

WAMBO COAL PTY LIMITED

MONTHLY ENVIRONMENTAL MONITORING REPORT

May 2016

Table 1 - Monthly Surface Water Results

Sample Location	pH	EC (µS/cm)	TSS (mg/L)	TDS (mg/L)	Oil & Grease (mg/L)	Temp (°C)	Comments
WOLLOMBI BROOK							
SW01	7.5	985	<5	528		12.6	
SW03	7.7	898	<5	458		10.3	
SW02	7.8	1085	<5	586		12.8	
SW40	7.8	900	<5	460		12.7	
NORTH WAMBO CREEK							
SW04							Dry
SW27a							Dry
SW32a							Dry
SW05							Pool
SOUTH WAMBO/STONY CREEK							
SW06							Pool
SW07	7.6	748	<5	384		12.5	
SW08							Dry
WATERFALL CREEK							
SW39							Dry
MINE WATER DAMS							
SW12	8.9	3670				19	
SW14							No access
SW15	8.8	4490				20.1	
SW20							Dry
SW29							No access
SW30	9.2	4700				19.6	
SW31	9.1	3590				18.8	
SW38	8.9	4630				19.7	

Note: Figures in bold fall outside trigger levels.

Table 2 - Ground Water Results

Sample Location	pH	EC (μ S/cm)	Depth to Water (m)	Temp ($^{\circ}$ C)	Comments
GW02					No groundwater monitoring scheduled for May
GW11					
P106					
P109					
P110					
P111					
P114					
P116					
P202					
P206					
P301					
P315					
GW12					
GW13					
GW14					
GW15					
GW16					
GW17					
GW18					
GW19					
GW21					
GW22					
P1*					
P12*					
P13*					
P15*					
P16*					
P17*					
P18*					
P20*					

Note: All depths measured to top of casing, except United bores which are to ground. Figures in bold are outside trigger levels listed in Table 5 of the Ground Water Monitoring Programme (GWMP), which is part of the Site Water Management Plan.

* Represents data that is provided on a quarterly basis. The results are to be updated once available.

Table 3 - Dust Deposition Results

Site	Insoluble Solids (IS) (g/m ² .month)	Ash Residue (AR) (g/m ² .month)	IS:AR Ratio	IS YTD Average (g/m ² .month)	AR YTD Average (g/m ² .month)
D01*	9.3	4.0	43	3.7	2.3
D03*	20.0	8.8	44	3.0	2.4
D07	4.1	2.4	59	4.4	2.5
D09	2.6	1.6	62	2.6	1.6
#D11	1.4	1.0	71	3.6	3
#D12*	3.5	2.2	63	3.1	2.1
#D17	1.6	1.4	88	1.8	1.1
D19	1.7	1.3	76	3.1	2.1
D20	1.0	0.8	80	1.7	1.0
#D21	1.4	1.2	86	2.3	1.6
#D22	1.9	1.4	74	2.6	1.9
D23	1.3	0.9	69	1.4	1.1
#D24	1.5	1.3	87	1.1	0.7
#D25	1.7	1.3	76	3.5	2.7
D26	1.2	0.8	67	2.2	1.5

Note:

Results in **bold** are YTD average above 4g/m²/month

Results # are dust gauges not on WCPL owned land. DD gauges on Wambo Coal land and above criteria level are not considered non-compliance.

* Contaminated sample

Table 4 - HVAS Results

Date of Run	HV01 - Coralie TSP ($\mu\text{g}/\text{m}^3$)	HV02 - Caban TSP ($\mu\text{g}/\text{m}^3$)	HV03 - Thelander TSP ($\mu\text{g}/\text{m}^3$)	HV04 - Muller TSP ($\mu\text{g}/\text{m}^3$)
5/05/2016	27.2	64.3	17.3	21.4
11/05/2016	16.6	47.9	15	14.6
17/05/2016	33.5	104	24.9	15.9
23/05/2016	61.2	75.6	29.8	32.4
29/05/2016	29.1	63.3	10.2	7.7
Monthly Mean	33.5	71	19.4	18.4
Yearly Mean	52	56.9	49	82.8

Table 5 - Blast Results

Peabody Wambo Blasting Results 2016													
Blast Number	Date	Time	Blast ID	Homestead (BM01)		Kelly (BM02)		Muller (BM05)		Harris (BM03)		Thelander (BM07)	
				Overpressure dB(L)	Vibration (mm/sec)	Overpressure dB(L)	Vibration (mm/sec)	Overpressure dB(L)	Vibration (mm/sec)	Overpressure dB(L)	Vibration (mm/sec)	Overpressure dB(L)	Vibration (mm/sec)
25	5/05/2016	15:04:00	M22WWA	99.7	0.04	81.3	0.05	99.6	0.09	98.9	0.04	89.9	0.11
26	9/05/2016	16:06:06	M_21WRC_1	109.1	0.05	99.2	0.05	105.4	0.39	112.3	0.08	103.6	0.41
27	11/05/2016	15:18:07	M_23RCA_6	112.2	0.14	98.9	0.07	108.6	0.5	106.6	0.06	102	0.68
28	13/05/2016	11:03:03	M_19WTA_4	101.7	0.09	95.3	0.19	103.3	0.3	NRR	<0.26	95	0.42
29	13/05/2016	11:15:00	M_23RCA_7	100.3	0.07	87.4	0.05	100.1	0.53	NRR	<0.26	98.2	0.31
30	17/05/2016	0:00:00	MA_8 & M_23	101.4	0.07	88.9	0.05	101	0.14	100.3	0.06	98.9	0.19
31	20/05/2016	15:18:39	M_19WMA_8	93.9	0.08	81.3	0.12	101.4	0.3	100.8	0.06	94	0.27
32	20/05/2016	15:23:31	M_21WMA_10	98.7	0.05	82.9	0.24	105.4	0.42	100.3	0.06	101.1	0.4
33	20/05/2016	15:28:29	M_23RCA_9	91.2	0.04	79.4	0.05	102.2	0.28	100.3	0.05	98.9	0.28
34	25/05/2016	11:06:43	M_19WTA_17	91.8	0.1	NRR	<0.48	101	0.49	99.4	0.08	100.6	0.43
35	27/05/2016	16:03:01	M21_WMA_24	112.3	0.17	98.2	0.08	103.9	0.74	107.4	0.13	104.3	0.75

- * Trigger unit SMS unable to be received by monitoring unit. Blast below monitoring unit vibration trigger threshold
- ** Hardware failure
- *** Software failure

Table 6 - PM₁₀ Results

Date	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
1/05/2016	14.50	19.24	14.60	19.80	11.70	18.24	12.50	22.23
2/05/2016	7.59	19.15	6.87	19.70	5.69	18.14	5.66	22.10
3/05/2016	9.50	19.07	9.80	19.62	7.70	18.05	7.00	21.98
4/05/2016	8.77	18.98	8.60	19.53	6.13	17.95	6.97	21.86
5/05/2016	13.60	18.94	17.90	19.52	9.10	17.88	9.20	21.76
6/05/2016	11.50	18.88	19.60	19.52	8.80	17.81	10.90	21.67
7/05/2016	14.30	18.84	20.00	19.52	13.98	17.78	18.36	21.64
8/05/2016	25.40	18.89	36.50	19.65	25.70	17.84	35.80	21.75
9/05/2016	31.00	18.99	37.70	19.79	22.40	17.88	32.20	21.83
10/05/2016	18.00	18.98	20.28	19.80	13.59	17.85	18.40	21.81
11/05/2016	8.90	18.90	13.14	19.75	8.60	17.77	8.18	21.70
12/05/2016	8.50	18.82	16.50	19.72	8.40	17.70	8.27	21.60
13/05/2016	12.30	18.77	22.90	19.75	9.90	17.64	9.10	21.51
14/05/2016	9.30	18.70	19.70	19.75	7.12	17.57	6.76	21.40
15/05/2016	9.90	18.64	16.50	19.72	9.43	17.51	7.03	21.30
16/05/2016	10.68	18.58	26.60	19.77	8.80	17.44	8.39	21.20
17/05/2016	14.20	18.54	46.00	19.96	15.80	17.43	17.40	21.17
18/05/2016	12.90	18.50	33.30	20.06	12.80	17.40	9.80	21.09
19/05/2016	12.90	18.46	43.60	20.23	7.90	17.33	7.10	20.99
20/05/2016	17.10	18.45	29.30	20.29	15.10	17.31	14.50	20.95
21/05/2016	14.59	18.42	48.97	20.49	19.70	17.33	21.29	20.95
22/05/2016	26.40	18.48	25.60	20.53	31.40	17.43	32.60	21.03
23/05/2016	16.70	18.47	28.30	20.58	20.00	17.45	15.10	20.99
24/05/2016	5.56	18.38	21.80	20.59	16.79	17.44	11.40	20.92
25/05/2016	0.20	18.25	21.40	20.60	11.20	17.40	8.70	20.84
26/05/2016	0.90	18.13	33.50	20.68	10.50	17.35	8.90	20.76
27/05/2016	9.00	18.07	13.90	20.64	11.90	17.31	8.20	20.67
28/05/2016	6.60	17.99	15.10	20.60	5.71	17.24	5.50	20.57
29/05/2016	4.70	17.90	9.70	20.53	6.01	17.16	4.60	20.46
30/05/2016	5.90	17.82	10.90	20.46	4.40	17.08	4.30	20.36
31/05/2016	10.70	17.77	20.60	20.47	2.41	16.98	2.19	20.24

Table 7 - Meteorological Data

Date	Temperature (2m)			Temperature (10m)			Temperature Inversion			Humidity			Solar Radiation			Rain	Wind Speed		
	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	mm	Min	Avg	Max
01/05/16	15.0	18.8	22.5	15.5	19.5	23.1	2.6	8.2	17.2	73.7	87.6	98.6	-1.7	42.4	348.7	9.7	0.0	2.1	5.2
02/05/16	10.9	18.6	24.3	11.9	19.6	24.6	-4.7	12.1	53.2	49.7	77.1	98.0	-1.7	117.9	675.6	0.2	0.0	1.7	5.0
03/05/16	15.6	19.9	24.6	16.8	20.5	24.8	-3.5	7.0	18.4	41.8	66.4	90.5	-1.7	146.6	722.9	0.0	0.5	3.5	6.7
04/05/16	11.5	18.5	25.5	13.3	19.4	25.6	-2.9	12.0	39.6	37.8	61.9	92.4	-1.7	174.6	648.0	0.0	0.0	2.4	5.4
05/05/16	8.1	15.6	25.2	9.5	16.8	25.3	-5.5	14.6	36.4	32.6	72.3	97.7	-1.8	171.9	645.3	0.0	0.0	1.5	4.7
06/05/16	7.0	15.8	27.5	8.3	16.9	27.3	-4.3	13.5	38.8	29.9	72.4	97.6	-2.3	169.1	639.0	0.0	0.0	1.1	4.3
07/05/16	7.1	15.5	24.9	8.3	16.6	25.1	-2.7	14.3	36.5	50.2	80.9	97.8	-2.2	143.3	628.3	0.0	0.0	0.6	1.8
08/05/16	10.9	16.5	22.9	12.1	17.4	23.3	-2.6	11.9	34.7	63.4	87.6	97.5	-1.7	55.9	479.3	0.0	0.0	0.5	1.6
09/05/16	15.7	19.5	24.7	16.7	20.2	25.0	1.4	9.3	18.8	57.3	84.7	96.9	-1.7	42.9	402.9	0.9	0.0	1.6	5.0
10/05/16	16.4	19.3	22.1	17.0	19.8	22.3	-1.1	6.8	16.1	48.3	62.5	78.9	-1.7	160.8	705.4	0.2	1.9	4.5	7.9
11/05/16	12.8	16.3	21.0	13.3	16.7	21.2	-1.9	5.4	11.4	31.0	57.3	79.1	-1.7	166.1	634.7	0.0	2.1	4.4	7.5
12/05/16	11.8	16.3	21.6	12.8	16.9	22.0	-2.8	6.9	15.5	44.2	58.3	73.5	-1.7	140.7	656.7	0.0	1.3	3.7	7.5
13/05/16	10.7	17.4	25.9	13.1	18.4	26.1	-4.0	12.1	45.5	31.0	63.8	88.8	-1.8	163.5	618.5	0.0	0.0	2.4	4.9
14/05/16	4.2	13.1	25.8	5.9	14.7	25.9	-8.1	19.3	50.1	30.1	73.8	97.5	-2.6	160.9	617.8	0.0	0.0	0.9	3.3
15/05/16	4.2	14.7	22.8	5.5	15.9	23.4	-0.6	14.9	75.2	32.3	64.6	96.8	-2.7	86.0	556.0	0.0	0.0	2.2	6.2
16/05/16	6.8	15.5	24.5	8.1	16.8	25.1	-2.5	15.9	38.9	38.5	70.6	96.2	-2.1	122.4	654.1	0.0	0.0	0.6	3.1
17/05/16	9.7	17.2	26.2	10.6	18.3	26.3	-2.1	13.7	42.5	37.5	66.8	94.0	-2.0	129.3	585.6	0.0	0.0	2.1	5.6
18/05/16	6.8	15.1	22.8	7.8	16.0	22.7	-2.2	11.9	34.3	33.8	66.0	96.3	-2.3	78.5	502.7	0.0	0.0	1.5	3.8
19/05/16	5.7	15.4	23.4	8.0	16.5	23.6	-3.1	14.0	43.4	31.3	59.4	95.5	-2.2	145.4	568.5	0.0	0.0	2.7	5.8
20/05/16	8.8	16.4	24.8	10.3	17.3	24.5	-9.0	10.7	33.6	36.1	60.0	87.2	-2.0	144.5	561.8	0.0	0.0	2.2	5.4
21/05/16	7.2	14.8	23.0	8.5	15.9	23.2	-2.6	13.7	34.4	51.9	81.4	97.0	-2.2	97.5	662.7	0.0	0.0	1.0	4.9
22/05/16	8.5	15.6	26.1	10.3	16.9	26.1	-9.9	15.7	36.7	43.7	80.9	98.0	-2.2	123.5	527.8	0.0	0.0	1.0	4.0
23/05/16	6.2	15.7	27.2	8.8	17.3	27.4	-1.0	20.3	78.9	26.3	58.8	98.2	-2.2	121.8	518.2	0.0	0.0	2.3	6.9
24/05/16	4.9	7.5	10.9	5.1	13.1	21.1	4.3	25.0	45.1	18.9	55.2	90.5	-3.3	117.1	602.3	0.0	0.0	3.7	8.8
25/05/16					13.4						48.5			133.7		0.0		3.3	
26/05/16					13.6						62.5			61.5		0.0		5.0	
27/05/16					13.3						54.4			137.3		0.0		5.3	
28/05/16					11.2						64.7			103.3		0.4		4.7	
29/05/16					11.1						63.2			134.9		0.0		4.2	
30/05/16					9.1						62.2			132.4		0.0		1.7	
31/05/16					11.0						63.3			127.7		0.0		1.9	
MONTH					17.4						69.6			125.9	722.9	11.3	0.0	2.1	8.8

