0.6	0.1	3.6
15/06/2019	8.6	-0.3	20.6	9.0	0.6	19.8	73.2	34.8	98.9	139.7	557.6	0.0	0.3	0.0	1.7
16/06/2019	9.5	1.4	17.2	9.7	1.4	16.5	83.3	60.8	97.8	69.2	464.2	0.0	0.2	0.0	1.9
17/06/2019	14.8	9.3	18.2	14.6	11.2	17.4	71.3	54.3	96.5	64.4	612.1	0.0	1.9	0.2	4.2
18/06/2019	15.1	10.9	18.2	14.6	11.4	17.3	81.0	67.7	97.1	56.7	473.5	0.0	1.4	0.1	3.4
19/06/2019	9.7	1.0	18.3	10.3	2.9	17.7	71.4	30.9	99.0	140.8	554.7	0.4	0.1	0.0	3.1
20/06/2019	7.5	-1.8	17.5	7.8	-1.3	16.7	79.1	49.8	98.0	127.5	558.9	0.0	0.3	0.1	2.7
21/06/2019	7.3	-1.0	15.3	7.8	-0.4	14.3	69.8	30.9	98.7	136.0	565.4	0.0	0.3	0.0	3.2
22/06/2019	6.8	-2.1	16.4	7.0	-1.7	15.3	74.3	46.1	97.0	100.5	713.8	0.0	0.3	0.1	2.8
23/06/2019	11	4.0	16.3	11.0	5.4	15.2	71.2	52.4	95.2	95.4	616.3	0.6	1.5	0.1	4.8
24/06/2019	13.4	10.6	16.9	12.9	10.4	16.1	80.2	63.3	96.8	98.2	516.4	1.4	2.1	0.8	4.4
25/06/2019	14	11.3	17.8	13.8	11.6	17.0	87.3	70.2	98.6	73.5	595.8	1.4	1.3	0.0	3.4
26/06/2019	14.6	11.0	19.5	14.4	11.4	18.6	80.3	47.2	99.7	131.0	700.2	1.2	1.5	0.1	4.6
27/06/2019	13.8	8.9	20.2	13.8	9.6	19.2	84.3	54.0	99.9	143.8	693.3	0.2	1.3	0.1	4.3
28/06/2019	11.4	4.4	20.3	11.8	4.7	19.4	86.7	56.0	100.0	146.4	584.1	0.0	0.2	0.0	2.3
29/06/2019	11.1	2.6	22.4	11.3	2.8	21.4	80.6	42.2	100.0	140.0	583.0	0.0	0.5	0.1	3.4
30/06/2019	13.3	3.3	19.8	13.4	4.3	18.9	63.5	32.9	99.6	149.8	726.5	0.0	1.8	0.0	4.5
	12.1	-2.1	26	12.2	-1.7	25.1	76.4	30.1	100.0	111.0	726.5	5.4	1.0	0.0	7.7

