

## TARRAWONGA COAL MINE – MONTHLY MONITORING SUMMARY

### Site Information

**EPL No:** 12365

**EPA Website Link:** <http://www.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=55113&SYSUID=1&LICID=12365>

**Licensee:** Tarrawonga Coal Pty Ltd

**Licensee Address:** Tarrawonga Coal Mine, 469 Goonbri Road, BOGGABRI NSW 2382

**EPL Monitoring Points:** See Figure 1 below

**Sampling Period:** December 2020

**Obtained Date:** 8/01/2021

**Publication Date:** 8/1/2021

**Table 1 - No Pollutant Limits Apply**

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Samples for the Month	Date Sampled	Date of Max. Value Obtained	Min Value	Mean Value	Median Value	Max or Only Value	Comments
5	TSS	mg/L	Upon discharge	1	22/12/2020	-	-	-	-	66	-
	Conductivity	µS/cm		1	22/12/2020	-	-	-	-	96	-
	Oil & Grease	mg/L		1	22/12/2020	-	-	-	-	<5	-
	pH	pH		1	22/12/2020	-	-	-	-	6.75	-
6	TSS	mg/L	Upon discharge	1	22/12/2020	-	-	-	-	28	-
	Conductivity	µS/cm		1	22/12/2020	-	-	-	-	138	-
	Oil & Grease	mg/L		1	22/12/2020	-	-	-	-	<5	-
	pH	pH		1	22/12/2020	-	-	-	-	7.03	-

**Table 2 - Pollutant Limits Apply**

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Samples for the Month	Date Sampled	Date of Max. Value Obtained	Min Value	Max or Only Value	100%ile Limit	Exceed-ance (Yes/ No)	Comment/s
1	TSS	mg/L	Upon discharge	0	-	-	-	-	-	-	-
	Conductivity	µS/cm		0	-	-	-	-	-	-	-
	Oil & Grease	mg/L		0	-	-	-	-	-	-	-
	pH	pH		0	-	-	-	-	-	-	-
2	TSS	mg/L	Upon discharge	0	-	-	-	-	-	-	-
	Conductivity	µS/cm		0	-	-	-	-	-	-	-
	Oil & Grease	mg/L		0	-	-	-	-	-	-	-
	pH	pH		0	-	-	-	-	-	-	-
3	TSS	mg/L	Upon discharge	2	17&22/12	17/12	2,000	8,530	50	No	100%ile limit not applicable due to discharge occurring after 90mm of rain.
	Conductivity	µS/cm		2	17&22/12	22/12	192	221	-	No	-
	Oil & Grease	mg/L		2	17&22/12	17&22/12	<5	<5	10	No	-
	pH	pH		2	17&22/12	17/12	6.71	7.81	8.5	No	-

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Samples for the Month	Date Sampled	Date of Max. Value Obtained	Min Value	Max or Only Value	100%ile Limit	Exceed-ance (Yes/ No)	Comment/s
24	TSS	mg/L	Upon discharge	0	-	-	-	-	-	-	-
	Conductivity	µS/cm		0	-	-	-	-	-	-	-
	Oil & Grease	mg/L		0	-	-	-	-	-	-	-
	pH	pH		0	-	-	-	-	-	-	-
26	TSS	mg/L	Upon discharge	0	-	-	-	-	-	-	-
	Conductivity	µS/cm		0	-	-	-	-	-	-	-
	Oil & Grease	mg/L		0	-	-	-	-	-	-	-
	pH	pH		0	-	-	-	-	-	-	-
27	TSS	mg/L	Upon discharge	1	24/12/2020	-	-	327	50	No	100%ile limit not applicable due to discharge occurring after 90mm of rain.
	Conductivity	µS/cm		1	24/12/2020	-	-	244	-	No	-
	Oil & Grease	mg/L		1	24/12/2020	-	-	<5	10	No	-
	pH	pH		1	24/12/2020	-	-	6.62	8.5	No	-

**Table 3 – Monitoring (Quarterly & 6 Monthly – No Limits apply)**

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Samples for the Period	Date Sampled	Date of Max. Value Obtained	Min Value	Mean Value	Median Value	Max or Only Value
9	Conductivity	µS/cm	6 monthly – (Mar- Sep)	1	-	-	-	-	-	-
	Lead	mg/L		1	-	-	-	-	-	-
	pH	pH		1	-	-	-	-	-	-
	Standing Water Level	metres		1	-	-	-	-	-	-
10	Conductivity	µS/cm	6 monthly – (Mar- Sep)	1	-	-	-	-	-	-
	Lead	mg/L		1	-	-	-	-	-	-
	pH	pH		1	-	-	-	-	-	-
	Standing Water Level	metres		1	-	-	-	-	-	-
12	Conductivity	µS/cm	6 monthly – (Mar- Sep)	1	-	-	-	-	-	-
	Lead	mg/L		1	-	-	-	-	-	-
	pH	pH		1	-	-	-	-	-	-
	Standing Water Level	metres		1	-	-	-	-	-	-
13	Conductivity	µS/cm	Quarterly - (Feb, May, Aug, Nov)	0	-	-	-	-	-	-
	Oil & Grease	mg/L		0	-	-	-	-	-	-
	pH	pH		0	-	-	-	-	-	-

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Samples for the Period	Date Sampled	Date of Max. Value Obtained	Min Value	Mean Value	Median Value	Max or Only Value
	TSS	mg/L		0	-	-	-	-	-	-

*Note: From April 2012 to February 2019, Electrical Conductivity was reported with the incorrect unit of measure (mS/cm). From January 2019 it has been corrected to  $\mu$ S/cm.*

**Table 4 – Quarterly Attended Noise Monitoring**

(Noise Limits Apply -35dB LAeq(15min) -Day, Evening and Night;45dB LA1(1min) -Night )

(Extracts from consultants’ report for the quarter)

Date	Time	Total Noise Levels (dB)						Mine LAeq Noise Level (dB)	Wind Speed (m/s)	Wind Direction (°)	Stability Category	Rain (mm)
		LA eq	LA max	LA min	LA1	LA10	LA90					
<b>TN2</b>												
01/12/2020	11:53	36	67	25	44	36	27	<27	1.8	317	A	0
	12:10	36	55	27	46	38	29	<29	2.9	5	B	0
	12:26	35	55	24	46	37	27	<27	<b>4.2</b>	267	B	0
	12:42	34	52	24	44	37	27	<27	2.9	340	A	0
	13:03	36	52	24	44	38	28	<18 (I/A)	<b>4.4</b>	339	B	0
	13:19	45	72	24	56	45	28	<18 (I/A)	<b>4.8</b>	300	A	0
	21:35	32	48	27	37	34	29	<19 (I/A)	2.3	21	D	0
	21:51	36	59	28	44	38	30	<20 (I/A)	2.3	38	D	0
	22:07	43	58	32	52	47	35	<25 (I/A)	3.0	32	D	0
	22:22	42	64	34	49	45	38	<28 (I/A)	<b>4.1</b>	16	D	0
	22:38	42	55	32	50	45	36	<26 (I/A)	3.0	18	D	0
22:54	39	57	32	46	41	35	<25 (I/A)	<b>3.8</b>	357	D	0	
02/12/2020	12:32	35	69	21	45	29	21	<21	2.6	230	A	<b>3</b>
	12:50	44	64	20	56	47	28	<18 (I/A)	<b>3.8</b>	228	A	0
	13:06	33	55	22	44	36	25	<15 (I/A)	<b>5.2</b>	216	D	0

	13:21	29	48	21	38	32	23	<13 (I/A)	<b>3.1</b>	241	B	0
	13:39	27	49	18	37	28	20	20	<b>4.4</b>	244	A	0
	13:54	37	55	18	49	40	20	20	<b>3.6</b>	194	B	0
	21:28	34	49	27	38	36	30	<20 (I/A)	3.0	150	E	0
	21:44	33	56	26	37	35	30	<20 (I/A)	0.9	63	F	0
	22:00	35	52	27	41	36	31	<26	<b>5.6</b>	100	D	0
	22:15	34	47	28	38	36	31	<26	<b>5.0</b>	126	E	0
	22:31	32	48	26	36	34	28	<28	<b>3.4</b>	124	D	0
	22:47	31	45	26	35	32	29	28	<b>4.3</b>	104	E	0
03/12/2020	11:28	40	58	23	52	43	26	<28	<b>5.9</b>	281	D	0
	11:46	39	63	23	53	41	25	25	3.0	171	A	0
	12:03	28	50	23	36	30	25	25	1.4	127	A	0
	12:18	38	69	22	49	37	24	24	2.8	300	C	0
	12:34	38	56	21	49	41	25	25	<b>5.5</b>	267	D	0
	12:50	41	60	21	54	44	25	25	<b>5.1</b>	235	C	0
	22:33	43	63	28	51	47	33	<23 (I/A)	<b>4.9</b>	50	D	0
	22:48	33	50	24	45	34	27	<17 (I/A)	0.7	238	F	0
	23:03	29	39	24	33	31	27	<17 (I/A)	1.9	55	F	0
	23:18	31	49	23	42	32	26	<26	0.6	208	F	0
04/12/2020	10:13	40	73	27	51	35	29	30	1.8	309	A	0
	11:09	38	56	24	49	41	27	27	<b>4.9</b>	304	D	0
	11:25	38	54	25	47	41	29	<29	<b>4.3</b>	278	B	0
	11:40	45	78	27	52	43	30	<30	<b>3.6</b>	334	B	0
	11:56	40	61	28	51	42	31	<28	<b>3.1</b>	299	B	0
	12:12	42	68	26	53	45	28	<28	<b>6.0</b>	289	C	0

	21:23	36	46	33	39	38	35	35	1.2	41	E	0
	21:39	37	45	32	39	38	35	<35	1.0	26	E	0
	22:00	36	42	32	38	37	34	<34	2.3	62	F	0
	22:15	35	55	30	38	36	33	<33	1.1	19	E	0
	22:31	35	48	30	38	36	32	<32	1.1	335	D	0
	22:47	34	49	29	41	35	31	<31	1.2	42	E	0
<b>TN3</b>												
01/12/2020	12:33	46	56	38	53	49	40	<30 (I/A)	<b>4.4</b>	342	A	0
	12:52	49	56	43	54	51	45	<35 (I/A)	<b>4.9</b>	349	C	0
	13:14	48	58	40	56	51	43	<33 (I/A)	<b>3.4</b>	16	B	0
	13:33	50	59	41	57	53	44	<34 (I/A)	<b>4.6</b>	305	C	0
	13:51	51	60	43	58	54	47	<37 (I/A)	<b>5.1</b>	311	D	0
	14:11	51	60	41	56	53	47	<37 (I/A)	<b>6.1</b>	328	D	0
	21:07	42	56	36	53	42	39	<29 (I/A)	2.5	38	E	0
	21:26	39	46	36	42	41	38	<28 (I/A)	<b>3.2</b>	12	D	0
	22:00	38	46	32	42	40	35	<25 (I/A)	<b>3.4</b>	20	D	0
	22:15	39	45	32	43	42	35	<25 (I/A)	<b>4.4</b>	22	D	0
	22:32	36	44	32	43	39	33	<23 (I/A)	<b>3.6</b>	11	D	0
	22:48	39	47	32	43	42	33	<23 (I/A)	<b>3.2</b>	23	D	0
02/12/2020	13:10	42	64	23	56	41	25	<15 (I/A)	<b>4.2</b>	216	C	0
	13:30	34	55	22	43	37	24	<14 (I/A)	1.3	248	A	0
	13:46	35	58	23	44	37	26	<16 (I/A)	<b>3.9</b>	242	C	0
	14:09	49	76	22	60	36	23	<13 (I/A)	2.0	195	A	0
	14:29	37	63	21	47	33	23	<13 (I/A)	<b>3.5</b>	345	A	0
	14:54	37	60	23	44	39	26	<16 (I/A)	2.9	178	C	0



	21:14	50	61	40	56	53	45	<35 (I/A)	2.8	196	D	0
	21:29	48	55	40	54	51	44	<34 (I/A)	3.0	150	E	0
	22:00	46	54	40	52	48	42	<32 (I/A)	<b>5.6</b>	100	D	0
	22:15	43	49	37	47	45	40	<30 (I/A)	<b>5.0</b>	126	E	0
	22:40	40	47	36	44	42	38	<28 (I/A)	<b>4.9</b>	111	E	0
	23:05	42	51	36	49	45	38	<28 (I/A)	0.6	233	F	0
03/12/2020	12:22	42	64	24	55	44	28	<18 (I/A)	<b>5.3</b>	306	C	0
	12:41	44	70	24	53	40	28	<18 (I/A)	<b>4.4</b>	235	D	0
	12:57	39	62	24	50	42	29	<19 (I/A)	<b>4.6</b>	208	A	0
	13:19	40	67	25	47	40	28	<18 (I/A)	<b>4.3</b>	261	C	0
	13:40	35	51	25	42	38	28	<18 (I/A)	<b>4.3</b>	196	C	0
	13:57	38	54	25	48	42	27	<17 (I/A)	<b>4.7</b>	254	B	0
	22:21	48	58	42	51	50	45	<35 (I/A)	1.7	18	F	0
	22:36	48	67	41	52	50	44	<34 (I/A)	<b>4.9</b>	50	D	0
	22:52	46	51	40	50	49	43	<33 (I/A)	1.0	305	F	0
	23:07	47	52	41	50	49	43	<33 (I/A)	1.9	55	F	0
04/12/2020	12:04	45	67	30	56	44	35	<25 (I/A)	<b>4.9</b>	275	C	0
	12:19	49	67	35	61	51	39	<29 (I/A)	<b>6.7</b>	318	D	0
	12:35	47	69	32	61	46	35	<25 (I/A)	<b>4.9</b>	328	D	0
	12:50	49	69	31	63	46	35	<25 (I/A)	<b>4.8</b>	306	C	0
	13:17	48	69	28	63	47	31	<21 (I/A)	<b>4.9</b>	334	C	0
	13:46	46	68	26	59	46	31	<21 (I/A)	<b>4.1</b>	298	C	0
	19:47	53	73	34	66	56	37	<27 (I/A)	1.9	264	F	0
	20:03	48	69	36	62	49	38	<28 (I/A)	0.4	273	F	0
	00:40	36	47	34	37	37	35	28	1.9	62	F	0

	00:57	37	59	35	38	37	36	30	1.8	52	E	0
	01:12	37	44	35	39	38	36	31	1.4	60	D	0
	01:28	37	46	35	43	38	36	32	1.8	55	E	0
<b>TN4</b>												
01/12/2020	10:37	37	61	28	48	39	31	<21 (I/A)	<b>4.8</b>	288	D	0
	10:53	41	70	29	51	40	32	<22 (I/A)	2.8	318	B	0
	11:10	39	59	28	47	42	31	<21 (I/A)	<b>4.9</b>	323	A	0
	11:25	36	56	25	44	40	29	<19 (I/A)	<b>4.4</b>	0	C	0
	11:41	42	59	25	51	46	31	<21 (I/A)	2.1	5	A	0
	11:59	43	67	31	52	47	35	<25 (I/A)	3.2	334	B	0
	20:57	39	55	34	43	41	36	<26 (I/A)	2.3	18	D	0
	21:11	39	44	33	43	41	36	<26 (I/A)	3.0	12	D	0
	23:28	44	57	35	51	46	38	<28 (I/A)	2.8	17	D	0
	23:43	50	65	40	57	53	44	<34 (I/A)	2.5	355	D	0
	23:58	40	60	32	45	42	35	<25 (I/A)	<b>5.2</b>	218	D	0
	00:13	39	45	31	43	41	35	<25 (I/A)	<b>6.2</b>	161	D	0
02/12/2020	11:18	48	79	32	58	50	37	<27 (I/A)	1.0	91	A	0
	11:35	44	76	31	54	47	35	<25 (I/A)	<b>3.1</b>	143	A	0
	11:52	41	68	28	53	42	31	<21 (I/A)	<b>3.3</b>	132	B	0
	12:08	41	70	28	53	41	30	<20 (I/A)	2.2	107	A	0
	12:23	40	61	32	46	43	36	<26 (I/A)	1.2	48	A	0
	12:41	44	72	32	56	43	35	<25 (I/A)	<b>4.3</b>	235	D	0
	20:42	53	60	44	59	56	48	<38 (I/A)	<b>5.0</b>	173	D	0
	20:58	48	55	41	54	51	44	<34 (I/A)	<b>5.8</b>	158	D	0
	23:22	41	54	34	46	44	37	<30	<b>3.4</b>	130	E	0

	23:39	42	51	36	47	45	39	<30	1.8	184	E	0
	23:55	40	48	33	46	44	36	<30	1.4	237	E	0
	00:10	45	54	38	51	47	41	<31 (I/A)	2.6	168	D	0
03/12/2020	10:25	36	55	28	41	38	31	<21 (I/A)	<b>3.6</b>	216	A	0
	10:41	35	57	26	42	38	30	<20 (I/A)	<b>4.5</b>	261	A	0
	10:56	37	66	24	49	39	27	<17 (I/A)	<b>5.3</b>	274	A	0
	11:12	36	54	25	41	40	30	<20 (I/A)	<b>4.1</b>	223	B	0
	11:32	37	57	23	44	40	28	<18 (I/A)	<b>5.6</b>	257	B	0
	11:51	35	58	24	42	38	28	<18 (I/A)	<b>3.5</b>	224	A	0
	23:59	39	50	31	44	42	33	29	2.2	35	F	0
	00:16	40	47	32	45	43	35	30	<b>3.2</b>	42	D	0
	00:31	42	49	35	47	45	38	<28 (I/A)	3.0	17	D	0
	00:46	42	52	35	47	45	38	<28 (I/A)	<b>4.2</b>	49	D	0
04/12/2020	10:12	46	68	26	59	47	28	<18 (I/A)	1.8	309	A	0
	10:30	33	59	25	39	35	27	<17 (I/A)	2.7	215	A	0
	10:46	36	58	25	46	38	29	<19 (I/A)	<b>3.7</b>	257	A	0
	11:01	38	59	24	51	39	28	<18 (I/A)	<b>3.5</b>	263	B	0
	11:16	37	55	25	43	40	29	<19 (I/A)	<b>4.6</b>	310	D	0
	11:33	40	62	25	52	40	28	<18 (I/A)	<b>4.2</b>	309	C	0
	20:33	42	51	32	47	46	35	<25 (I/A)	0.4	206	F	0
	20:48	42	57	34	47	46	36	<26 (I/A)	0.4	19	F	0
	23:20	35	49	32	37	36	34	<24 (I/A)	1.2	352	D	0
	23:36	35	48	32	37	36	33	<26	1.2	61	E	0
	23:52	34	53	31	40	35	33	<26	1.4	60	D	0
	00:08	35	51	31	42	37	33	<26	1.8	55	E	0

Notes:

- Acronyms used: I/A = Inaudible, m/s = metres/second, dB = decibel.
- Coloured Cells = Non-compliant weather conditions not included in calculation of average for that period. Non-compliant weather conditions are any:
  - a) Wind speeds greater than 3m/s at 10m above ground level
  - b) Stability Category F temperature inversion conditions and wind speeds greater than 2m/s, 10m above the ground
  - c) Stability category G temperature inversions.
- Real time weather conditions retrieved from the mine, after monitoring occurs.

Attended noise monitoring was conducted at the “Bungalow” (TN4), “Barbers Lagoon” (TN3) and “Matong” (TN2) properties from 1<sup>st</sup> to the 4th of December 2020. The summary table (Table 4) displays a comprehensive results table displaying all measurements. The noise criterion for the mine is 35dB(A) Leq (15 min) for all operating times.

Noise from the mine must not exceed 45 dB(A) L1 (1 min) between 10 pm and 7 am. This is to minimise the potential for sleep disturbance as a result of individual loud noises from the mine. The results of the sleep disturbance monitoring show that the measured L1 (1 min) noise level did not exceed the sleep disturbance criterion.

The results above show that noise emissions from the mine did not exceed the operational noise criterion at the “Barbers Lagoon”, “Bungalow” or “Matong” monitoring locations during the monitoring event during the entire monitoring period.

**Table 5 – Monthly Monitoring (Blasts – Limits Apply)**

Location	Parameter	Units of Measure	Frequency	No. of Blasts for the Month	Average Value	Max Value	100%ile Limit	(Potential) Non-compliance /breach	Date of Max. Value Obtained
Coomalgah (TB2)	Blast Noise	dB (Lin Peak)	Every Blast	6	97.17	105.60	<b>120</b>	<b>Nil</b>	10/12/2020
	Blast Vibration	mm/s	Every Blast	6	0.19	0.40	<b>10</b>	<b>Nil</b>	4/12/2020

**Table 6- Monthly Monitoring (Dust PM10 – No Limits apply)**

Location	No. of samples required by licence	Lowest sample value	Mean of sample	Highest sample value
“Flixton” property* TEOM ( $\mu\text{g}/\text{m}^3$ )	Continuous	0	9.1	46.1

*\*Mine owned property – no limit apply*

Figure 1 – EPL 12365 Monitoring Locations

