

WAMBO COAL PTY LIMITED

MONTHLY ENVIRONMENTAL MONITORING REPORT

DECEMBER 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
WOLLOMBI BROOK							
SW01	7.4	818	<5	355		24	
SW03	7.3	900	<5	478	<5	22.9	
SW02	7.6	1023	<5	456	<5	25.3	
SW40	7.4	887	<5	531		23.9	
NORTH WAMBO CREEK							
SW04							Dry
SW27a	7.5	825	170	1440		20.9	
SW32a	7.3	458	338	963		19.8	
SW05	7.4	565	97	692		19.7	
SOUTH WAMBO/STONY CREEK							
SW06	7.2	564	<5	326		21.6	
SW07	7.2	744	30	720		23.3	
SW08							Dry
WATERFALL CREEK							
SW39							Dry
MINE WATER DAMS							
SW12	8.9	3580					
SW14							No access
SW15	9.2	6500	26	3000	<5	25.1	
SW20	8.2	200				20.2	
SW29							No access
SW30							No access
SW31	9.3	5820				24.2	
SW38	9.1	3100				19.1	

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	7.00	491	6.46	20.2	
GW11	7.00	512	4.86	19.5	
P106	6.50	645	8.83	19.5	
P109	6.60	734	5.84	17.4	
P110	6.00	733	5.57	18.2	
P111	6.20	752	6.99	17.6	
P114	6.50	10,030	9.52	19.1	
P116	6.80	610	5.28	18.5	
P202	7.30	5,090	8.15	18.4	
P206	7.40	2,090	16.32	19.5	
P301	6.50	5,520	14.81	19.4	
P315	6.70	290	7.47	18.8	
GW12					Dry
GW13	6.90	3,040	5.53	20.1	
GW14					Dry
GW15	7.00	678	10.04	20.8	
GW16	7.50	556	7.82	19.9	
GW17	7.10	5,260	11.00	20.5	
GW18					Dry
GW19					Dry
GW21					Dry
GW22	8.20	6,980	35.94	21.7	
P1*	7.25	6,670	25.10		
P12*	9.69	860	6.91		
P13*	8.64	824	7.19		
P15*	8.01	6280	6.30		
P16*	7.52	6,810	7.27		
P17*	7.68	8180	6.10		
P18*	7.50	6,640	7.35		
P20*	7.49	8,600	7.66		

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*	17.3	4.6	27	2.8	1.7
D03*	10.3	4.3	42	3.0	1.8
D07*	6.9	3.9	57	5.4	3.5
D09	3.7	1.8	49	4.4	2.3
#D11	3.9	2.6	67	2.2	1.5
#D12	5.2	3.3	63	3.3	2.1
#D17	3.2	1.8	56	1.7	0.9
D19	3.2	1.9	59	3.1	1.8
D20	1.8	1.2	67	1.6	1.0
#D21	4.0	2.7	68	2.0	1.3
#D22	6.1	4.4	72	2.0	1.5
D23	2.5	1.7	68	1.8	1.1
#D24	1.4	1.1	79	1.4	0.9
#D25	3.7	2.7	73	2.6	1.9
D26	2.8	1.8	64	2.1	1.3

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 ($\mu\text{g}/\text{m}^3$)
1/12/2015	102	98.2	67.7	90.5
7/12/2015	112	62.5	116	162
13/12/2015	119	104	83.3	109
19/12/2015	88.7	81.6	62.1	184
25/12/2015	19.0	19.2	16.4	21.4
31/12/2015	82.4	49.5	61.0	75.2
Monthly Mean	84.2	63.4	67.8	110.3
Yearly Mean	54.8	51.5	40.6	60.6

Table 5 - Blast Results

Peabody Wambo Blasting Results 2015													
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	8/12/2015	11:10:52	M22RCA3	92.9	0.04	93.4	0.04	101.4	0.13	100.8	0.05	99.5	0.14
2	9/12/2015	15:04:21	M20WMA1	97.8	0.14	100	0.13	103.6	1.04	106.8	0.11	101.1	0.74
3	14/12/2015	9:11:55	M21WRA1	104.4	0.05	104.3	0.08	105.4	0.36	105.7	0.05	102	0.38
4	18/12/2015	15:02:36	M20WMA2	94.7	0.21	93.4	0.15	106.4	0.62	100.3	0.1	103.6	0.58

* 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
1/12/2015	26.8	15.3	35.5	15.5	20.0	12.5	21.8	15.8
2/12/2015	29.7	15.3	30.6	15.5	27.5	12.6	28.6	15.9
3/12/2015	25.4	15.3	29.6	15.6	30.4	12.6	26.4	15.9
4/12/2015	20.3	15.3	18.7	15.6	23.5	12.7	34.0	15.9
5/12/2015	17.4	15.4	21.2	15.6	18.7	12.7	22.3	16.0
6/12/2015	20.4	15.4	27.3	15.6	19.9	12.7	32.9	16.0
7/12/2015	25.5	15.4	20.0	15.7	26.0	12.7	29.7	16.1
8/12/2015	26.2	15.4	25.9	15.7	22.4	12.8	31.8	16.1
9/12/2015	18.0	15.4	21.5	15.7	15.8	12.8	16.4	16.1
10/12/2015	20.2	15.5	34.5	15.8	21.7	12.8	26.3	16.1
11/12/2015	23.0	15.5	25.2	15.8	NRR	12.8	22.0	16.2
12/12/2015	38.4	15.5	42.6	15.9	NRR	12.8	39.8	16.2
13/12/2015	29.3	15.6	31.4	15.9	NRR	12.8	28.5	16.3
14/12/2015	32.2	15.6	35.6	16.0	27.5	12.8	44.5	16.3
15/12/2015	48.7	15.7	54.9	16.1	38.8	12.9	70.5	16.5
16/12/2015	12.4	15.7	7.1	16.1	13.4	12.9	13.9	16.5
17/12/2015	16.8	15.7	12.9	16.0	15.1	12.9	17.7	16.5
18/12/2015	16.4	15.7	17.4	16.0	14.5	12.9	23.0	16.5
19/12/2015	24.2	15.7	24.8	16.1	20.3	12.9	41.2	16.6
20/12/2015	22.1	15.8	22.7	16.1	17.9	13.0	22.6	16.6
21/12/2015	23.7	15.8	32.4	16.1	20.1	13.0	22.7	16.6
22/12/2015	3.7	15.7	2.9	16.1	2.8	13.0	3.1	16.6
23/12/2015	9.9	15.7	9.4	16.1	8.9	12.9	10.9	16.6
24/12/2015	14.8	15.7	14.6	16.1	15.0	12.9	16.3	16.6
25/12/2015	11.6	15.7	11.6	16.1	11.3	12.9	11.1	16.5
26/12/2015	12.0	15.7	11.7	16.1	10.3	12.9	11.8	16.5
27/12/2015	14.8	15.7	10.9	16.0	11.8	12.9	12.4	16.5
28/12/2015	13.1	15.7	10.9	16.0	13.4	12.9	14.9	16.5
29/12/2015	11.9	15.7	10.4	16.0	12.3	12.9	15.1	16.5
30/12/2015	15.4	15.7	14.2	16.0	14.4	12.9	14.4	16.5
31/12/2015	22.2	15.7	18.3	16.0	17.9	12.9	18.8	16.5

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
01/12/15	14.4	27.9	38.0	15.5	28.5	38.0	-15.2	6.4	28.9	11.4	45.8	96.3	-1.6	257.3	1089.3	0.0	0.0	2.9	6.3
02/12/15	17.7	23.9	31.3	18.1	24.2	30.9	-10.5	4.5	23.1	30.7	56.0	75.6	-1.5	194.3	1157.3	0.0	0.5	3.3	8.3
03/12/15	12.4	18.8	23.6	14.2	19.2	22.7	-12.5	4.3	25.4	44.5	58.8	90.6	-1.6	162.8	1179.3	0.0	0.2	2.8	6.4
04/12/15	9.8	18.6	26.0	11.2	18.9	25.4	-12.4	4.4	26.0	38.7	65.4	95.4	-1.6	293.5	1213.5	0.0	0.0	2.3	6.4
05/12/15	11.7	21.6	30.6	13.6	22.1	30.1	-9.3	6.6	27.9	23.8	60.8	94.1	-1.6	355.2	1017.2	0.0	0.0	1.7	5.6
06/12/15	12.1	23.1	32.7	13.3	23.6	32.4	-9.4	6.3	31.1	20.3	55.7	96.0	-1.6	343.4	993.2	0.0	0.0	1.8	5.9
07/12/15	15.7	23.5	29.6	17.4	23.7	29.1	-11.5	3.2	24.3	39.2	62.2	90.6	-1.5	333.4	991.2	0.0	0.0	2.6	6.6
08/12/15	16.7	25.6	33.5	17.7	26.0	33.3	-10.4	5.3	19.6	32.5	61.4	88.7	-1.5	186.2	960.5	0.0	0.0	1.3	3.9
09/12/15	21.6	28.3	35.3	22.5	28.7	35.2	-11.4	4.6	17.9	29.8	58.6	92.7	-1.5	223.0	1090.1	0.5	0.0	3.0	6.9
10/12/15	19.0	25.8	36.3	20.3	26.0	34.9	-19.2	2.4	18.7	29.8	61.8	87.7	-1.5	287.6	992.0	0.0	0.0	2.3	7.2
11/12/15	15.1	28.3	38.4	16.5	28.8	38.0	-6.2	6.4	27.3	10.6	40.7	94.9	-1.6	347.9	1025.4	0.0	0.0	3.5	9.9
12/12/15	17.9	22.5	29.3	18.3	22.6	28.6	-17.3	1.4	12.7	22.5	56.4	80.9	-1.5	290.6	1145.9	0.0	0.4	3.3	8.2
13/12/15	17.9	23.4	32.2	18.3	23.5	31.3	-23.0	2.1	24.1	23.5	60.9	80.8	-1.5	264.5	1133.3	0.0	0.0	2.2	5.8
14/12/15	15.1	25.7	36.6	16.9	26.2	36.0	-13.0	6.9	34.3	17.4	54.2	94.3	-1.6	278.2	1038.7	0.0	0.0	2.3	7.9
15/12/15	16.1	25.5	36.2	17.3	26.0	35.8	-17.7	6.9	32.4	19.5	59.4	92.5	-1.6	249.8	1082.5	25.9	0.0	1.7	10.9
16/12/15	16.4	19.5	24.6	17.1	20.1	24.5	-2.4	6.9	10.9	71.9	92.0	96.5	-1.6	41.8	674.5	10.6	0.0	1.2	3.7
17/12/15	16.8	22.6	30.4	17.4	22.9	29.8	-7.6	4.4	17.4	42.0	70.6	94.9	-1.6	267.5	1161.5	0.0	0.0	2.0	6.7
18/12/15	15.5	25.5	34.7	16.7	26.0	34.7	-13.1	6.2	23.4	28.0	61.7	95.9	-1.6	348.6	1006.2	0.0	0.0	1.5	5.2
19/12/15	17.4	26.7	36.7	18.8	27.4	36.3	-9.3	8.5	27.0	16.9	52.5	95.4	-1.6	350.9	1001.2	0.0	0.0	1.7	7.1
20/12/15	15.6	29.0	38.8	16.7	29.8	38.2	-10.1	9.4	57.8	18.1	43.8	89.6	-1.6	349.5	1018.5	0.0	0.0	2.5	6.1
21/12/15	19.6	27.4	38.3	20.0	28.0	36.9	-19.5	7.9	44.1	26.4	55.1	96.2	-1.6	246.8	1067.2	29.3	0.3	3.0	8.5
22/12/15	16.8	18.0	19.7	17.2	18.4	20.0	2.7	5.1	6.4	95.3	96.5	97.6	-1.6	23.6	183.1	43.6	0.6	1.9	4.4
23/12/15	16.3	18.6	21.8	16.8	19.0	22.0	-0.6	5.3	12.1	70.9	86.9	96.9	-1.6	84.3	465.8	2.8	0.7	2.0	5.2
24/12/15	17.5	20.6	24.9	18.3	21.0	24.7	-5.5	5.0	9.6	49.8	71.4	91.3	-1.6	134.0	950.2	0.2	1.0	2.8	6.3
25/12/15	16.7	21.7	26.8	18.0	22.1	26.4	-6.8	5.2	16.3	53.4	70.5	93.3	-1.6	263.5	1267.4	0.0	0.0	2.6	6.8
26/12/15	16.5	22.1	31.1	17.1	22.5	31.2	-6.8	5.7	13.6	49.5	85.0	96.0	-1.6	197.8	1085.5	7.6	0.0	1.1	9.1
27/12/15	15.3	18.7	21.7	16.5	19.3	22.6	-4.4	6.6	17.5	62.4	80.3	97.3	-1.6	85.0	1008.0	1.6	0.0	2.1	5.1
28/12/15	15.4	17.7	21.9	16.5	18.1	21.4	-6.9	5.7	14.6	59.2	77.9	92.8	-1.6	149.1	1152.3	1.9	0.0	2.1	6.2
29/12/15	13.7	19.3	25.5	15.0	19.9	25.4	-7.2	6.9	23.4	41.0	66.2	89.6	-1.6	304.1	1192.3	0.0	0.0	2.4	6.0
30/12/15	11.5	19.8	28.1	12.8	20.5	28.1	-4.4	7.9	23.1	40.2	68.6	96.9	-1.6	357.0	1027.7	0.0	0.0	1.7	6.0
31/12/15	14.9	21.6	28.8	15.7	22.1	28.6	-4.2	5.9	19.7	45.2	68.1	92.2	-1.6	339.2	1275.9	0.0	0.0	2.1	6.3
MONTH	9.8	22.9	38.8	11.2	23.4	38.2	-23.0	5.6	57.8	10.6	64.7	97.6	-1.6	245.5	1,275.9	124.1	0.0	2.2	10.9

