

**WAMBO COAL PTY LIMITED**

**MONTHLY ENVIRONMENTAL MONITORING REPORT**

**OCTOBER 2015**

**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
<b>WOLLOMBI BROOK</b>							
SW01	7.4	907	<5	508		21.3	
SW03	7.0	883	<5	534	<5	19.6	
SW02	7.5	1005	<5	506	<5	23.1	
SW40	7.6	894	<5	534		21.5	
<b>NORTH WAMBO CREEK</b>							
SW04							Dry
SW27a							Dry
SW32a							Dry
SW05	7.4	1600	9	882		15.5	
<b>SOUTH WAMBO/STONY CREEK</b>							
SW06	7.0	<b>602</b>	<5	253		19.3	
SW07	8.0	<b>1118</b>	8	668		24.4	
SW08							Dry
<b>WATERFALL CREEK</b>							
SW39							Dry
<b>MINE WATER DAMS</b>							
SW12	8.9	3580				21.4	
SW14	8.1	869				21.8	
SW15	9.0	8080	41	4720	<5	26.1	
SW20							Dry
SW29							Dry
SW30	9.1	6050				21.3	
SW31	9.1	7660				20.5	
SW38	8.9	8000				25.8	

**Note:** Figures in bold fall outside trigger levels.

**Table 2 - Ground Water Results**

Sample Location	pH	EC (µS/cm)	Depth to Water (m)	Temp (°C)	Comments
GW02	7.20	484	6.04	20.2	
GW11	7.10	514	4.38	18.4	
P106	6.60	660	8.30	19.8	
P109	6.90	745	5.58	18.7	
P110	6.50	741	5.18	18.6	
P111	6.40	752	6.86	18.1	
P114	6.50	<b>7,450</b>	8.64	19.4	
P116	6.70	620	5.12	18.4	
P202	7.30	4,780	8.08	18.5	
P206	7.40	2,060	16.12	19.2	
P301	6.70	5,540	14.54	20.3	
P315	6.20	361	6.98	19.7	
GW12					Dry
GW13	6.90	3,300	5.45	19.8	
GW14					Dry
GW15	7.10	683	9.79	20.6	
GW16	7.40	525	7.23	19.5	
GW17	7.20	5,150	10.44	20.5	
GW18					Dry
GW19					Dry
GW21					Dry
GW22	8.40	6,860	35.88	21.4	
P1*	6.81	6,120	25.20		
P12*	7.32	936	6.82		
P13*	6.71	877	7.07		
P15*	7.86	6240	6.15		
P16*	7.45	6,810	7.15		
P17*	7.70	8060	5.93		
P18*	7.38	6,420	7.23		
P20*	7.35	7,950	7.65		

**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 <sup>2</sup> .month)	Ash Residue (AR) (g/m <sup>2</sup> .month)	IS:AR Ratio	IS YTD Average (g/m <sup>2</sup> .month)	AR YTD Average (g/m <sup>2</sup> .month)
D01*	7.8	3.6	46	1.7	1.3
D03*	7.3	3.3	45	3	1.8
D07	5.5	3.7	67	<b>5.4</b>	3.5
D09*	11.1	4.3	39	<b>5</b>	2.6
#D11	9.2	3.4	37	2	1.3
#D12	5.3	3.7	70	3.1	2.0
#D17	1.5	1.0	67	1.4	0.8
D19	6.0	3.8	63	3.1	1.8
D20	1.9	1.1	58	1.5	0.9
#D21	2.6	2.0	77	1.8	1.1
D22	3.2	2.4	75	1.6	1.2
D23	1.7	1.2	71	1.8	1.1
#D24	1.1	0.7	64	1.4	0.9
#D25	3.1	2.4	77	2.4	1.8
D26	3.1	1.8	58	1.9	1.2

**Note:**

Results in **bold** are YTD average above 4g/m<sup>2</sup>/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 ( $\mu\text{g}/\text{m}^3$ )
2/10/2015	74.3	78.8	67.7	115
8/10/2015	112	74.8	119	95.2
14/10/2015	147	48.1	78	82.3
20/10/2015	95.2	65.1	58.2	120
26/10/2015	56.5	47.8	32.2	44.8
<b>Monthly Mean</b>	97.0	62.9	71.0	91.5
<b>Yearly Mean</b>	50.6	48.5	37.7	56.4

Table 5 - Blast Results

Peabody ENERGY				Peabody Wambo Blasting Results 2015									
				Homestead (BM01)		Kelly (BM02)		Muller (BM05)		Harris (BM03)		Thelander (BM07)	
Blast Number	Date	Time	Blast ID	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	1/10/2015	15:01:51	M20WRC2	100.3	0.13	96.3	0.08	109	0.51	101.2	0.08	106.3	0.94
2	6/10/2015	14:58:40	M23WWA6	97.6	0.05	90.9	0.05	104.5	0.34	103.9	0.04	100	0.24
3	9/10/2015	11:02:58	BS9WMA1	107.5	0.48	NRR*	<0.48	103.3	0.13	106.8	0.16	99.5	0.17
4	12/10/2015	15:01:17	M20WWA6	101	0.08	NRR*	<0.49	99.6	0.18	98.4	0.06	101.5	0.18
5	16/10/2015	15:03:37	M20WRC3	99.4	0.08	NRR*	<0.49	107	0.34	100.8	0.1	103.9	0.36
6	21/10/2015	11:03:01	M18WRC4	NRR*	<0.16	NRR*	<0.49	104.2	0.45	110.7	0.09	102	0.31
7	23/10/2015	10:13:46	BS9WMA2	107.8	0.21	NRR*	<0.49	104.8	0.11	109.3	0.09	98.9	0.12
8	30/10/2015	11:01:36	BS9WMA2a	107.2	0.22	NRR*	<0.49	101	0.09	105	0.09	95	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 - PM<sub>10</sub> 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 <sup>3</sup> )	YTD Average	PM10 24 Hour Result (ug/m <sup>3</sup> )	YTD Average	PM10 24 Hour Result (ug/m <sup>3</sup> )	YTD Average	PM10 24 Hour Result (ug/m <sup>3</sup> )	YTD Average
1/10/2015	18.8	14.1	29.5	14.2	20.1	11.3	28.6	14.9
2/10/2015	22.4	14.2	25.4	14.2	22.5	11.3	28.8	14.9
3/10/2015	26.8	14.2	27.0	14.3	12.9	11.3	15.6	14.9
4/10/2015	<b>33.8</b>	14.3	21.6	14.3	12.3	11.3	12.4	14.9
5/10/2015	24.6	14.3	<b>31.3</b>	14.4	15.7	11.3	20.9	14.9
6/10/2015	27.5	14.4	<b>43.3</b>	14.5	19.2	11.4	23.4	15.0
7/10/2015	<b>42.3</b>	14.5	<b>33.1</b>	14.5	<b>37.2</b>	11.5	<b>34.5</b>	15.0
8/10/2015	<b>30.6</b>	14.5	26.5	14.6	<b>31.8</b>	11.5	27.3	15.1
9/10/2015	<b>37.0</b>	14.6	<b>35.4</b>	14.7	26.4	11.6	<b>32.1</b>	15.1
10/10/2015	22.5	14.6	27.8	14.7	24.0	11.6	27.9	15.2
11/10/2015	17.3	14.7	15.1	14.7	12.8	11.6	15.0	15.2
12/10/2015	11.4	14.6	17.0	14.7	24.3	11.7	13.6	15.2
13/10/2015	23.6	14.7	23.4	14.8	30.0	11.8	24.7	15.2
14/10/2015	21.9	14.7	19.2	14.8	<b>31.7</b>	11.8	21.8	15.2
15/10/2015	19.7	14.7	24.3	14.8	24.1	11.9	23.0	15.3
16/10/2015	21.6	14.7	<b>33.8</b>	14.9	28.0	11.9	28.1	15.3
17/10/2015	<b>38.4</b>	14.8	<b>52.8</b>	15.0	<b>42.9</b>	12.0	<b>44.9</b>	15.4
18/10/2015	24.0	14.9	22.0	15.0	<b>30.5</b>	12.1	25.2	15.4
19/10/2015	23.5	14.9	23.4	15.1	26.3	12.1	29.3	15.5
20/10/2015	16.1	14.9	19.4	15.1	20.1	12.2	24.4	15.5
21/10/2015	18.5	14.9	23.5	15.1	22.3	12.2	20.9	15.5
22/10/2015	6.9	14.9	8.2	15.1	10.1	12.2	7.5	15.5
23/10/2015	14.5	14.9	12.5	15.1	13.4	12.2	17.3	15.5
24/10/2015	17.5	14.9	16.8	15.1	15.1	12.2	26.0	15.6
25/10/2015	12.6	14.9	17.9	15.1	17.1	12.2	21.1	15.6
26/10/2015	16.1	14.9	21.6	15.1	7.0	12.2	13.9	15.6
27/10/2015	14.3	14.9	11.0	15.1	8.1	12.2	12.4	15.6
28/10/2015	23.7	14.9	17.3	15.1	17.6	12.2	23.1	15.6
29/10/2015	22.1	14.9	17.4	15.1	16.8	12.2	19.1	15.6
30/10/2015	20.5	14.9	19.7	15.1	15.5	12.2	22.0	15.6
31/10/2015	22.1	15.0	12.8	15.1	14.2	12.2	23.6	15.6

**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
01/10/15	12.0	19.7	30.3	13.7	20.5	29.8	-11.4	10.1	41.1	21.7	63.0	95.0	-1.5	241.0	850.3	0.0	0.0	1.5	5.4
02/10/15	9.8	17.8	26.4	11.2	19.0	26.4	-8.3	15.3	65.0	43.3	71.4	94.1	-1.5	213.2	909.0	0.0	0.0	2.1	5.7
03/10/15	8.3	20.4	33.3	9.3	21.7	33.0	-12.0	15.1	65.8	21.6	62.9	97.5	-1.6	260.3	858.4	0.0	0.0	1.7	5.8
04/10/15	10.5	23.4	35.8	14.4	25.0	35.8	-5.4	20.1	66.4	12.3	42.9	89.6	-1.5	250.2	975.4	0.0	0.0	2.3	7.1
05/10/15	8.8	22.8	38.0	11.2	24.3	37.0	-15.3	19.0	54.6	10.8	47.4	90.8	-1.8	247.3	857.4	0.0	0.0	1.7	5.1
06/10/15	9.7	23.3	37.1	11.3	24.6	37.0	-10.5	16.9	77.0	12.0	48.2	91.5	-1.5	260.9	844.2	0.0	0.0	1.7	5.6
07/10/15	9.5	17.3	24.6	11.3	18.1	24.7	-6.2	10.1	41.9	40.9	67.4	91.5	-1.5	140.3	779.1	0.0	0.0	2.7	6.9
08/10/15	14.6	17.6	21.0	15.3	17.9	21.0	-3.1	4.1	11.8	57.0	67.8	80.6	-1.5	92.5	418.0	0.0	1.0	2.9	6.2
09/10/15	14.6	19.9	27.1	15.6	20.4	26.4	-11.0	6.4	32.7	40.1	62.9	87.8	-1.5	254.9	824.1	0.0	0.0	1.5	3.8
10/10/15	11.9	19.2	29.5	13.2	19.7	28.8	-8.5	7.1	31.3	32.8	74.9	96.1	-1.5	207.1	879.2	1.1	0.0	1.2	4.3
11/10/15	11.3	20.3	29.9	12.4	20.8	29.1	-14.5	6.4	25.0	34.6	70.4	98.0	-1.5	201.0	958.3	0.0	0.0	2.3	6.4
12/10/15	13.5	23.3	33.6	14.5	24.2	33.3	-9.3	10.7	40.7	16.3	53.5	95.8	-1.5	226.3	861.1	0.0	0.0	2.3	6.6
13/10/15	17.7	21.1	25.1	18.5	21.5	24.6	-8.8	4.8	13.5	54.9	71.4	88.7	-1.4	136.6	992.8	0.0	0.7	2.8	6.9
14/10/15	15.9	20.9	26.8	17.3	21.3	26.6	-11.0	4.7	17.7	43.7	69.7	90.5	-1.5	214.4	1063.7	0.0	0.5	2.5	6.2
15/10/15	12.3	20.6	30.6	14.0	21.3	29.8	-13.8	8.9	33.2	31.7	67.1	96.3	-1.5	251.3	868.0	0.0	0.0	1.1	3.1
16/10/15	10.4	23.0	35.3	11.8	23.8	34.2	-19.3	9.4	38.5	19.0	56.9	95.9	-1.5	277.2	875.2	0.0	0.0	1.8	6.5
17/10/15	13.1	23.6	33.9	14.5	24.3	33.1	-10.8	8.7	35.8	31.4	65.2	95.3	-1.5	233.4	829.4	0.4	0.0	1.6	5.0
18/10/15	19.3	20.6	23.4	20.0	21.1	23.2	-4.1	5.7	13.0	64.2	80.1	92.9	-1.5	65.9	594.7	0.9	0.5	2.3	4.3
19/10/15	18.2	23.2	31.1	18.9	23.6	30.5	-14.2	5.2	27.7	33.3	66.6	91.4	-1.5	245.1	870.7	0.0	0.0	1.3	3.4
20/10/15	14.0	24.6	34.6	15.5	25.1	33.7	-14.5	6.5	26.0	24.9	59.1	96.3	-1.5	254.5	868.5	0.0	0.0	1.9	5.3
21/10/15	14.8	24.0	34.5	16.2	24.8	33.7	-12.4	9.9	39.1	22.6	58.3	93.2	-1.5	202.7	1090.7	1.4	0.0	2.5	7.6
22/10/15	17.1	20.0	27.4	17.6	20.3	25.9	-19.5	4.1	20.0	46.3	75.1	94.2	-1.5	168.9	1045.3	9.2	0.1	3.0	5.9
23/10/15	10.6	17.1	21.2	12.0	17.5	20.7	-9.5	5.1	23.3	49.0	66.2	91.6	-1.5	142.7	881.1	0.0	0.0	2.5	5.0
24/10/15	8.4	17.8	26.8	9.8	18.3	26.2	-11.3	6.6	26.9	32.2	67.8	96.9	-1.7	288.2	969.3	0.0	0.0	1.3	5.3
25/10/15	10.4	20.5	31.9	11.6	21.1	30.8	-15.6	7.2	27.3	28.2	67.1	96.8	-1.5	245.9	998.5	0.0	0.0	1.4	6.4
26/10/15	12.2	20.8	33.0	13.3	21.5	32.3	-9.5	9.0	29.5	31.8	70.5	96.7	-1.5	190.0	994.4	2.5	0.0	2.7	9.8
27/10/15	14.8	16.9	20.0	15.4	17.3	20.6	-2.4	5.5	12.7	61.0	71.7	90.3	-1.5	55.8	550.7	1.6	0.7	2.9	5.9
28/10/15	11.2	16.6	22.0	12.6	17.2	21.7	-8.3	7.0	30.6	44.1	62.4	85.3	-1.7	208.3	1037.9	0.2	0.0	2.2	5.5
29/10/15	7.8	17.0	24.9	10.0	17.7	24.5	-10.1	8.3	29.7	39.1	67.3	95.1	-2.1	234.9	1124.1	0.0	0.0	2.2	6.5
30/10/15	8.3	18.4	26.6	10.1	19.0	26.2	-9.8	7.5	35.2	31.5	65.0	96.6	-2.2	290.2	957.5	0.0	0.0	1.7	5.5
31/10/15	12.2	18.1	23.4	13.7	18.7	23.2	-5.5	7.7	22.0	50.8	80.1	96.0	-1.5	93.0	694.8	0.5	0.0	0.8	2.3
MONTH	7.8	20.3	38.0	9.3	21.0	37.0	-19.5	8.8	77.0	10.8	65.2	98.0	-2.2	206.3	1,124.1	17.6	0.0	2.0	9.8



