

WAMBO COAL PTY LIMITED

MONTHLY ENVIRONMENTAL MONITORING REPORT

JANUARY 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	542	8	264		21.7	
SW03	7.5	533	25	307	<5	21.2	
SW02	7.5	650	<5	326	<5	21.2	
SW40	6.8	36	67	80		21.4	
NORTH WAMBO CREEK							
SW04							To wet
SW27a	7.2	235	48	184		29.9	Sample 7/1
SW32a	7.3	199	53	153		29.5	Sample 7/1
SW05	7.3	256	250	580		21.3	
SOUTH WAMBO/STONY CREEK							
SW06	6.8	119	53	131		21.2	
SW07	7.1	201	96	179		21.4	
SW08							To wet
WATERFALL CREEK							
SW39	7.9	124	2600	863		21.3	
MINE WATER DAMS							
SW12	8.8	2960				26.1	
SW14	9.9	550				27.2	
SW15	8.7	5230				27.0	
SW20							Dry
SW29							Buried
SW30	9.4	5280				27.2	
SW31	9.3	2570				27.1	
SW38							Client to sample

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					Sampling not scheduled for January
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*	12.5	3.0	24	0	0
D03	2.7	2.3	85	2.7	2.3
D07	4.0	2.0	50	4	2.0
D09	2.4	1.3	54	2.4	1.3
#D11	2.2	1.8	82	2.2	1.8
#D12	2.4	1.6	67	2.4	1.6
#D17	1.5	0.8	53	1.5	0.8
D19	1.8	1.2	67	1.8	1.2
D20	0.5	0.4	80	0.5	0.4
#D21	1.5	1.3	87	1.5	1.3
#D22	1.6	1.2	75	1.6	1.2
D23	1.6	1.2	75	1.6	1.2
#D24	0.9	0.7	78	2.3	1.8
#D25	2.3	1.8	78	2.6	1.9
D26	1.3	1.0	77	1.3	1.0

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 ($\mu\text{g}/\text{m}^3$)
6/01/2016	9.4	4.3	4.8	5.5
12/01/2016	69.2	81.7	56.2	59.2
18/01/2016	32.9	42.5	35.1	48.1
24/01/2016	50.3	53.2	54.4	69.8
30/01/2016	48.4	56.1	44.6	67.7
Monthly Mean	42.0	47.6	39.0	50.1
Yearly Mean	42.0	47.6	39.0	50.1

Table 5 - Blast Results

Peabody Wambo Blasting Results 2016													
Peabody ENERGY													
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)
1	8/01/2016	9:19:32	M19WRC5 & M22RCA4	101.6	0.07	99.8	0.08	106.2	0.06	106.2	0.06	102.4	0.23
2	12/01/2016	11:05:48	M27WWA1	97.2	0.04	89.6	0.2	107.5	0.51	100.8	0.05	102	0.6
3	14/01/2016	11:11:59	M21WRA2	107.2	0.04	95.7	0.07	109.6	0.3	107.6	0.05	107.5	0.33
4	19/01/2016	15:19:21	BS9WRA2	NRR	NRR	90.9	0.42	102.2	0.09	109.4	0.11	102.8	0.13
5	21/01/2016	11:03:48	M21WRA3	103.7	0.07	96.3	0.05	111.8	0.38	103.3	0.05	106.3	0.31
6	28/01/2016	15:03:56	M20WMA3	74.3	0.14	90.9	0.09	103	0.57	100.3	0.1	92.9	0.65
7	29/01/2016	11:11:26	BS9WTA3	NRR	NRR	95.7	0.2	104.5	0.08	113.6	0.09	96.8	0.11

- * 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
1/01/2016	18.5	18.5	17.4	17.4	18.8	18.8	20.4	20.4
2/01/2016	23.1	20.8	20.0	18.7	22.8	20.8	21.7	21.1
3/01/2016	15.5	19.0	12.7	16.7	13.6	18.4	17.6	19.9
4/01/2016	10.9	17.0	7.7	14.5	7.9	15.8	8.5	17.1
5/01/2016	4.0	14.4	2.8	12.1	2.8	13.2	2.8	14.2
6/01/2016	3.8	12.6	3.6	10.7	3.9	11.6	3.3	12.4
7/01/2016	10.4	12.3	9.2	10.5	9.6	11.3	10.9	12.2
8/01/2016	18.2	13.1	18.3	11.5	16.9	12.0	19.4	13.1
9/01/2016	25.8	14.5	24.4	12.9	26.7	13.7	27.8	14.7
10/01/2016	26.5	15.7	20.7	13.7	22.1	14.5	23.9	15.6
11/01/2016	21.3	16.2	25.2	14.7	18.3	14.9	23.8	16.4
12/01/2016	23.2	16.8	27.6	15.8	21.1	15.4	20.8	16.7
13/01/2016	31.0	17.9	35.0	17.3	34.2	16.8	40.4	18.6
14/01/2016	19.3	18.0	23.6	17.7	18.3	16.9	24.7	19.0
15/01/2016	5.8	17.2	5.9	16.9	6.0	16.2	5.9	18.1
16/01/2016	15.1	17.0	12.0	16.6	14.4	16.1	15.7	18.0
17/01/2016	8.8	16.5	7.9	16.1	7.9	15.6	11.7	17.6
18/01/2016	10.8	16.2	11.4	15.9	12.0	15.4	14.0	17.4
19/01/2016	13.8	16.1	19.7	16.1	9.5	15.1	13.4	17.2
20/01/2016	17.9	16.2	33.0	16.9	15.4	15.1	19.5	17.3
21/01/2016	19.9	16.4	34.1	17.7	18.2	15.3	19.9	17.4
22/01/2016	15.8	16.3	17.5	17.7	9.9	15.0	14.1	17.3
23/01/2016	14.3	16.2	9.3	17.3	Invalid	15.0	7.8	16.9
24/01/2016	27.5	16.7	22.8	17.6	22.5	15.3	23.4	17.1
25/01/2016	32.7	17.4	27.4	18.0	28.1	15.9	29.8	17.6
26/01/2016	28.3	17.8	15.5	17.9	17.9	16.0	17.7	17.7
27/01/2016	Invalid	17.8	13.7	17.7	12.6	15.8	18.2	17.7
28/01/2016	Invalid	17.8	12.3	17.5	10.4	15.6	12.6	17.5
29/01/2016	7.0	17.4	14.4	17.4	7.5	15.3	10.3	17.2
30/01/2016	19.3	17.4	19.5	17.5	16.6	15.4	20.1	17.3
31/01/2016	23.0	17.6	24.8	17.7	18.2	15.5	16.0	17.3

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
01/01/16	15.2	21.8	28.5	16.3	22.3	28.5	-3.1	5.9	14.5	43.7	65.9	92.3	-1.6	337.2	1022.4	0.0	0.5	2.4	6.0
02/01/16	16.6	21.6	27.0	17.5	22.0	26.9	-5.0	5.3	11.9	47.1	67.0	90.2	-1.6	221.4	950.3	0.0	0.0	2.7	6.6
03/01/16	17.6	20.2	24.5	18.3	20.7	24.7	-2.3	5.8	10.6	57.7	79.7	96.1	-1.6	99.4	503.2	3.4	0.3	1.9	7.3
04/01/16	17.6	19.2	22.2	18.2	19.6	22.3	-6.6	4.9	9.7	72.2	91.3	96.8	-1.6	104.3	1098.3	14.3	0.0	2.0	7.7
05/01/16	18.1	19.0	20.3	18.6	19.5	20.6	2.9	6.3	9.4	90.8	95.9	97.4	-1.6	54.2	382.0	69.2	1.0	2.7	5.1
06/01/16	16.9	18.6	20.6	17.5	19.2	20.9	2.5	7.0	9.2	74.5	87.2	96.4	-1.6	60.3	411.2	17.8	0.9	2.7	5.5
07/01/16	15.2	20.6	26.1	16.7	21.1	26.1	-5.0	6.6	28.0	47.0	66.0	91.5	-1.6	244.0	1114.4	0.0	0.0	2.9	6.1
08/01/16	12.6	20.7	27.7	13.9	21.3	27.6	-9.3	7.3	20.6	41.6	67.6	96.8	-1.6	352.1	1094.9	0.0	0.0	1.4	4.7
09/01/16	16.2	21.9	27.8	17.1	22.4	27.7	-3.1	6.2	14.3	47.3	73.5	91.0	-1.6	222.8	1167.6	0.0	0.0	1.3	3.6
10/01/16	16.5	23.8	30.9	17.6	24.4	30.8	-4.4	7.2	16.2	43.2	71.6	96.6	-1.6	348.8	997.6	0.0	0.0	1.5	4.4
11/01/16																			
12/01/16	19.5	28.3	38.7	20.3	28.9	38.6	-8.8	7.1	18.4	27.9	62.5	95.3	-1.6	257.6	1173.9	0.0	0.0	2.3	6.6
13/01/16	20.8	26.5	33.5	21.9	27.0	33.6	-7.5	6.9	18.4	48.9	71.0	90.4	-1.6	277.9	958.3	0.0	0.0	1.2	3.6
14/01/16	19.4	28.9	40.8	20.0	29.5	40.1	-9.2	6.6	18.7	26.4	66.2	96.4	-1.6	267.5	948.2	3.0	0.0	2.7	6.7
15/01/16	13.7	16.6	21.4	14.0	17.0	21.5	-8.9	5.1	13.8	62.9	86.1	96.4	-1.6	89.8	847.7	34.8	0.7	2.3	5.0
16/01/16	14.4	19.2	23.7	15.2	19.7	23.9	-3.6	6.1	13.9	45.7	68.1	88.3	-1.6	158.0	1094.8	0.2	0.5	2.6	6.3
17/01/16	16.2	18.9	23.4	17.0	19.3	23.2	-4.6	5.2	15.2	63.4	83.7	95.6	-1.6	132.0	692.4	1.2	0.0	1.5	4.8
18/01/16	14.1	21.4	29.3	15.0	21.9	28.5	-12.9	6.7	19.8	36.9	71.9	97.7	-1.6	308.4	1125.8	0.0	0.0	1.1	3.1
19/01/16	14.6	24.5	34.9	16.0	25.0	34.0	-10.9	6.7	32.9	21.3	64.6	97.3	-1.6	339.6	992.3	0.0	0.0	1.6	4.6
20/01/16	16.1	27.1	38.0	17.1	27.7	37.3	-9.2	8.0	30.1	21.9	57.2	95.2	-1.6	339.0	990.2	0.0	0.0	2.0	6.2
21/01/16	21.4	28.3	38.8	22.4	28.8	38.4	-8.3	7.1	33.9	25.6	61.6	95.5	-1.6	242.1	1047.6	8.1	0.0	1.9	9.2
22/01/16	22.1	25.3	33.1	22.8	25.7	33.2	-4.9	5.6	13.9	54.4	88.1	97.1	-1.6	139.0	1031.7	29.3	0.0	1.1	3.7
23/01/16	20.3	25.3	31.7	21.1	25.7	31.5	-4.9	5.6	15.3	41.5	75.7	94.8	-1.6	209.4	1114.1	0.5	0.1	2.9	6.8
24/01/16	19.3	23.0	27.5	20.3	23.4	27.4	-2.8	5.8	14.0	60.5	78.0	95.4	-1.6	165.6	948.1	0.0	0.0	1.8	5.0
25/01/16	19.7	23.7	28.2	20.5	24.1	28.2	-2.5	6.0	11.5	60.6	76.1	92.5	-1.6	153.2	1151.4	0.0	0.0	2.3	6.4
26/01/16	20.4	24.0	28.3	21.2	24.4	28.2	-2.6	6.0	11.6	55.2	71.8	89.0	-1.6	214.0	1194.4	0.0	0.8	3.1	6.4
27/01/16	19.4	23.0	26.9	20.5	23.5	26.9	-1.8	6.4	13.5	53.4	73.1	88.5	-1.6	145.3	1029.9	0.0	0.0	2.1	4.7
28/01/16	20.0	23.9	30.6	20.6	24.2	30.3	-8.3	4.5	16.6	53.9	81.9	96.4	-1.6	182.4	1089.9	3.5	0.0	1.0	3.0
29/01/16	20.5	24.1	29.4	21.5	24.6	29.3	-14.5	5.6	20.7	54.1	77.7	96.3	-1.6	185.6	866.6	0.0	0.0	1.7	6.5
30/01/16	18.7	25.6	32.5	19.7	26.1	32.6	-8.5	6.6	19.2	50.0	75.1	96.5	-1.6	294.2	995.1	0.0	0.0	1.5	6.4
31/01/16	16.7	24.4	32.1	17.7	25.2	32.0	-3.9	9.3	43.7	21.2	56.1	97.0	-1.6	334.7	986.0	0.0	0.0	2.5	6.8
MONTH	12.6	23.0	40.8	13.9	23.5	40.1	-14.5	6.3	43.7	21.2	73.7	97.7	-1.6	216.0	1,194.4	210.0	0.0	2.0	9.2

