

WAMBO COAL PTY LIMITED

MONTHLY ENVIRONMENTAL MONITORING REPORT

SEPTEMBER 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	854	<1	419		18.2	
SW03	7.3	858	6	423	<8	16.5	
SW02	7.5	882	<1	438	<8	18.4	
SW40	7.4	861	4	446		18.0	
NORTH WAMBO CREEK							
SW04							Dry
SW27a							Dry
SW32a							Dry
SW05	7.4	1497	29	894		12.4	
SOUTH WAMBO/STONY CREEK							
SW06	7.0	569	6	287		16.1	
SW07	7.4	842	8	418		16.8	Ponding
SW08							Dry
WATERFALL CREEK							
SW39							Dry
MINE WATER DAMS							
SW12	9.2	7640				22.6	
SW14	8.4	830				22.9	
SW15	9.1	6710	39	4100	<8	26.2	
SW20							Dry
SW29							No access
SW30	9.2	5680				20.3	
SW31	9.1	6940				22.9	
SW38	9.0	8020				26.8	

Note: Figures in bold fall outside trigger levels.

Table 2 - Ground Water Results

Groundwater monitoring was not scheduled for the month of September.

Sample Location	pH	EC (µS/cm)	Depth to Water (m)	Temp (°C)	Comments
GW02					
GW11					
P106					
P109					
P110					
P111					
P114					
P116					
P202					
P206					
P301					
P315					
GW12					
GW13					
GW14					
GW15					
GW16					
GW17					
GW18					
GW19					
GW20	GW20 is a vibration wire multi-piezometer installation				
GW21					
GW22					
P1*					
P3*					
P5*					
P6*					
P11*					
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	1.7	1.3	76	1.7	1.3
D03	3.8	2.4	63	3	1.8
D07*	6.9	4.3	62	4.2	3.1
D09*	21.4	7.3	34	5	2.6
#D11	0.8	0.8	100	2	1.3
#D12	0.8	0.2	25	2.8	1.7
#D17	0.8	0.5	63	1.4	0.8
D19	2.4	1.4	58	2.7	1.6
D20	1.0	0.7	70	1.5	0.9
#D21	1.2	0.9	75	1.7	1.0
#D22	0.9	0.9	100	1.4	1.1
D23	1.4	0.9	64	1.8	1.1
#D24	2.5	1.9	76	1.5	0.9
#D25	1.6	1.6	100	2.3	1.7
D26	1.2	0.9	75	1.8	1.1

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 ($\mu\text{g}/\text{m}^3$)
2/09/2015	55.4	68.6	25.1	34.3
8/09/2015	30.0	50.8	14.6	17.9
14/09/2015	72.8	63.3	33.5	56.8
20/09/2015	62.4	26.8	34.5	91.3
26/09/2015	21.7	18.0	44.7	79.4
Monthly Mean	48.5	45.5	30.5	55.9
Yearly Mean	45.4	46.9	34.0	52.5

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	2/09/2015	15:01:08	M23WWA5a	98.7	0.05	98.3	0.09	107	0.24	100.3	0.05	107.8	0.25
2	7/09/2015	15:01:07	M20WRC1	106.1	0.14	97.2	0.1	107.7	0.79	106.6	0.09	104.3	0.78
3	14/09/2015	9:08:08	BS9WRA2	113.8	0.65	102.3	0.41	104.2	0.26	109.6	0.21	98.9	0.26
4	16/09/2015	15:02:23	M18WMA2	106.3	0.17	103.7	0.13	106.6	0.62	104.2	0.11	102.4	0.58
5	29/09/2015	11:08:44	M25WWA1	99.9	0.08	96.3	0.06	110.1	1.03	104.2	0.06	110.8	1.03

* 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
1/09/2015	8.8	14.4	17.4	14.1	6.4	11.2	6.0	14.9
2/09/2015	13.8	14.4	19.0	14.2	9.1	11.1	12.6	14.8
3/09/2015	7.7	14.3	7.9	14.1	5.7	11.1	6.0	14.8
4/09/2015	10.2	14.3	11.3	14.1	7.8	11.1	8.7	14.8
5/09/2015	9.1	14.3	9.6	14.1	7.9	11.1	10.2	14.8
6/09/2015	10.9	14.3	11.9	14.1	10.7	11.1	12.6	14.8
7/09/2015	8.4	14.2	8.6	14.1	5.5	11.1	5.7	14.7
8/09/2015	9.1	14.2	13.1	14.1	6.7	11.1	6.7	14.7
9/09/2015	9.1	14.2	12.5	14.1	7.8	11.0	9.5	14.7
10/09/2015	15.1	14.2	14.4	14.1	14.1	11.1	16.3	14.7
11/09/2015	13.8	14.2	15.3	14.1	16.8	11.1	NRR	14.7
12/09/2015	13.8	14.2	19.1	14.1	11.8	11.1	14.3	14.7
13/09/2015	20.3	14.2	21.6	14.1	14.5	11.1	18.9	14.7
14/09/2015	21.2	14.3	17.5	14.1	12.8	11.1	19.0	14.7
15/09/2015	20.2	14.3	27.2	14.2	14.2	11.1	14.2	14.7
16/09/2015	15.0	14.3	14.2	14.2	14.4	11.1	16.4	14.7
17/09/2015	14.3	14.3	18.1	14.2	17.8	11.1	16.8	14.7
18/09/2015	11.5	14.3	12.6	14.2	12.4	11.2	18.5	14.7
19/09/2015	12.5	14.3	9.2	14.2	13.3	11.2	17.9	14.7
20/09/2015	7.7	14.2	7.7	14.1	10.0	11.2	13.7	14.7
21/09/2015	7.4	14.2	12.5	14.1	11.9	11.2	9.7	14.7
22/09/2015	9.2	14.2	13.4	14.1	13.9	11.2	11.8	14.7
23/09/2015	10.8	14.2	11.1	14.1	10.6	11.2	17.0	14.7
24/09/2015	6.8	14.2	9.4	14.1	8.0	11.2	12.4	14.7
25/09/2015	8.3	14.1	10.4	14.1	10.6	11.2	15.5	14.7
26/09/2015	11.1	14.1	9.0	14.1	7.7	11.1	22.5	14.7
27/09/2015	11.5	14.1	10.2	14.1	10.3	11.1	15.1	14.7
28/09/2015	14.1	14.1	19.9	14.1	16.2	11.2	22.8	14.8
29/09/2015	11.6	14.1	20.6	14.1	18.3	11.2	16.3	14.8
30/09/2015	21.2	14.1	27.0	14.1	28.4	11.2	25.1	14.8

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
01/09/15	2.4	11.7	19.8	4.8	12.8	19.7	-6.5	14.0	47.9	30.8	62.5	97.2	-1.9	207.4	750.2	0.0	0.0	2.7	6.4
02/09/15	1.8	11.0	21.1	3.1	11.9	20.9	-10.2	11.4	38.4	31.7	70.6	96.5	-1.9	152.7	872.8	0.9	0.0	1.2	4.7
03/09/15	10.3	13.5	17.6	11.2	14.1	17.8	1.4	7.6	21.0	51.7	74.3	97.3	-1.8	110.0	608.1	5.3	0.2	3.1	6.9
04/09/15	9.0	12.9	17.3	10.2	13.6	17.5	-0.3	8.9	25.4	63.7	82.0	96.7	-1.5	49.2	433.8	0.0	0.0	1.2	3.6
05/09/15	6.6	13.1	21.6	7.4	13.6	21.1	-9.6	6.9	30.1	45.1	85.1	98.2	-1.8	170.4	823.4	1.2	0.0	1.2	4.5
06/09/15	10.2	14.4	19.2	11.8	15.0	19.4	-3.8	7.7	20.2	55.0	83.0	97.3	-1.4	112.4	636.2	0.2	0.0	1.3	4.4
07/09/15	6.3	15.2	24.6	7.1	15.9	24.3	-8.2	9.5	27.0	31.2	65.1	98.2	-1.9	197.5	770.5	0.0	0.0	2.3	6.7
08/09/15	4.8	13.2	20.3	6.8	13.9	20.2	-6.4	9.4	39.5	30.9	54.4	86.8	-2.0	218.7	780.9	0.0	0.1	3.0	5.9
09/09/15	4.7	14.0	22.1	6.2	14.7	21.8	-11.9	7.8	29.2	33.7	64.4	94.6	-1.9	223.2	789.3	0.0	0.0	1.9	4.9
10/09/15	5.6	12.1	19.7	7.0	13.1	19.7	-4.8	13.4	37.7	51.5	78.4	97.1	-1.9	143.1	972.6	0.0	0.0	1.1	4.6
11/09/15	3.7	12.7	22.4	5.8	13.8	22.5	-10.0	14.2	41.4	37.0	73.1	97.6	-2.0	224.9	785.8	0.0	0.0	0.9	3.6
12/09/15	4.2	15.0	26.5	5.1	16.0	26.1	-15.0	12.3	43.4	30.4	69.2	97.8	-1.9	225.2	788.6	0.0	0.0	1.7	5.1
13/09/15	6.3	16.1	26.3	8.3	17.2	26.0	-8.6	13.9	39.7	30.1	70.2	97.2	-2.0	222.6	774.3	0.0	0.0	1.0	3.5
14/09/15	6.8	16.5	27.1	8.1	17.6	26.9	-12.5	13.9	46.3	32.4	71.7	97.7	-1.9	220.4	769.5	0.0	0.0	1.1	4.4
15/09/15	6.9	18.4	28.2	8.8	19.5	28.2	-5.1	13.8	41.9	31.2	62.8	97.4	-2.1	194.4	763.9	0.0	0.0	2.7	7.9
16/09/15	7.5	16.4	25.8	9.2	17.6	25.4	-7.2	14.1	60.7	23.3	56.6	90.1	-1.9	233.4	799.6	0.0	0.0	1.5	4.9
17/09/15	8.8	13.8	19.7	10.1	14.7	19.7	-6.1	10.8	34.5	41.1	75.7	94.7	-1.5	94.4	867.2	0.9	0.0	1.3	5.7
18/09/15	9.8	14.8	19.9	11.2	15.5	19.8	-6.0	8.1	26.8	44.1	73.3	92.0	-1.5	144.5	968.7	0.4	0.3	2.1	5.5
19/09/15	11.1	14.9	20.0	12.6	15.4	19.9	-5.2	6.2	19.9	55.5	77.3	94.7	-1.4	125.8	865.3	1.8	0.2	2.1	6.3
20/09/15	11.7	15.4	20.9	13.0	15.9	20.7	-6.1	6.0	23.7	58.3	84.3	96.5	-1.4	133.7	924.4	0.2	0.0	1.5	5.0
21/09/15	7.8	15.9	25.2	8.8	16.7	25.3	-12.1	10.1	29.6	29.2	73.3	97.9	-1.9	194.4	846.7	0.0	0.0	1.5	5.5
22/09/15	9.1	15.8	23.4	10.3	16.5	23.1	-6.1	8.0	31.5	14.5	58.8	94.2	-1.8	236.7	904.6	0.0	0.0	2.3	6.4
23/09/15	8.1	12.8	17.4	10.6	13.3	17.1	-6.0	6.2	31.1	36.7	49.5	71.7	-2.0	180.2	949.6	0.0	0.3	3.1	6.0
24/09/15	8.6	13.0	17.7	9.7	13.3	17.3	-7.5	4.4	14.8	35.5	51.9	72.3	-1.9	179.3	1038.0	0.0	0.0	3.2	7.0
25/09/15	11.4	13.8	18.1	12.0	14.1	17.6	-5.7	4.2	9.1	52.7	68.7	79.9	-1.5	113.9	995.5	0.0	1.4	3.4	7.1
26/09/15	9.7	14.4	19.6	11.2	14.9	19.1	-9.4	6.2	26.7	42.6	69.7	92.7	-1.6	167.8	1059.5	0.0	0.0	2.1	5.3
27/09/15	7.7	14.2	21.0	9.5	14.9	20.8	-6.6	9.5	33.0	36.8	73.0	97.0	-2.0	177.3	1017.6	0.0	0.0	1.5	4.7
28/09/15	3.6	14.0	24.1	4.9	14.8	23.6	-14.2	9.7	37.3	34.2	68.4	97.4	-1.8	258.7	919.0	0.0	0.0	1.2	3.9
29/09/15	5.1	15.7	26.9	6.6	16.8	26.4	-13.5	13.2	47.4	23.2	63.0	96.8	-1.9	252.8	865.2	0.0	0.0	1.3	5.1
30/09/15	6.1	16.7	28.6	7.4	17.4	28.6	-8.3	9.8	30.6	23.1	67.8	94.8	-2.0	209.1	933.2	0.0	0.0	1.6	7.6
MONTH	1.8	14.4	28.6	3.1	15.2	28.6	-15.0	9.7	60.7	14.5	69.3	98.2	-2.1	179.1	1,059.5	10.8	0.0	1.9	7.9

