

**WAMBO COAL
BLAST MONITORING RESULTS
1 JANUARY 2020 – 30 NOVEMBER 2020**

Published 10 May 2021

**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**

Wambo Coal has approval to blast in accordance with DA 305-7-2003 and EPL 529.

During the 2020 Calendar year Wambo Coal conducted a total of 61 blast events, all of which were monitored at EPL locations 10, 11 and 12.

EPL 529 outlines several specific conditions in relation to blast monitoring. These include;

- L6.2 - The airblast overpressure level from blasting operations in or on the premises must not exceed: 115 dB (Lin Peak) for more than 5% of the total number of blasts during each reporting period; at either monitoring point 10, 11 or 12 in Condition P1.3.
- L6.3 - The airblast overpressure level from blasting operations in or on the premises must not exceed: 120 dB (Lin Peak) at any time; at either monitoring point 10, 11 or 12 in Condition P1.3.
- L6.4 - The ground vibration peak particle velocity from blasting operations carried out in or on the premises must not exceed: 5 mm/second for more than 5% of the total number of blasts during each reporting period; at either monitoring point 10, 11 or 12 in Condition P1.3.
- L6.5 - The ground vibration peak particle velocity from blasting operations carried out in or on the premises must not exceed: 10 mm/second at any time; at either monitoring point 10, 11 or 12 in Condition P1.3

A summary of blast compliance is outlined in Table 1.

Table 1 Summary of Blast Compliance

Parameter	Criteria	Results Exceeding Approval Criteria					
		BM02		BM05		BM07	
		No.	%	No.	%	No.	%
Airblast Overpressure Level (dB Lin Peak [dBL])	115	0	0	2	3	1	1
	120	0	0	0	0	0	0
Ground Vibration Peak Particle Velocity (mm/s)	5	1	1	0	0	0	0
	10	0	0	0	0	0	0

Note: dBL = low frequency noise levels.

Less than 5% of all blasts recorded overpressure greater than 115 dBL, and no blasts resulted in overpressure greater than 120 dBL being recorded at BM02, BM05 or BM07.

Less than 5% of all blasts recorded a ground vibration greater than 5 mm/s and no blasts resulted in ground vibration of greater than 10 mm/s being recorded at BM02, BM05 or BM07.

From 30 November 2020, blasting conducted for open cut operations is managed by United under Phase 2 operations of the United Wambo Joint Venture.

Table 2 provides the monitoring results for all blasts that occurred at Wambo to 30 November 2020.



Table 2 - 2020 Blast Monitoring Results

Blast ID	Date	BM02 – Kelly (EPA 10)		BM05 – Muller (EPA 11)		BM07 – Thelander (EPA 12)	
		Peak Air Blast	Peak Resultant	Peak Air Blast	Peak Resultant	Peak Air Blast	Peak Resultant
		dBL	mm/s	dBL	mm/s	dBL	mm/s
M_27WTA_468	Fri/10/Jan/2020	82.6	0.03	111.4	0.57	101.9	0.73
M_27WMA_471	Fri/10/Jan/2020	80.2	0.08	103.4	0.48	97.7	0.48
M_27WRC_467	Fri/10/Jan/2020	78.6	0.12	98.9	0.49	96.2	0.29
M_27WMA_474	Tue/21/Jan/2020	83.3	9.12	104.9	0.46	101.9	0.32
M_27WTA_469	Tue/21/Jan/2020	92.1	0.04	100.6	0.19	103.9	0.17
M_27WMA_475	Tue/28/Jan/2020	88.2	0.22	101.4	0.47	96.7	0.4
M_27WMA_476	Tue/28/Jan/2020	92.8	0.06	100.7	0.25	99.7	0.14
M_27WMA_479	Mon/03/Feb/2020	98.3	0.06	102	0.6	90.5	0.35
HS_WRB_483	Fri/14/Feb/2020	101.3	0.52	87.2	0.02	78.2	0.03
M_27WMA_476b	Sat/15/Feb/2020	90.3	0.04	99.8	0.19	101.3	0.12
M_27WMA_477	Tue/18/Feb/2020	83.6	0.16	101.2	0.4	97.6	0.32
MW_WWA_484	Wed/26/Feb/2020	107.8	0.14	104.6	0.57	101.7	1.06
M_27WRC_481	Wed/26/Feb/2020	96	0.11	94.4	0.16	95.5	0.11
M_27WRC_485	Mon/02/Mar/2020	93.2	0.12	92.6	0.35	95.5	0.19
M_27WMA_488	Fri/06/Mar/2020	87.4	0.02	94.8	0.08	93.8	0.06
M_27WMA_489	Fri/06/Mar/2020	98.1	0.08	100.6	0.33	94.7	0.29



Blast ID	Date	BM02 – Kelly (EPA 10)		BM05 – Muller (EPA 11)		BM07 – Thelander (EPA 12)	
		Peak Air Blast	Peak Resultant	Peak Air Blast	Peak Resultant	Peak Air Blast	Peak Resultant
		dBL	mm/s	dBL	mm/s	dBL	mm/s
M_27WRC_494	Thu/19/Mar/2020	81.2	0.24	115.8	0.77	111.7	0.51
M_27WMA_490	Thu/19/Mar/2020	81.2	0.24	115.8	0.77	111.7	0.51
M_27WMA_489_2	Thu/19/Mar/2020	81.2	0.24	115.8	0.77	111.7	0.51
M_27WMA_487	Thu/19/Mar/2020	79.9	0.22	104.8	0.68	101.3	0.49
M_27WMA_491	Thu/26/Mar/2020	97.1	0.39	86.4	0.01	74.3	0.02
M_27WMA_487_2	Thu/02/Apr/2020	81.5	0.25	108.3	0.55	102.7	0.35
M_27WMA_490_2	Thu/02/Apr/2020	81.5	0.25	108.3	0.55	102.7	0.35
M_27WMA_497a	Sat/11/Apr/2020	99.8	0.04	99	0.12	101.7	0.09
M_27WMA_485	Fri/17/Apr/2020	86.6	0.06	100	0.37	96.7	0.38
M_27WRC_496	Fri/17/Apr/2020	105.3	0.11	101.3	0.31	92.9	0.17
M_27WMA_495	Fri/24/Apr/2020	94.7	0.17	104.1	0.58	99	0.34
WTA 500_1	Fri/01/May/2020	100.8	0.15	96.9	0.43	91.9	0.48
WMA 490_3	Fri/01/May/2020	100.8	0.15	96.9	0.43	91.9	0.48
WTA 501_1	Fri/08/May/2020	98.8	1.34	97.3	0.14	95.3	0.17
WMA 503	Fri/08/May/2020	92.7	0.23	95.4	0.45	90	0.34
WMA_502	Wed/20/May/2020	86.2	0.04	83	0.08	85.5	0.13
WTA 501_2	Wed/20/May/2020	94.8	0.22	94	0.19	94.9	0.23

Blast ID	Date	BM02 – Kelly (EPA 10)		BM05 – Muller (EPA 11)		BM07 – Thelander (EPA 12)	
		Peak Air Blast	Peak Resultant	Peak Air Blast	Peak Resultant	Peak Air Blast	Peak Resultant
		dBL	mm/s	dBL	mm/s	dBL	mm/s
RCA 504	Wed/20/May/2020	90.2	0.23	95.9	0.46	93.6	0.39
WMA 506_1	Thu/28/May/2020	75.4	0.07	99.4	0.27	95.8	0.24
WTA_500_2	Thu/28/May/2020	77.6	0.2	99	0.41	98.4	0.31
WRC_507	Fri/05/Jun/2020	94.1	0.1	103.3	0.21	94.4	0.16
WMA_509	Tue/16/Jun/2020	83.4	0.13	94.3	0.36	93.8	0.3
WTA_500_3	Wed/24/Jun/2020	84	0.2	98	0.55	95.8	0.36
WRA_511_1	Fri/03/Jul/2020	97.6	0.21	102.3	0.28	99.9	0.19
WTA_500_4B	Fri/10/Jul/2020	83.2	0.17	98.1	0.33	88.3	0.24
WRC_505_510	Fri/10/Jul/2020	96.3	0.18	102	0.19	89.2	0.12
WRC_512A	Thu/16/Jul/2020	89.2	0.12	118.5	0.21	107.3	0.18
WTA_500_4b2	Thu/23/Jul/2020	80.2	0.25	104.7	0.51	100.7	0.37
WTA_500_6	Thu/23/Jul/2020	80.2	0.25	104.7	0.51	100.7	0.37
WMA_506_2a2 part 1	Sat/01/Aug/2020	92.5	0.21	101.1	0.48	96.9	0.27
WRC_515	Sat/01/Aug/2020	92.5	0.21	101.1	0.48	96.9	0.27
WMA_506_2a2 part 2	Thu/06/Aug/2020	84.3	0.19	95.1	0.43	92.6	0.29
WTA_500_4c	Wed/12/Aug/2020	81.9	0.26	100.2	0.45	95.5	0.48
WMA_506_2a2 part 3&4	Thu/20/Aug/2020	96	0.26	91	0.39	87.7	0.4

Blast ID	Date	BM02 – Kelly (EPA 10)		BM05 – Muller (EPA 11)		BM07 – Thelander (EPA 12)	
		Peak Air Blast	Peak Resultant	Peak Air Blast	Peak Resultant	Peak Air Blast	Peak Resultant
		dBL	mm/s	dBL	mm/s	dBL	mm/s
WMA_513_123	Fri/28/Aug/2020	82.4	0.26	102.4	0.52	101.9	0.32
WMA_513_1_2_part2	Fri/04/Sep/2020	93.9	0.12	97.6	0.27	95	0.26
WRA_511_2a	Tue/08/Sep/2020	91	0.08	96.7	0.11	92.7	0.08
WTA_500_8_part1	Thu/17/Sep/2020	88.4	0.25	95.3	0.67	92.4	0.27
WRC_518	Thu/17/Sep/2020	88.4	0.25	95.3	0.67	92.4	0.27
WTA_501_3a	Fri/25/Sep/2020	107.7	0.07	103.7	0.12	100.6	0.07
WTA_500_8_part2	Thu/01/Oct/2020	91.5	0.26	98	0.43	97.6	0.41
WMA_506R	Fri/02/Oct/2020	83.2	0.07	93	0.01	84.5	0
WMA_524 (reshoot)	Fri/09/Oct/2020	86.2	0.05	94.1	0.13	91.2	0.08
WMA_520 (Ramp)	Sat/17/Oct/2020	91.4	0.27	100.2	0.37	94.7	0.34
WTA_500_7	Fri/23/Oct/2020	89.6	0.3	99.8	0.49	95.4	0.31
WTA_500_8_part3	Wed/04/Nov/2020	84.8	0.13	95.2	0.34	92.1	0.35
WMA_519	Fri/13/Nov/2020	94.8	0.28	99.8	0.4	93.1	0.36
WRC_523	Fri/20/Nov/2020	81.2	0.06	98.8	0.1	91.7	0.08

Notes - WCPL achieved a data capture rate of 100% for overpressure and 100% for vibration during the reporting period. Homestead (structural monitoring; BM01) and Harris (performance monitoring; BM03) monitors have been excluded due to not being compliance based monitoring points.