

WAMBO COAL ENVIRONMENTAL REPORTING 1 JANUARY – 31 JANUARY 2018

13 February 2018

Environment Protection Licence Number: 529

Licensee: Wambo Coal Pty Limited, PMB 1, Singleton NSW 2330

Premises: Wambo Coal Pty Limited, Jerrys Plains Road, Warkworth NSW 2330



Monitoring Frequency: Once per month Sampling Method: Grab sample

Limits: Nil

Table 1 - WCPL Surface and Mine Water Dam Results

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|---|------------|------|---------------|------------|----------|--|--|--|--|--|--|
| Site | Date | рН | EC (μS/cm) | TSS (mg/L) | Comments | | | | | | |
| SW01 | 30 January | 7.84 | 913 | 6 | | | | | | | |
| SW02 | 30 January | | | | Pool | | | | | | |
| SW03 | 30 January | 7.87 | 2600 | 17 | | | | | | | |
| SW04 | 30 January | | | | Dry | | | | | | |
| SW05 | 30 January | | | | Dry | | | | | | |
| SW06 | 30 January | | | | Pool | | | | | | |
| SW07 | 30 January | | | | Dry | | | | | | |
| SW08 | 30 January | | | | Dry | | | | | | |
| SW14 | 30 January | 8.4 | 525 | 5 | | | | | | | |
| SW15 | 30 January | 8.85 | 9200 | 170 | | | | | | | |
| SW27 | 30 January | | | | Pool | | | | | | |
| SW31 | 30 January | 9.08 | 9920 | 415 | | | | | | | |
| SW32a | 30 January | | | | Pool | | | | | | |
| SW38 | 30 January | 9.09 | 9570 | 745 | | | | | | | |
| SW39 | 30 January | | | | Dry | | | | | | |
| SW40 | 30 January | | | | Pool | | | | | | |



Monitoring Frequency: Once per month Sampling Method: AM19 Limits: 4g / m² / month EPA Guideline

Date sampled: 15 January 2018 Date obtained: 24 January 2018 Date published: 13 February 2018

Table 2 - WCPL Depositional Dust Gauges

| Site | Date | Ash (g/m2) | Total Insoluble Matter (g/m2) | AR/IS Ratio | Comment |
|------|------------|------------|----------------------------------|----------------|---------|
| D11 | 15 January | 2.6 | 4.9 | 53.06 | |
| D19 | 15 January | 4.1 | 6.1 | 88.93 | |
| D21 | 15 January | 3.1 | 4.3 | 72.09 | |
| D22 | 15 January | 2.7 | 3.3 | 81.81 | |



Monitoring Frequency: Continuous Sampling Method: AM22

Limits: Nil

Date sampled: Dust readings recorded daily

Date obtained: The next day for the preceding day's result

Date published: 1 February 2018

Table 3 - WCPL PM10 Results

| | | Coralie | PM02 - Wa | WCPL PM10 Imbo Road | PM03 - T | helander | PM04 - Muller | | | |
|-------------|---|----------------|---|------------------------|---|----------------|---|----------------|--|--|
| | (Sentir | nex 19) | (Caban) (Se | entinex 20) | (Sentir | nex 21) | (Sentir | nex 22) | | |
| Date of Run | 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 January | 36.3 | 36.30 | 25.6 | 25.60 | NaN* | NaN* | 23.5 | 23.50 | | |
| 2 January | 28.1 | 32.20 | 21.9 | 23.75 | NaN* | NaN* | 23.4 | 23.45 | | |
| 3 January | 24.8 | 29.73 | 18.5 | 22.00 | 14.5468 | 14.55 | 18.1 | 21.67 | | |
| 4 January | 29.6 | 29.70 | 25.2 | 22.80 | 24.5 | 19.52 | 27.1 | 23.03 | | |
| 5 January | 31.4 | 30.04 | 27.9 | 23.82 | 22.4 | 20.48 | 32.1 | 24.84 | | |
| 6 January | 41.5 | 31.95 | 31 | 25.02 | 22.7 | 21.04 | 34 | 26.37 | | |
| 7 January | 26.6 | 31.19 | 30.4 | 25.79 | 22.4 | 21.31 | 26.7 | 26.41 | | |
| 8 January | 45.2 | 32.94 | 37.5 | 27.25 | 24.9033 | 21.91 | 34.9 | 27.48 | | |
| 9 January | 28.9 | 32.49 | 22.8 | 26.76 | 17.8 | 21.32 | 22 | 26.87 | | |
| 10 January | 32.7 | 32.51 | 22 | 26.28 | 24.2 | 21.68 | 24.6 | 26.64 | | |
| 11 January | 42.1 | 33.38 | 29.4 | 26.56 | 32.2 | 22.85 | 33.9 | 27.30 | | |
| 12 January | 34.1282 | 33.44 | 30.5 | 26.89 | 25.4 | 23.11 | 33.2 | 27.79 | | |
| 13 January | 12.4 | 31.83 | 19.2 | 26.30 | 18.2 | 22.66 | 19.2 | 27.13 | | |
| 14 January | 11.7 | 30.39 | 12.6 | 25.32 | 8.4 | 21.47 | 19.6 | 26.59 | | |
| 15 January | 21.1 | 29.77 | 15.3 | 24.65 | 12.3 | 20.77 | 17.9 | 26.01 | | |
| 16 January | 31.7 | 29.89 | 25.2 | 24.69 | 24.5 | 21.03 | 32.7 | 26.43 | | |
| 17 January | 34.4 | 30.15 | 28.1 | 24.89 | 28.5 | 21.53 | 30.1 | 26.65 | | |
| 18 January | 33.2 | 30.32 | 40.7 | 25.77 | 28.2 | 21.95 | 51.2 | 28.01 | | |
| 19 January | 60.5 | 31.91 | 36.7 | 26.34 | 39.8 | 23.00 | 49.5 | 29.14 | | |
| 20 January | 45.3 | 32.58 | 27.1 | 26.38 | 32 | 23.50 | 47.3 | 30.05 | | |
| 21 January | 40.7 | 32.97 | 24.6 | 26.30 | 26.6 | 23.66 | 32 | 30.14 | | |
| 22 January | 37.5 | 33.17 | 28.2 | 26.38 | 21 | 23.53 | 43.2 | 30.74 | | |
| 23 January | 42.1 | 33.56 | 42.7 | 27.09 | 31.4 | 23.90 | 55 | 31.79 | | |
| 24 January | 46.4 | 34.10 | 44.1 | 27.80 | 35.8 | 24.44 | 48.8 | 32.50 | | |
| 25 January | 32.8 | 34.05 | 27.9 | 27.80 | 26.8 | 24.55 | 30.6 | 32.42 | | |
| 26 January | 36.4 | 34.14 | 29.9 | 27.88 | 31.9 | 24.85 | 37 | 32.60 | | |
| 27 January | 40.1 | 34.36 | 19.3 | 27.57 | 21 | 24.70 | 32.3 | 32.59 | | |
| 28 January | 34.7 | 34.37 | 18.9 | 27.26 | 17.9 | 24.44 | 26.7 | 32.38 | | |
| 29 January | 53.6 | 35.03 | 25.6 | 27.20 | 25.3 | 24.47 | 35.1 | 32.47 | | |
| 30 January | 00.0 | 05.45 | 24.0 | 07.40 | 25.0 | 24.54 | 20.0 | 22.02 | | |
| | 38.6 | 35.15 | 34.9 | 27.46 | 25.6 | 24.51 | 36.9 | 32.62 | | |

^{*} No data due to an ntermittent fault with the UPS rendering the TEOM in operable.



Monitoring Frequency: Every blast Airblast Overpressure Limit: 120 dBL **Ground Vibration Limit: 10mm/s**

Date sampled: After blast event

Date obtained: 6, 13, 18, 19 and 22 January 2018 Date published: 13 February 2018

Table 4 - WCPL Blast Monitoring Results

| Data 9 Time | ID | BM02 | 2 - Kelly | BM05 | - Muller | BM07 - Thelander | | |
|---------------------|------------------|-------|-----------|-------|----------|------------------|--------|--|
| Date & Time | טו | dBL | mm/sec | dBL | mm/sec | dBL | mm/sec | |
| 2018-01-06 11:59:40 | Montrose RCA_220 | 94.7 | 0.03 | 103.2 | 0.18 | 100.5 | 0.20 | |
| 2018-01-13 13:05:26 | M_27RCA_220 | 107.8 | 0.20 | 103.9 | 0.31 | 104.0 | 0.23 | |
| 2018-01-18 10:16:53 | M_27RCA_222 | 97.0 | 0.14 | 111.2 | 0.22 | 102.4 | 0.19 | |
| 2018-01-19 10:21:22 | HD_1WWA_225 | 100.8 | 0.11 | 109.1 | 0.54 | 101.8 | 0.38 | |
| 2018-01-22 14:38:23 | M_27WMA_226 | 91.9 | 0.08 | 103.8 | 0.96 | 97.9 | 0.79 | |



Monitoring Frequency: Continuous Sampling Method: Site Meteorological Station Limits: Nil

Date sampled: Weather readings recorded daily Date obtained: 1 February 2018 Date published: 13 February 2018

Table 5 - WCPI Meteorology

| Table 5 - WCPL Meteorology | | | | | | | | | | | | | | | |
|----------------------------|------|------------------|------|------|----------------------------|------|------|-----------|------|---------|------------|-----|-----|---------|------|
| Date | | Temperature (2m) | | | Temperature (10m) Humidity | | | Solar Rad | RAIN | | Wind Speed | | | | |
| | Min | Average | Max | Min | Average | Max | Min | Average | Max | Average | Max | mm | Min | Average | Max |
| 1 January | 19.2 | 26.3 | 35.4 | 19.8 | 26.2 | 35 | 24.8 | 62.7 | 93.1 | 299.7 | 1209.1 | 0 | 0.1 | 1.6 | 7.6 |
| 2 January | 20.6 | 25 | 31.6 | 20.9 | 24.8 | 30.4 | 40.6 | 68.7 | 89.5 | 303.8 | 1232.1 | 2.6 | 0.7 | 2.5 | 9.3 |
| 3 January | 18.1 | 22.7 | 27.5 | 18.7 | 22.6 | 26.6 | 48.1 | 70.8 | 98.4 | 245.5 | 1328.6 | 0 | 0 | 2.8 | 6.8 |
| 4 January | 19.2 | 23 | 28.6 | 19.3 | 22.7 | 27.9 | 39.9 | 59.6 | 79.9 | 278.2 | 1343.4 | 0 | 0.3 | 1.8 | 6.3 |
| 5 January | 13.6 | 24.5 | 34.6 | 14.6 | 24.4 | 34 | 18.5 | 55.6 | 94.5 | 371.6 | 1149.5 | 0 | 0.2 | 1 | 4.5 |
| 6 January | 16.9 | 29.7 | 41.4 | 18.3 | 29.7 | 40.8 | 14.6 | 46.8 | 86.8 | 363.2 | 1101.1 | 0 | 0.2 | 0.8 | 5.7 |
| 7 January | 20.2 | 33.4 | 43.8 | 21.3 | 33.8 | 43 | 15.4 | 37.7 | 79.1 | 356.7 | 1086.2 | 0 | 0.1 | 2.1 | 6.8 |
| 8 January | 23.7 | 30.5 | 42 | 23.6 | 30.4 | 41.1 | 19.6 | 51.1 | 80.1 | 282.1 | 1109.2 | 2 | 0.1 | 0.7 | 7.5 |
| 9 January | 23.5 | 28.2 | 35.6 | 23.6 | 28.2 | 35.5 | 35.1 | 60.7 | 92.2 | 199 | 1170.2 | 1.4 | 0.2 | 1.3 | 10.6 |
| 10 January | 20.9 | 22.4 | 24.8 | 20.8 | 22.2 | 24.4 | 63.2 | 72.5 | 85 | 96.9 | 479.8 | 0 | 1.2 | 2.8 | 5.2 |
| 11 January | 20.8 | 24.3 | 29.1 | 20.7 | 24.1 | 28.7 | 51.4 | 67.2 | 79.2 | 190.1 | 1207.9 | 0 | 0.4 | 1.8 | 3.9 |
| 12 January | 19 | 27.3 | 39.4 | 19.5 | 27.3 | 38.4 | 27.4 | 69.6 | 94 | 275.8 | 1124.5 | 1.2 | 0.1 | 0.5 | 3.9 |
| 13 January | 21.9 | 31 | 37.6 | 22 | 31.1 | 36.8 | 28.5 | 48.2 | 93.2 | 234 | 1089.1 | 0 | 0.2 | 2.9 | 7.7 |
| 14 January | 17.8 | 22.1 | 26.6 | 18.6 | 22 | 25.7 | 24 | 48.7 | 96.2 | 363.2 | 1292 | 0 | 0.2 | 3.1 | 6.4 |
| 15 January | 15.6 | 21.7 | 28.4 | 16 | 21.4 | 27.5 | 25.4 | 46.4 | 67.2 | 316.1 | 1254.3 | 0 | 0.2 | 2.1 | 7.1 |
| 16 January | 17.4 | 22.1 | 26.6 | 17.5 | 21.7 | 25.6 | 31.8 | 45.2 | 64.9 | 361.2 | 1280.4 | 0 | 1.3 | 3.3 | 5.6 |
| 17 January | 11.5 | 20.9 | 30.4 | 12.5 | 20.8 | 29.4 | 22.9 | 55.2 | 91.2 | 375.7 | 1119.4 | 0 | 0.1 | 1.7 | 6.1 |
| 18 January | 10 | 22.7 | 34.7 | 11.1 | 22.8 | 33.6 | 14.5 | 47.4 | 93.9 | 388.2 | 1141 | 0 | 0 | 1 | 6.2 |
| 19 January | 10.6 | 25.2 | 39.4 | 12.1 | 25.5 | 38.5 | 12.9 | 39 | 78.8 | 382.6 | 1127.2 | 0 | 0.1 | 1.5 | 7.8 |
| 20 January | 9.9 | 24.4 | 38.4 | 11.2 | 24.6 | 37.5 | 7 | 42.1 | 77.9 | 380.4 | 1146.3 | 0 | 0.2 | 1.8 | 7 |
| 21 January | 14 | 26.7 | 37.6 | 15.3 | 26.6 | 36.5 | 19.8 | 54.2 | 92.5 | 367.7 | 1155.7 | 0 | 0 | 1.7 | 5.3 |
| 22 January | 16.5 | 30.1 | 42.5 | 17.4 | 30.1 | 41.8 | 12.6 | 47.1 | 92.5 | 337.1 | 1139.3 | 0 | 0.1 | 0.4 | 6.8 |
| 23 January | 19.1 | 29 | 38.8 | 20 | 29.2 | 37.9 | 16.1 | 44.8 | 71.3 | 229.1 | 1058.7 | 0 | 0 | 0.8 | 4.9 |
| 24 January | 20.9 | 29.3 | 39.6 | 21.9 | 29.2 | 38.8 | 17.6 | 52.5 | 79.6 | 295.5 | 1142 | 0 | 0.1 | 1.4 | 5.8 |
| 25 January | 20.8 | 27.5 | 35.7 | 20.9 | 27.2 | 34.8 | 32.7 | 63.2 | 88.8 | 221.4 | 1189.8 | 0 | 0.3 | 1.7 | 5.1 |
| 26 January | 23.3 | 27.6 | 36.4 | 23.2 | 27.3 | 35.6 | 33.6 | 66 | 85 | 250.2 | 1068.8 | 0 | 0.1 | 1.1 | 5.4 |
| 27 January | 23.5 | 28.7 | 36.6 | 23.3 | 28.2 | 35.7 | 29.8 | 62.8 | 87.2 | 260.3 | 1081.6 | 0 | 0.2 | 1.9 | 6.2 |
| 28 January | 23.8 | 28.1 | 34.5 | 23.6 | 27.6 | 33.3 | 35.3 | 62.7 | 79.4 | 281.7 | 1143.3 | 0 | 1.1 | 2.9 | 7.3 |
| 29 January | 21.6 | 26.9 | 33.2 | 21.7 | 26.4 | 32.1 | 35.4 | 61.8 | 88.4 | 303.3 | 1172 | 0 | 0.7 | 2.9 | 6.6 |
| 30 January | 18.3 | 28 | 37.5 | 18.9 | 27.6 | 36.6 | 20.1 | 54.9 | 91.6 | 355.7 | 1065.8 | 0 | 0 | 0.7 | 6.2 |
| 31 January | 19.5 | 21.8 | 27.8 | 19.2 | 21.4 | 27.5 | 56.1 | 68.2 | 79.6 | 59.5 | 307 | 0 | 1.6 | 3 | 5.4 |
| MONTH | 9.9 | 26.1 | 43.8 | 11.1 | 26.0 | 43 | 7 | 55.9 | 98.4 | 291.1 | 1343.4 | 7.2 | 0 | 1.7 | 10.6 |

