

**WAMBO COAL PTY LIMITED**

**MONTHLY ENVIRONMENTAL MONITORING REPORT**

**FEBRUARY 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
<b>WOLLOMBI BROOK</b>							
SW01	7.5	779	<5	328		27.0	
SW03	7.4	698	5	350	7	24.0	
SW02	7.6	708	<5	356	13	26.2	
SW40	7.6	669	<5	387		25.4	
<b>NORTH WAMBO CREEK</b>							
SW04							Dry
SW27a							Dry
SW32a							Dry
SW05	7.4	1175	7	642		21.2	
<b>SOUTH WAMBO/STONY CREEK</b>							
SW06	7.1	534	12	268		23.2	
SW07	7.5	<b>641</b>	<5	296		23.6	
SW08	6.7	399	<5	<b>202</b>		22.5	
<b>WATERFALL CREEK</b>							
SW39							Dry
<b>MINE WATER DAMS</b>							
SW12	8.8	4350				26.8	
SW14	9.3	440				27.6	
SW15	9.0	4850				27.4	
SW20							Dry
SW29							No access
SW30	9.2	4880				27.8	
SW31	9.2	3040				27.1	
SW38	9.0	6650				32.7	

**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	6.60	510	<b>5.34</b>	19.7	
GW11	6.80	520	<b>3.85</b>	19.2	
P106	6.50	708	8.05	19.6	
P109	6.70	767	4.30	18.8	
P110	6.10	743	4.45	18.5	
P111	6.50	618	5.53	17.9	
P114	6.70	<b>7,990</b>	9.32	19.4	
P116	6.80	704	5.40	20.5	
P202	7.50	4,560	7.55	18.6	
P206	7.50	2,090	15.78	19.6	
P301	6.60	5,970	13.84	19.3	
P315	6.20	266	3.84	20.3	
GW12					Dry
GW13	6.80	2,690	5.31	21.6	
GW14					Dry
GW15	6.70	642	9.83	20.3	
GW16	6.90	319	4.06	19.6	
GW17	7.20	5,150	6.56	20.1	
GW18					Dry
GW19					Dry
GW21			36.63		Insufficient water
GW22	8.30	6,950	35.77	21.5	
P1*	8.15	7920	25.18		
P12*	8.29	821	6.71		
P13*	7.89	1103	6.99		
P15*	8.18	6580	6.33		
P16*	7.81	7380	7.46		
P17*	7.93	7940	6.34		
P18*	7.87	7220	7.65		
P20*	7.73	8840	7.94		

**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	3.7	2.3	62	3.7	2.3
D03*	10.9	4.1	38	2.7	2.3
D07	5.0	3.2	64	<b>4.5</b>	2.6
D09*	4.8	2.4	50	2.4	1.3
#D11	8.1	7.2	89	<b>5.2</b>	<b>4.5</b>
#D12	3.5	2.6	74	3.0	2.1
#D17*	4.6	2.5	54	1.5	0.8
D19	3.2	2.3	72	2.5	1.8
D20	1.9	1.2	63	1.2	0.8
#D21	2.3	1.7	74	1.9	1.5
#D22	2.4	1.6	67	2	1.4
D23*	3.5	1.1	31	1.6	1.2
#D24	1.1	0.5	45	1	0.6
#D25	2.6	2.1	81	2.5	2.0
D26	2.3	1.7	74	1.8	1.4

**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 ( $\mu\text{g}/\text{m}^3$ )
5/02/2016	37.5	42.5	48.8	98.6
11/02/2016	64.3	45.2	54.8	143
17/02/2016	64.7	70.5	101	115
23/02/2016	77.6	64.8	81.2	140
29/02/2016	53.6	49.9	74.0	105
<b>Monthly Mean</b>	59.5	54.6	72.0	120.3
<b>Yearly Mean</b>	50.8	51.1	55.5	85.2

**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)
8	1/02/2016	15:05:53	M18WMA3	103.6	0.04	98.9	0.04	101.8	0.07	105	0.04	92.9	0.24
9	3/02/2016	15:09:09	M23WWA7	99.4	0.1	89.6	0.05	107	0.51	103	0.06	110.6	0.38
10	12/02/2016	13:26:22	M21WRA4, M	97.6	<0.17	92	<0.48	114.8	0.84	NRR	<0.26	115.7	1.03
11	16/02/2016	15:19:33	M23WWA9	101.9	0.04	92	0.23	110.7	0.33	100.8	0.05	108.8	0.42
12	19/02/2016	15:10:49	M22WWA8	104.2	0.17	94.2	0.12	115.8	0.49	99.4	0.08	107.5	0.31
13	24/02/2016	11:09:34	WRA5, M20W	100.1	0.12	96.6	0.09	111	0.59	103.9	0.08	103.2	0.61

- \* 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
1/02/2016	18.3	17.7	25.0	18.0	13.7	15.4	13.0	17.2
2/02/2016	15.5	17.6	14.4	17.8	14.6	15.4	19.3	17.2
3/02/2016	22.6	17.7	23.6	18.0	18.6	15.5	25.6	17.5
4/02/2016	13.3	17.6	13.8	17.9	12.7	15.4	18.5	17.5
5/02/2016	19.5	17.7	21.2	18.0	18.6	15.5	26.6	17.8
6/02/2016	16.0	17.6	13.9	17.9	15.5	15.5	16.6	17.7
7/02/2016	17.8	17.6	15.6	17.8	21.2	15.6	24.1	17.9
8/02/2016	12.6	17.5	10.9	17.6	14.7	15.6	20.0	17.9
9/02/2016	14.2	17.4	15.1	17.6	18.2	15.7	19.7	18.0
10/02/2016	14.2	17.3	17.1	17.6	16.7	15.7	22.7	18.1
11/02/2016	17.2	17.3	15.3	17.5	16.2	15.7	<b>30.8</b>	18.4
12/02/2016	13.4	17.2	16.6	17.5	15.1	15.7	17.9	18.4
13/02/2016	11.4	17.1	15.3	17.4	18.4	15.8	23.0	18.5
14/02/2016	<b>Invalid</b>	17.1	27.0	17.6	21.3	15.9	25.9	18.7
15/02/2016	<b>31.0</b>	17.4	<b>37.4</b>	18.1	29.0	16.2	<b>34.6</b>	19.0
16/02/2016	27.8	17.6	<b>31.9</b>	18.4	23.2	16.3	23.1	19.1
17/02/2016	26.9	17.8	<b>31.2</b>	18.6	27.8	16.6	<b>31.7</b>	19.4
18/02/2016	26.3	18.0	26.8	18.8	28.9	16.8	30.0	19.6
19/02/2016	23.8	18.2	27.6	19.0	22.5	17.0	28.9	19.8
20/02/2016	23.8	18.3	24.6	19.1	21.7	17.1	<b>30.2</b>	20.0
21/02/2016	20.4	18.3	15.6	19.0	18.2	17.1	20.4	20.0
22/02/2016	19.4	18.3	14.5	18.9	24.1	17.2	19.3	20.0
23/02/2016	17.7	18.3	17.7	18.9	19.0	17.2	25.4	20.1
24/02/2016	21.6	18.4	28.6	19.1	18.2	17.3	25.1	20.2
25/02/2016	17.0	18.4	<b>31.2</b>	19.3	16.7	17.3	21.5	20.2
26/02/2016	<b>32.1</b>	18.6	<b>34.5</b>	19.6	<b>35.6</b>	17.6	<b>36.9</b>	20.5
27/02/2016	24.6	18.7	23.4	19.6	25.7	17.7	26.1	20.6
28/02/2016	19.7	18.7	20.3	19.7	22.7	17.8	27.5	20.7
29/02/2016	15.2	18.7	18.2	19.6	20.0	17.8	22.8	20.7

**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
01/02/15	13.4	23.4	31.9	14.3	24.2	31.8	-5.8	9.1	31.4	26.9	57.1	95.3	-1.6	243.7	1108.4	0.0	0.0	2.3	6.3
02/02/15	15.1	23.0	31.4	16.0	23.4	31.2	-16.0	4.9	22.0	32.7	64.8	95.8	-1.6	315.7	1052.2	0.0	0.0	1.4	4.1
03/02/15	18.2	25.3	33.1	19.0	25.6	33.2	-11.5	4.7	17.5	37.2	66.2	95.0	-1.6	274.4	1146.3	0.0	0.0	1.7	5.5
04/02/15	20.0	21.7	24.1	20.5	22.1	24.3	-2.2	4.8	10.3	60.2	76.5	96.4	-1.6	103.8	709.6	7.6	0.7	3.2	6.4
05/02/15	18.6	21.2	24.2	19.3	21.5	24.1	-3.9	4.6	9.2	57.6	68.5	93.4	-1.6	136.2	923.7	0.2	1.2	3.3	6.4
06/02/15	17.9	20.6	25.1	18.4	21.2	25.1	-5.2	6.6	18.6	59.5	81.9	96.7	-1.6	130.1	1125.9	4.1	0.0	2.2	5.9
07/02/15	17.1	21.8	27.6	18.2	22.4	27.1	-6.1	7.1	20.6	49.8	74.1	94.8	-1.6	218.8	1097.7	0.2	0.0	1.8	5.2
08/02/15	14.5	21.8	29.1	15.6	22.4	29.0	-7.5	7.5	20.3	48.9	76.5	97.3	-1.6	237.3	1090.8	0.0	0.0	1.9	5.6
09/02/15	18.5	23.0	28.6	19.2	23.5	28.4	-5.0	6.4	20.7	49.6	73.1	94.2	-1.6	256.9	1128.2	0.0	0.0	2.2	5.5
10/02/15	15.7	23.0	30.4	17.0	23.6	29.9	-10.3	7.4	21.7	40.7	69.0	96.7	-1.6	323.1	973.2	0.0	0.0	1.3	3.8
11/02/15	15.4	23.5	30.8	16.5	24.0	30.8	-4.2	6.3	20.9	37.0	70.9	96.6	-1.6	309.6	974.0	0.0	0.0	2.0	5.5
12/02/15	19.6	24.5	30.2	20.6	25.0	30.2	-4.5	5.6	15.1	44.6	69.1	91.8	-1.6	271.6	1051.0	0.0	0.0	2.2	5.5
13/02/15	17.3	24.3	32.0	18.4	25.0	31.8	-6.0	7.8	19.3	34.9	67.7	95.7	-1.6	314.8	952.0	0.0	0.0	1.3	4.3
14/02/15	16.0	27.4	39.1	17.1	28.0	38.6	-13.3	8.1	45.7	19.5	58.6	96.6	-1.6	302.6	938.9	0.0	0.0	1.6	5.5
15/02/15	20.1	26.3	35.2	21.4	26.9	35.2	-8.4	7.5	22.1	25.0	70.9	93.5	-1.6	244.6	932.0	0.0	0.0	1.4	5.5
16/02/15	15.9	24.4	34.6	16.9	25.0	34.2	-15.0	7.0	23.3	20.3	64.4	96.6	-1.6	299.1	941.9	0.4	0.0	2.1	7.4
17/02/15	18.4	22.1	28.4	19.4	22.5	27.6	-17.0	4.3	12.9	43.8	67.1	85.3	-1.6	216.9	1103.5	0.2	0.6	2.0	5.6
18/02/15	18.2	22.5	28.7	19.2	22.9	28.6	-7.3	5.4	13.6	47.3	71.7	85.8	-1.6	180.4	1074.5	0.0	0.0	1.8	5.8
19/02/15	17.0	26.1	36.0	18.6	26.6	35.7	-15.2	6.6	21.8	25.8	65.7	95.7	-1.6	296.3	929.7	0.0	0.0	1.2	4.7
20/02/15	21.5	25.5	30.9	23.1	26.0	30.6	-7.7	6.2	20.0	54.1	74.8	94.0	-1.6	140.1	971.9	0.0	0.0	2.2	5.8
21/02/15	21.2	24.6	29.2	22.0	25.0	29.2	-12.6	5.4	14.0	55.1	75.9	90.7	-1.6	189.3	1121.1	16.1	0.5	2.3	5.7
22/02/15	19.0	24.8	31.7	20.0	25.3	31.8	-4.9	6.3	16.6	37.4	71.7	95.5	-1.6	267.4	1080.2	0.0	0.0	1.8	4.9
23/02/15	15.9	24.4	33.0	17.2	25.2	33.0	-4.7	9.4	22.5	28.7	67.9	97.0	-1.6	304.6	962.9	0.0	0.0	1.3	4.4
24/02/15	16.3	26.2	36.5	17.6	26.9	36.7	-11.2	8.3	22.6	22.5	63.7	97.1	-1.6	302.2	944.1	0.0	0.0	1.3	4.1
25/02/15	17.1	28.2	40.3	18.2	29.2	40.1	-11.3	12.5	52.5	17.2	56.5	96.9	-1.6	300.3	935.5	0.0	0.0	1.8	5.8
26/02/15	17.7	24.5	29.9	19.0	25.2	29.9	-7.2	8.1	32.4	56.4	71.5	91.0	-1.6	199.4	1025.3	0.0	0.0	2.1	4.6
27/02/15	22.2	23.9	27.0	22.8	24.3	27.0	-3.7	5.6	9.1	56.2	71.0	82.1	-1.6	78.9	901.7	0.0	0.9	2.7	6.2
28/02/15	18.2	23.2	29.5	19.2	23.7	29.1	-5.7	6.7	17.0	48.3	70.0	89.9	-1.6	183.1	1037.6	0.0	0.0	2.0	6.1
MONTH	12.8	23.0	36.1	14.0	23.5	35.6	-13.6	6.5	33.6	27.5	72.7	96.8	-1.8	258.6	1,159.9	32.4	0.0	2.1	8.8



