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: June 2023
Obtained Date: 13/07/2023
Publication Date: 13/07/2023

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	-	-	-	-	-	-	-	-
	Conductivity	µS/cm		-	-	-	-	-	-	-	
	Oil & Grease	mg/L		-	-	-	-	-	-	-	
	pH	pH		-	-	-	-	-	-	-	
6	TSS	mg/L	Upon discharge	-	-	-	-	-	-	-	-
	Conductivity	µS/cm		-	-	-	-	-	-	-	
	Oil & Grease	mg/L		-	-	-	-	-	-	-	
	pH	pH		-	-	-	-	-	-	-	

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	-	-	-	-	-	-	-	-
	Conductivity	µS/cm		-	-	-	-	-	-	-	
	Oil & Grease	mg/L		-	-	-	-	-	-	-	
	pH	pH		-	-	-	-	-	-	-	
2	TSS	mg/L	Upon discharge	-	-	-	-	-	-	-	-
	Conductivity	µS/cm		-	-	-	-	-	-	-	
	Oil & Grease	mg/L		-	-	-	-	-	-	-	
	pH	pH		-	-	-	-	-	-	-	
3	TSS	mg/L	Upon discharge	-	-	-	-	-	-	-	-
	Conductivity	µS/cm		-	-	-	-	-	-	-	
	Oil & Grease	mg/L		-	-	-	-	-	-	-	
	pH	pH		-	-	-	-	-	-	-	
26	TSS	mg/L	Upon discharge	-	-	-	-	-	-	-	-
	Conductivity	µS/cm		-	-	-	-	-	-	-	
	Oil & Grease	mg/L		-	-	-	-	-	-	-	

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
	pH	pH		-	-	-	-	-	-	-	
27	TSS	mg/L	Upon discharge	-	-	-	-	-	-	-	-
	Conductivity	µS/cm		-	-	-	-	-	-	-	
	Oil & Grease	mg/L		-	-	-	-	-	-	-	
	pH	pH		-	-	-	-	-	-	-	

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)	-	-	-	-	-	-	-
	Lead	mg/L		-	-	-	-	-	-	-
	pH	pH		-	-	-	-	-	-	-
	Standing Water Level	metres		-	-	-	-	-	-	-
10	Conductivity	µS/cm	6 monthly – (Mar- Sep)	-	-	-	-	-	-	-
	Lead	mg/L		-	-	-	-	-	-	-
	pH	pH		-	-	-	-	-	-	-
	Standing Water Level	metres		-	-	-	-	-	-	-
12	Conductivity	µS/cm	6 monthly – (Mar- Sep)	-	-	-	-	-	-	-
	Lead	mg/L		-	-	-	-	-	-	-
	pH	pH		-	-	-	-	-	-	-
	Standing Water Level	metres		-	-	-	-	-	-	-
13	Conductivity	µS/cm	Quarterly - (Feb, May, Aug, Nov)	1	17/05	17/05	-	-	-	2700
	Oil & Grease	mg/L		1	17/05	17/05	-	-	-	<5
	pH	pH		1	17/05	17/05	-	-	-	8.66
	TSS	mg/L		1	17/05	17/05	-	-	-	7

Table 4 – Quarterly Attended Noise Monitoring

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

Table 1 TCM Operational Noise Monitoring Results – 21 June 2023 (Evening)				
Location	**Time**	**Total dB(A), Leq (15 min)**	**Wind speed / direction / PSC[1]**	**Identified Noise Sources**
Matong – TN2	6:01pm	33	1.3 / 048 / F	Cows (32), car (27), **TCM (<20)**
Barbers Lagoon – TN3	6:49pm	38	2.4 / 057 / E	Traffic (38), dog (28), **TCM (<20)**
Bungalow – TN4	7:37pm	45	2.5 / 048 / F	Traffic (45), dogs (31), **TCM (<20)**

1. Pasquill Stability Class

Table 2 TCM Operational Noise Monitoring Results – 21 – 22 June 2023 (Night)				
Location	**Time**	**Total dB(A), Leq (15 min)**	**Wind speed / direction / PSC**	**Identified Noise Sources**
Matong – TN2	10:07pm	33	2.2 / 069 / D	Cows (33), car (21), **TCM (<20)**
Barbers Lagoon – TN3	12:39am	28	1.7 / 052 / E	Car (28), **TCM (<20)**
Bungalow – TN4	11:28pm	26	0.9 / 258 / E	Dogs (26), **TCM (<20)**

Table 3 TCM Operational Noise Monitoring Results – 22 June 2023 (Day)				
Location	**Time**	**Total dB(A), Leq (15 min)**	**Wind speed / direction / PSC**	**Identified Noise Sources**
Matong – TN2	11:19am	45	1.0 / 268 / A	Traffic (45), birds (33), mine (23), **TCM (<20)**
Barbers Lagoon – TN3	2:51pm	52	0.6 / 008 / A	Industrial (52), **TCM (<20)**
Bungalow – TN4	1:07pm	43	1.9 / 284 / D	Traffic (42), birds (35), **TCM (<20)**

Table 4 TCM Operational Noise Monitoring Results – 22 June 2023 (Evening)				
Location	**Time**	**Total dB(A), Leq (15 min)**	**Wind speed / direction / PSC**	**Identified Noise Sources**
Matong – TN2	9:24pm	31	2.0 / 247 / F	Birds (31), mine (21), **TCM (<20)**
Barbers Lagoon – TN3	7:47pm	42	0.7 / 213 / F	Traffic (42), **TCM (<20)**
Bungalow – TN4	8:31pm	32	0.9 / 331 / D	**TCM[1] (32)**, traffic (22)

1. Coal trucks on private haul road

Table 5 TCM Operational Noise Monitoring Results – 22 – 23 June 2023 (Night)				
Location	**Time**	**Total dB(A), Leq (15 min)**	**Wind speed / direction / PSC**	**Identified Noise Sources**
Matong – TN2	12:47am	NA[1]	1.6 / 071 / E	NA[1]
Barbers Lagoon – TN3	11:28pm	46	1.2 / 172 / F	Traffic (46), **TCM (20)**
Bungalow – TN4	10:15pm	31	1.3 / 260 / D	**TCM[2] (28)**, traffic (28)

1. NA – Measurement was not able to be taken due to consistent rain
2. Coal trucks on private haul road

Table 6 TCM Operational Noise Monitoring Results – 23 June 2023 (Day)				
Location	**Time**	**Total dB(A), Leq (15 min)**	**Wind speed / direction / PSC**	**Identified Noise Sources**
Matong – TN2	11:31am	41	6.4 / 299 / D	Wind in trees (41), traffic (27), **TCM (<20)**
Barbers Lagoon – TN3	1:22pm	43	7.1 / 327 / D	Wind in trees (43), **TCM (<20)**
Bungalow – TN4	3:01pm	47	6.4 / 342 / C	Birds (46), wind in trees (37), **TCM (<20)**

Table 7 TCM Operational Noise Monitoring Results – 23 June 2023 (Evening)				
Location	**Time**	**Total dB(A), Leq (15 min)**	**Wind speed / direction / PSC**	**Identified Noise Sources**
Matong – TN2	9:28pm	48	2.0 / 046 / E	Traffic (48), mine (27), **TCM (<20)**
Barbers Lagoon – TN3	7:53pm	32	2.7 / 035 / D	Car (32), **TCM (<20)**
Bungalow – TN4	8:36pm	32	0.5 / 065 / E	Wind in trees (32), **TCM (<20)**

Table 8 TCM Operational Noise Monitoring Results – 23 – 24 June 2023 (Night)				
Location	**Time**	**Total dB(A), Leq (15 min)**	**Wind speed / direction / PSC**	**Identified Noise Sources**
Matong – TN2	12:48am	38	0.8 / 022 / D	Birds (38), **TCM (23)**
Barbers Lagoon – TN3	10:21pm	37	1.9 / 039 / E	Traffic (35), birds (32), **TCM (22)**
Bungalow – TN4	11:31pm	46	1.4 / 034 / D	Birds (46), traffic (34), **TCM[1] (30)**

1. Coal trucks on private haul road

Table 9 TCM Operational Noise Monitoring Results – 24 June 2023 (Day)				
Location	**Time**	**Total dB(A), Leq (15 min)**	**Wind speed / direction / PSC**	**Identified Noise Sources**
Matong – TN2	2:49pm	49	4.1 / 324 / D	Traffic (48), wind in trees (43), birds (24), **TCM (<20)**
Barbers Lagoon – TN3	11:18am	36	0.9 / 262 / A	Birds (35), wind in trees (27), **TCM (<20)**
Bungalow – TN4	1:03pm	42	2.3 / 206 / A	Wind in trees (42), birds (30), **TCM (<20)**

Table 10 TCM Operational Noise Monitoring Results – 24 June 2023 (Evening)				
Location	**Time**	**Total dB(A), Leq (15 min)**	**Wind speed / direction / PSC**	**Identified Noise Sources**
Matong – TN2	7:48pm	.38	1.7 / 053 / D	Car (38), **TCM (<20)**
Barbers Lagoon – TN3	9:21pm	22	1.6 / 054 / D	Car (22), **TCM (<20)**
Bungalow – TN4	8:36pm	37	3.4 / 071 / D	Insects (37), **TCM (<20)**

Table 11 TCM Operational Noise Monitoring Results – 24 – 25 June 2023 (Night)				
Location	**Time**	**Total dB(A), Leq (15 min)**	**Wind speed / direction / PSC**	**Identified Noise Sources**
Matong – TN2	12:47am	26	0.9 / 220 / F	Wind in trees (25), **TCM (<20)**
Barbers Lagoon – TN3	11:26pm	27	0.4 / 035 / E	Wind in trees (26), **TCM (21)**
Bungalow – TN4	10:04pm	26	0.6 / 037 / F	Wind in trees (26), **TCM (<20)**

Table 12 TCM Operational Noise Monitoring Results – 25 June 2023 (Day)				
Location	**Time**	**Total dB(A), Leq (15 min)**	**Wind speed / direction / PSC**	**Identified Noise Sources**
Matong – TN2	11:26am	43	1.6 / 339 / A	Traffic (43), mine (26), **TCM (<20)**
Barbers Lagoon – TN3	8:00am	45	0.4 / 089 / A	Birds (42), traffic (39), helicopter (39), **TCM (28)**
Bungalow – TN4	9:46am	33	0.2 / 125 / A	Birds (32), traffic (22), **TCM[1] (20)**

1. Coal trucks on private haul road

Attended noise monitoring was conducted at the “Bungalow” (TN4), “Barbers Lagoon” (TN3) and “Coomalgah” (TN2) properties from 21st to the 25th of June 2023. Tables 1 - 12 display comprehensive results of all measurements. The noise criterion for the mine is 35dB(A) Leq (15 min) for all operating times.

Table 13 TCM Sleep Disturbance Monitoring Results – 21 – 22 June 2023 (Night)					
Location	Time	dB(A) L1 (1 min)[1]	dB(A) L1 (1 min)[2]	L1 Source	Wind speed / direction / PSC
Matong – TN2	10:07pm	42	<20	Cows	2.2 / 069 / D
Barbers Lagoon – TN3	12:39am	48	26	Car	1.7 / 052 / E
Bungalow – TN4	11:28pm	51	<20	Dogs	0.9 / 258 / E

1. L1 (1 min) – total measured level.
2. L1 (1 min) – TCM noise only.

Table 14 TCM Sleep Disturbance Monitoring Results – 22 – 23 June 2023 (Night)					
Location	Time	dB(A) L1 (1 min)[1]	dB(A) L1 (1 min)[2]	L1 Source	Wind speed / direction / PSC
Matong – TN2	12:47am	NA*	NA*	NA*	1.6 / 071 / E
Barbers Lagoon – TN3	11:28pm	48	20	Car	1.2 / 172 / F
Bungalow – TN4	10:15pm	40	40	Trucks	1.3 / 260 / D

* NA - Measurement was not able to be taken due to consistent rain

Table 15 TCM Sleep Disturbance Monitoring Results – 23 – 24 June 2023 (Night)					
Location	Time	dB(A) L1 (1 min)[1]	dB(A) L1 (1 min)[2]	L1 Source	Wind speed / direction / PSC
Matong – TN2	12:48am	51	<20	Birds	0.8 / 022 / D
Barbers Lagoon – TN3	10:21pm	58	27	Car	1.9 / 039 / E
Bungalow – TN4	11:31pm	61	34	Birds	1.4 / 034 / D

Table 16 TCM Sleep Disturbance Monitoring Results – 24 – 25 June 2023 (Night)					
Location	Time	dB(A) L1 (1 min)[1]	dB(A) L1 (1 min)[2]	L1 Source	Wind speed / direction / PSC
Matong – TN2	12:47am	36	<20	Wind	0.9 / 220 / F
Barbers Lagoon – TN3	11:26pm	37	<20	Wind	0.4 / 035 / E
Bungalow – TN4	10:04pm	37	<20	Wind	0.6 / 037 / F

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 LA1 (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 "Coomalgah" monitoring locations during the monitoring event during the entire monitoring period. (Tables 13-16)

Table 5 – Monthly Monitoring (Blasts – Limits Apply)

November	Parameter	Units of Measure	Frequency	No. of Blasts for the Month	Average Value	Max Value	100%ile Limit	(Potential) Non-compliance /breach	Date Obtained
Coomalgah	Blast Noise	dB (Lin Peak)	Every Blast	8	96.06	106.30	**120**	**Nil**	28/06/2023
	Blast Vibration	mm/s	Every Blast	8	0.23	0.52	**10**	**Nil**	1/06/2023

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
28 "Flixton" property* TEOM (µg/m^3)	Continuous	0	11.5	66.2

***Mine owned property – no limit apply*

Figure 1 – EPL 12365 Monitoring Locations