

**WAMBO COAL
ENVIRONMENTAL REPORTING
1 JULY – 31 JULY 2017**

7 August 2017

**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: 27 and 28 July 2017
 Date obtained: 1 August 2017
 Date published: 7 August 2017

Table 1 - WCPL Surface and Mine Water Dam Results

Site	Date	pH	EC ($\mu\text{S}/\text{cm}$)	TSS (mg/L)	Comments
SW01	28/7/2017	7.28	620	5	Slow
SW02	28/7/2017	7.40	578	5	Slow
SW03	28/7/2017	7.25	527	5	Trickle
SW04	28/7/2017				Dry
SW05	28/7/2017				No flow
SW06	28/7/2017				Dry
SW07	28/7/2017				Dry
SW08	28/7/2017				Dry
SW14	27/7/2017	8.33	718	-	
SW15	27/7/2017	8.69	7440	24	
SW20	27/7/2017				No access
SW27	28/7/2017				Dry
SW31	27/7/2017	8.9	7650	-	
SW32a	28/7/2017				Dry
SW38	27/7/2017	8.94	7350	-	
SW39	28/7/2017				Dry
SW40	28/7/2017	7.57	586	5	Slow

Monitoring Frequency: Every 6 days
Sampling Method: AM15
Limits: 90 ug/m³ annual average limit

Date sampled: 5, 11, 17, 23 and 29 2017
Date obtained: 24 July 2017 (batch 1) and 4 August 2017 (batch 2)
Date published: 7 August 2017

Table 2 - WCPL HVAS

Site	Date	TSP (UG/m3)
HV01	5/7/2017	29.40
HV01	11/7/2017	35
HV01	17/7/2017	31.8
HV01	23/7/2017	54.1
HV01	29/7/2017	76.9
HV02	5/7/2017	46.50
HV02	11/7/2017	51
HV02	17/7/2017	32.4
HV02	23/7/2017	84.9
HV02	29/7/2017	102
HV03	5/7/2017	7.80
HV03	11/7/2017	24.30
HV03	17/7/2017	9.9
HV03	23/7/2017	14.7
HV03	29/7/2017	12.4
HV04	5/7/2017	8.70
HV04	11/7/2017	29.60
HV04	17/7/2017	5.4
HV04	23/7/2017	15.2
HV04	29/7/2017	12.0

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

Date sampled: 14 July 2017
Date obtained: 21 July 2017
Date published: 7 August 2017

Table 3 - WCPL Depositional Dust Gauges

Site	Date	Ash (g/m ²)	Total Insoluble Matter (g/m ²)	AR/IS Ratio	Comment
D01	14/7/2017	9.10	25.40	35.82	
D03	14/7/2017	3.90	6.20	62.90	
D07	14/7/2017	1.10	1.80	61.11	
D09	14/7/2017	1.30	2.00	65	
D11	14/7/2017	0.50	1.60	31.25	
D12	14/7/2017	1.40	1.90	73.68	
D17	14/7/2017	0.30	0.50	60	
D19	14/7/2017	0.80	1.50	53.33	
D20	14/7/2017	0.70	1.00	70	
D21	14/7/2017	0.50	0.60	83.33	
D22	14/7/2017	3.70	6.20	59.67	
D23	14/7/2017	0.70	1.60	43.75	
D24	14/7/2017	0.20	0.20	100	
D25	14/7/2017	0.70	1.00	70	
D26	14/7/2017	1.10	1.60	68.75	

Monitoring Frequency: Continuous
 Sampling Method: AM22
 Limits: 50 (ug/m³)

Date sampled: Dust readings recorded daily
 Date obtained: The next day for the preceding day's result
 Date published: 7 August 2017

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
1/7/2017	13.2	19.62	8.5	18.01	7.5	14.42	11.8	17.52
2/7/2017	10.7	19.57	8.5	17.96	6.6	14.38	8.1	17.47
3/7/2017	16.4	19.56	14.2	17.94	10.4	14.36	10.8	17.43
4/7/2017	15.3	19.53	12.8	17.91	7.4	14.32	7.2	17.38
5/7/2017	11.4	19.49	12.8	17.88	6.9	14.28	6.8	17.32
6/7/2017	13.2	19.46	12.8	17.85	7.3	14.24	7	17.26
7/7/2017	16	19.44	17.1	17.85	6.1	14.20	6.7	17.21
8/7/2017	14.2	19.41	18.1	17.85	8.7	14.17	8.8	17.16
9/7/2017	15.4	19.39	28	17.90	8.8	14.14	8	17.12
10/7/2017	11.5	19.35	17.3	17.90	7.3	14.10	7.4	17.06
11/7/2017	14.2	19.32	20	17.91	8.4	14.07	10.4	17.03
12/7/2017	23.3	19.34	14.7117	17.90	12.2	14.06	18	17.03
13/7/2017	16.9	19.33	10	17.86	8.1	14.03	12.6	17.01
14/7/2017	18.3	19.32	12.5	17.83	10	14.01	9.3	16.97
15/7/2017	9.2	19.27	9.3	17.78	5.9	13.97	7.2	16.92
16/7/2017	17	19.26	18.2	17.79	9.9	13.95	13.7	16.91
17/7/2017	14.2	19.23	12.6	17.76	7.6	13.92	10.3	16.87
18/7/2017	14.5252	19.21	15.5	17.75	7.4	13.88	7.6	16.83
19/7/2017	10.9	19.17	13.1	17.73	7	13.85	7.2	16.78
20/7/2017	12.5	19.14	19	17.73	7	13.82	6.8	16.73
21/7/2017	14.3	19.11	20.9	17.75	9.4	13.79	16.5	16.73
22/7/2017	18.2	19.11	21	17.76	7.9	13.76	8.3	16.69
23/7/2017	17.9	19.10	21.9	17.78	9	13.74	8.4	16.64
24/7/2017	13.9	19.08	24.3	17.82	8.5	13.71	8.4	16.60
25/7/2017	16	19.06	21.7	17.83	8.9	13.69	9.8	16.57
26/7/2017	28.6	19.11	33.4	17.91	10.6	13.68	10.8	16.54
27/7/2017	17	19.10	20.9	17.92	12.2	13.67	16.3	16.54
28/7/2017	17.5	19.09	31.8	17.99	8.4	13.64	8.8	16.51
29/7/2017	20.7	19.10	29.3	18.04	6.9	13.61	7.2	16.46

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
30/7/2017	21.7	19.11	28.4	18.09	10.7	13.60	10	16.43
31/7/2017	24.1	19.13	24.9	18.13	20.8	13.63	27.4	16.48

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

Date sampled: Blast readings recorded on 3, 5, 14, 24 and 31 July
 Date obtained: Following each blast event
 Date published: 7 August 2017

Table 5 - WCPL Blast Monitoring Results

Date & Time	ID	BM02 - Kelly		BM05 - Muller		BM07 - Thelander	
		dBL	mm/sec	dBL	mm/sec	dBL	mm/sec
3/07/2017 15:32:16	Montrose East B159	102.7	0.03	109.8	0.10	96.3	0.07
5/07/2017 15:00:14	M_22WMA-155	101.9	0.23	98.0	0.99	81.0	1.31
6/07/2017 15:30:25	Montrose 27WWA_151	94.5	0.05	99.6	0.41	69.6	0.49
14/07/2017 12:03:43	M_22WMA_167	103.9	0.08	104.3	0.77	96.4	0.78
14/07/2017 12:13:02	M_22WMA_167	100.0	0.10	104.2	0.40	93.2	0.34
24/07/2017 16:07:52	M_22WMA_161	98.7	0.09	104.0	0.82	72.3	1.07
24/07/2017 16:14:04	ME_21 WMA_164	106.0	0.13	106.4	0.65	71.5	0.47
31/07/2017 15:29:07	M_22WMA_162	97.4	0.04	99.2	0.30	83.1	0.31
31/07/2017 15:33:08	M_22WTA_165	100.9	0.10	102.4	1.18	87.1	1.38

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

Date sampled: Weather readings recorded daily
 Date obtained: 1 August 2017
 Date published: 7 August 2017

Table 6 - WCPL Meteorology

Date	Temperature (2m)			Temperature (10m)			Temperature Inversion			Humidity			Solar Radiation			RAIN mm	SUM RAIN mm	Wind Speed		
	Min	Average	Max	Min	Average	Max	Min	Average	Max	Min	Average	Max	Min	Average	Max			Min	Average	Max
1/7/2017	-0.2	5.6	15.3	0.3	6.7	15.9	-3.3	12.9	44.0	58.6	77.9	89.8	10.3	344.0	485.0	0.2	0.2	0.0	0.9	2.7
2/7/2017	-2.3	5.6	16.8	-1.4	6.7	17.0	0.6	13.5	34.2	55.8	77.3	89.1	0.0	334.4	453.6	0.0	0.2	0.0	0.7	3.0
3/7/2017	-1.3	7.3	16.3	-0.9	8.3	16.9	-1.0	12.4	60.8	69.3	81.0	89.0	-1.8	287.5	454.9	0.0	0.2	0.0	0.9	4.7
4/7/2017	8.4	15.7	20.6	10.1	16.8	21.1	3.5	13.8	41.0	34.2	58.5	86.4	-3.5	169.7	396.4	0.0	0.2	0.2	3.7	7.2
5/7/2017	8.3	14.2	19.5	9.3	14.9	19.8	1.6	8.5	34.9	34.8	44.6	53.4	-2.7	123.6	420.8	0.0	0.2	0.3	3.4	7.2
6/7/2017	3.0	11.2	17.9	5.0	11.9	18.1	-0.3	9.5	26.7	43.6	55.7	69.2	-2.3	137.2	533.7	0.0	0.2	0.0	2.4	5.2
7/7/2017	-1.4	7.8	19.1	-0.6	9.1	19.5	0.3	16.3	38.5	40.3	64.3	83.3	-2.3	133.2	558.8	0.0	0.2	0.0	1.1	4.6
8/7/2017	1.7	9.3	17.7	4.7	10.9	18.0	-0.5	19.7	69.9	42.8	58.0	71.9	-2.3	114.6	554.6	0.0	0.2	0.0	2.1	6.3
9/7/2017	0.3	8.4	17.3	2.4	10.0	17.6	0.5	20.4	51.6	44.2	64.0	80.9	-2.1	134.7	529.2	0.0	0.2	0.0	1.7	5.4
10/7/2017	1.1	8.8	16.8	2.6	10.4	16.9	-1.4	19.6	49.3	47.6	63.3	77.7	-2.2	120.7	535.2	0.0	0.2	0.0	1.3	4.0
11/7/2017	-2.3	6.7	16.9	-0.9	8.0	17.1	1.4	16.2	47.3	49.4	68.6	83.4	-2.2	128.8	616.7	0.0	0.2	0.0	0.7	2.8
12/7/2017	2.5	8.6	16.2	3.3	9.8	16.5	0.4	15.4	56.0	62.8	75.9	85.5	-2.3	77.6	497.3	0.2	0.4	0.0	1.1	4.4
13/7/2017	0.5	7.8	17.5	1.4	9.0	17.6	-3.7	14.4	49.0	59.8	78.9	89.9	-2.4	131.4	517.1	0.2	0.5	0.0	0.7	2.9
14/7/2017	-0.7	9.7	20.5	-0.2	10.5	20.7	0.0	9.9	35.6	55.6	74.3	89.0	-2.5	108.5	594.4	0.2	0.7	0.0	1.3	4.9
15/7/2017	7.9	11.7	17.0	8.6	12.6	17.3	0.6	11.7	23.3	64.7	79.0	89.5	-2.4	56.5	543.0	0.2	0.9	0.0	1.2	4.4
16/7/2017	4.4	9.8	17.8	5.3	10.8	18.3	0.4	12.4	31.2	53.9	74.7	89.7	-2.5	129.2	575.8	0.0	0.9	0.0	0.7	1.9
17/7/2017	0.7	9.5	19.5	1.7	10.6	19.7	0.8	14.0	32.0	54.2	73.2	87.3	-2.9	115.4	680.2	0.0	0.9	0.0	0.9	4.1
18/7/2017	1.7	12.6	23.1	3.4	13.8	23.5	2.2	15.3	44.3	38.8	65.7	88.2	-2.9	125.0	530.3	0.0	0.9	0.0	2.4	7.2
19/7/2017	8.8	12.5	16.9	9.4	13.0	17.0	-0.8	6.5	13.8	42.1	49.5	57.9	-2.3	88.9	559.1	0.0	0.9	1.1	3.3	6.8
20/7/2017	2.6	12.1	19.0	3.4	12.9	19.4	-2.0	10.0	50.4	29.5	52.3	78.8	-2.3	145.3	576.9	0.0	0.9	0.0	3.0	6.3
21/7/2017	-1.2	7.1	17.3	-0.1	8.4	17.5	-3.1	15.9	49.8	40.4	57.2	73.8	-2.7	127.4	620.2	0.0	0.9	0.0	1.0	3.4
22/7/2017	-3.5	5.8	18.0	-2.2	7.5	18.3	0.1	20.3	74.7	36.2	61.1	80.9	-2.5	143.7	583.4	0.0	0.9	0.0	1.4	5.3
23/7/2017	-0.6	11.9	19.9	0.6	13.0	20.3	2.2	13.4	74.4	27.3	45.6	75.9	-2.6	147.4	556.8	0.0	0.9	0.0	3.1	6.8
24/7/2017	0.9	11.6	20.8	2.4	13.1	20.9	-3.1	18.5	59.6	32.4	46.0	69.6	-2.6	151.4	575.7	0.0	0.9	0.0	2.1	5.9
25/7/2017	-0.7	12.5	20.7	2.2	13.8	21.0	-0.5	15.4	84.6	39.1	54.3	77.9	-2.3	148.2	561.8	0.0	0.9	0.0	2.8	5.5
26/7/2017	3.6	14.0	23.2	5.9	15.5	23.5	1.2	18.8	60.2	27.8	43.7	63.6	-2.3	148.6	564.0	0.0	0.9	0.0	2.9	7.7
27/7/2017	0.0	9.1	18.5	1.2	10.2	18.4	-4.1	14.7	51.9	40.7	60.5	76.7	-2.2	150.3	578.2	0.0	0.9	0.0	0.7	2.6
28/7/2017	-1.4	9.0	21.4	0.7	10.8	21.7	1.7	22.6	64.9	25.5	53.2	81.6	-2.5	118.5	569.2	0.0	0.9	0.0	1.7	6.5
29/7/2017	-3.1	11.5	20.4	-1.1	12.8	20.8	1.0	17.2	50.5	25.7	43.4	72.0	-2.6	159.5	597.2	0.0	0.9	0.0	2.2	6.9
30/7/2017	9.3	17.3	25.2	11.5	18.2	25.5	-2.8	11.0	30.9	21.8	30.3	53.8	-2.3	88.8	662.6	0.0	0.9	0.0	2.3	5.7
31/7/2017	9.1	13.2	22.2	10.1	13.9	19.4	-76.2	8.1	29.7	52.5	63.7	74.9	-2.4	39.1	174.7	0.4	1.2	0.0	2.1	5.9
MONTH	-3.5	10.3	25.2	-2.2	11.4	25.5	-76.2	14.5	84.6	21.8	61.1	89.9	-3.5	142.9	680.2	1.2		0.0	1.8	7.7

