

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 2021

Obtained Date: 9/07/2021

Publication Date: 13/07/2021

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	0	-	-	-	-	-	-	Not flowing upstream.
	Conductivity*	µS/cm		0	-	-	-	-	-	-	
	Oil & Grease	mg/L		0	-	-	-	-	-	-	
	pH	pH		0	-	-	-	-	-	-	
6	TSS	mg/L	Upon discharge	1	10/06/2021	-	-	-	-	28	Sample taken after ~42mm of rain. *No EPL limit applies Electrical conductivity not required by EPL.
	Conductivity*	µS/cm		1	10/06/2021	-	-	-	-	123	
	Oil & Grease	mg/L		1	10/06/2021	-	-	-	-	<5	
	pH	pH		1	10/06/2021	-	-	-	-	6.81	

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	7	10-11/06/21	10/06/21	446	3,130	50	No	Samples/ Duplicates taken after ~42mm of rain. This renders the TSS limit not applicable. *No EPL limit applies Electrical
	Conductivity*	µS/cm		7	10-11/06/21	11/06/21	408	481	NA	NA	
	Oil & Grease	mg/L		7	10-11/06/21	10/06/21	<5	<5	10	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	
	pH	pH		7	10-11/06/21	10/06/21	7.62	7.75	6.5-8.5	No	conductivity not required by EPL.	
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	2	12/06/21	12/06/21	141	145	50	No	Samples/ Duplicates taken after ~42mm of rain. This renders the TSS limit not applicable.	
	Conductivity*	µS/cm		2	12/06/21	12/06/21	321	323	NA	NA		
	Oil & Grease	mg/L		2	12/06/21	12/06/21	<5	<5	10	No		
	pH	pH		2	12/06/21	12/06/21	8.05	8.06	6.5-8.5	No	Electrical conductivity not required by EPL.	

*No EPL limit applies

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)	0	-	-	-	-	-	-
	Lead	mg/L		0	-	-	-	-	-	-
	pH	pH		0	-	-	-	-	-	-
	Standing Water Level	metres		0	-	-	-	-	-	-
10	Conductivity	µS/cm	6 monthly – (Mar- Sep)	0	-	-	-	-	-	-
	Lead	mg/L		0	-	-	-	-	-	-
	pH	pH		0	-	-	-	-	-	-
	Standing Water Level	metres		0	-	-	-	-	-	-
12	Conductivity	µS/cm	6 monthly – (Mar- Sep)	0	-	-	-	-	-	-
	Lead	mg/L		0	-	-	-	-	-	-
	pH	pH		0	-	-	-	-	-	-
	Standing Water Level	metres		0	-	-	-	-	-	-
13	Conductivity	µS/cm	Quarterly - (Feb, May, Aug, Nov)	0	-	-	-	-	-	-
	Oil & Grease	mg/L		0	-	-	-	-	-	-
	pH	pH		0	-	-	-	-	-	-
	TSS	mg/L		0	-	-	-	-	-	-

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)
		LAeq	LAm _{ax}	LAm _{in}	LA10	LA90					
TN2											
07/06/2021	12:44	27	47	21	27	23	26	1.8	317	C	0
	13:04	29	55	21	28	24	27	1.6	261	C	0
	13:19	27	45	21	27	23	25	1.5	35	C	0.2
	13:44	34	62	21	31	23	<25	1.4	310	A	0
	14:01	29	53	22	27	24	<25	1.7	331	A	0
	14:19	40	67	22	30	24	<25	1.4	350	C	0
	21:12	29	41	25	30	27	29	1.3	42	E	0
	21:28	29	42	25	31	28	29	2.4	32	F	0
	22:00	34	50	29	35	31	34	1.6	28	F	0
	22:15	37	60	26	37	29	<35	1.8	51	F	0
	22:30	30	45	25	32	28	30	0.9	59	F	0
	22:46	30	36	24	32	26	30	1.2	65	F	0
08/06/2021	12:31	45	62	34	47	38	<35	5.4	344	C	0
	12:47	46	60	36	48	40	<35	4.6	10	C	0
	13:03	47	73	34	50	38	<35	4.8	0	C	0
	13:19	41	57	33	44	36	<32	5.3	336	C	0
	13:35	37	52	31	39	34	<35	5	354	D	0
	13:50	37	56	31	40	33	<35	4.3	7	C	0
	22:22	38	45	33	40	36	38	3	32	E	0

Date	Time	Total Noise Levels (dB)					Mine L _{Aeq} Noise Level (dB)	Wind Speed (m/s)	Wind Direction (°)	Stability Category	Rain (mm)
		L _{Aeq}	L _{Amax}	L _{Amin}	L _{A10}	L _{A90}					
	22:38	40	49	35	42	37	40	2.2	6	F	0
	22:54	36	43	31	39	33	36	2.9	355	F	0
	23:10	41	47	36	42	38	41	2.9	343	F	0
09/06/2021	09:54	44	59	35	47	38	38	6.6	342	D	0
	10:09	46	60	37	49	40	<40	6.3	324	D	0
	10:25	46	61	38	49	41	<40	6.1	303	D	0
	10:41	48	65	37	51	41	<38	6.5	327	D	0
	10:58	49	66	39	53	41	<35	7.8	306	D	0
	11:13	41	49	38	42	39	<35	9.7	297	D	0
	22:26	44	60	38	46	40	<35	7.9	328	D	0
	22:42	44	61	38	47	40	<35	6	336	D	0
	22:57	48	63	40	50	42	<37	8	315	D	0
	23:15	45	61	37	48	40	<30 (I/A)	7.4	303	D	0
TN3											
07/06/2021	15:06	57	80	20	43	22	<22	1.2	333	A	0
	15:22	55	80	20	47	23	<22	1.1	252	A	0
	15:37	50	73	19	38	21	<21	0.8	261	B	0
	15:53	54	74	20	46	22	<12 (I/A)	1	44	D	0
	16:08	57	78	20	47	23	<13 (I/A)	1	86	D	0
	16:23	57	79	20	53	26	<16 (I/A)	1	80	D	0
	19:40	32	52	20	34	22	<30	1.8	40	F	0
	19:55	24	41	19	26	21	<30	1.8	33	F	0
	23:15	30	41	26	32	28	<30	1.4	30	E	0
	23:30	30	40	26	32	28	<30	1.9	43	F	0

Date	Time	Total Noise Levels (dB)					Mine LAeq Noise Level (dB)	Wind Speed (m/s)	Wind Direction (°)	Stability Category	Rain (mm)
		LAeq	LAmx	LAmn	LA10	LA90					
	23:45	33	46	29	35	31	<30	1.8	40	E	0
	00:00	36	53	30	37	33	<30	1.8	23	E	0
08/06/2021	13:45	48	66	39	51	43	<33 (I/A)	5	6	D	0
	14:00	47	56	42	49	43	<33 (I/A)	4.3	5	C	0
	14:23	50	74	39	47	41	<31 (I/A)	3	353	C	0
	14:39	49	73	35	46	38	<28 (I/A)	3.2	41	C	0
	15:03	54	79	37	45	39	<29 (I/A)	3	93	C	0
	15:18	54	72	38	54	41	<31 (I/A)	2.8	351	C	0
	23:29	27	35	24	28	25	<27	4	313	E	0
	23:44	32	47	26	34	28	<27	5.6	321	D	0
	00:05	33	40	27	36	29	<30	4.8	283	E	0.4
	00:20	36	44	30	38	32	<22 (I/A)	4.1	271	D	0
09/06/2021	11:44	59	80	43	53	45	<35 (I/A)	7.9	326	D	0
	11:59	55	78	45	55	47	<37 (I/A)	7.1	305	D	0
	12:16	58	80	46	55	47	<37 (I/A)	6.1	318	D	0.2
	12:31	58	81	45	53	47	<37 (I/A)	5.8	312	D	0
	12:46	59	83	42	54	44	<34 (I/A)	5.4	318	D	0
	13:01	54	74	46	55	48	<38 (I/A)	6.4	307	D	0
	21:30	50	60	42	53	45	<35 (I/A)	5.9	317	D	0.4
	21:45	49	58	43	52	45	<35 (I/A)	5.9	319	D	0
	22:25	51	62	47	53	48	<38 (I/A)	7.9	328	D	0
	22:55	52	65	40	54	44	<34 (I/A)	8	315	D	0
	23:10	51	65	45	54	47	<37 (I/A)	7.3	302	D	0
23:25	52	62	45	55	48	<38 (I/A)	7.4	331	D	0	

Date	Time	Total Noise Levels (dB)					Mine LAeq Noise Level (dB)	Wind Speed (m/s)	Wind Direction (°)	Stability Category	Rain (mm)
		LAeq	LAmx	LAmn	LA10	LA90					
10/06/2021	16:02	56	80	47	56	50	<40 (I/A)	5.6	323	D	0
	16:18	56	76	48	57	51	<41 (I/A)	5.8	336	D	0
	16:33	59	75	48	60	51	<41 (I/A)	5.9	326	D	0
	16:49	58	77	49	59	52	<42 (I/A)	6.8	307	D	0
	17:04	56	71	48	57	51	<41 (I/A)	7.3	323	D	0
	17:20	55	71	46	55	49	<39 (I/A)	5.4	345	C	0
	21:13	39	51	34	41	36	<26 (I/A)	6.7	324	D	0
	21:29	48	71	35	45	37	<27 (I/A)	5.4	326	D	0
	22:03	40	50	34	42	37	<27 (I/A)	6	328	D	0
	22:19	40	49	36	43	38	<28 (I/A)	5.3	318	D	0.2
	22:37	50	76	36	45	38	<28 (I/A)	5.7	290	D	0.2
22:52	36	49	31	38	33	<23 (I/A)	4.8	313	D	0.2	

TN4

07/06/2021	13:21	42	61	33	40	36	<26 (I/A)	1.6	33	C	0
	13:36	39	54	34	40	36	<26 (I/A)	1.5	310	C	0
	13:51	37	54	32	39	35	<25 (I/A)	1.4	294	A	0
	14:06	38	47	33	40	36	<26 (I/A)	1.7	209	A	0
	14:21	41	63	34	41	36	<26 (I/A)	1.4	338	C	0
	14:36	40	62	34	39	36	<26 (I/A)	1.8	263	C	0
	21:30	28	45	25	29	27	<28	2.7	33	F	0
	21:45	28	46	24	30	26	<30	2.6	27	E	0
	22:00	29	51	23	29	25	<30	1.6	28	F	0
	22:15	27	37	23	30	25	<30	1.8	51	F	0
22:30	27	43	23	29	25	<30	0.9	59	F	0	

Date	Time	Total Noise Levels (dB)					Mine L _{Aeq} Noise Level (dB)	Wind Speed (m/s)	Wind Direction (°)	Stability Category	Rain (mm)
		L _{Aeq}	L _{Amax}	L _{Amin}	L _{A10}	L _{A90}					
	22:45	27	44	23	29	25	<30	1.2	65	F	0
08/06/2021	11:51	37	55	33	38	34	<24 (I/A)	3.1	318	B	0
	12:06	52	65	37	56	42	<32 (I/A)	4	337	C	0
	12:21	58	72	44	62	47	<37 (I/A)	4.9	346	C	0
	12:36	59	72	49	62	52	<42 (I/A)	5.4	20	C	0
	12:51	52	63	40	56	45	<35 (I/A)	3.2	0	C	0
	13:06	50	66	38	53	41	<31 (I/A)	4.8	355	C	0
	13:21	48	71	38	50	41	<31 (I/A)	5.3	325	C	0
	21:30	27	48	23	28	25	<28	2.2	17	F	0
	21:45	28	39	24	29	26	<28	2	40	F	0.2
	22:12	30	59	23	27	24	<25	2.4	17	E	0
	22:29	30	53	25	31	27	<27	3	34	D	0
	22:44	30	50	24	33	26	<28	2	348	F	0
22:59	26	40	22	27	24	<28	2.9	27	F	0	
09/06/2021	09:23	50	67	41	53	45	<35 (I/A)	5.2	313	D	0
	09:38	52	61	42	55	46	<36 (I/A)	5.2	290	D	0
	09:53	53	63	43	56	47	<37 (I/A)	6.6	342	D	0
	10:08	52	60	43	54	48	<38 (I/A)	6.3	324	D	0
	10:23	54	68	46	58	49	<39 (I/A)	6.1	317	D	0
	10:38	53	62	45	56	49	<39 (I/A)	6.5	305	D	0
	23:50	55	67	45	58	49	<39 (I/A)	6.3	304	D	0
	00:31	54	66	44	57	48	<38 (I/A)	5.2	270	D	0
	00:46	53	64	45	56	49	<39 (I/A)	6.9	317	D	0
	01:01	57	65	48	60	51	<41 (I/A)	6.7	323	D	0

Date	Time	Total Noise Levels (dB)					Mine L _{Aeq} Noise Level (dB)	Wind Speed (m/s)	Wind Direction (°)	Stability Category	Rain (mm)
		L _{Aeq}	L _{Amax}	L _{Amin}	L _{A10}	L _{A90}					
10/06/2021	15:41	52	69	44	55	47	<37 (I/A)	6.3	319	D	0
	15:56	54	66	43	57	48	<38 (I/A)	6.4	2	D	0
	16:11	52	66	42	55	46	<36 (I/A)	5.8	329	D	0
	16:26	52	66	44	56	47	<37 (I/A)	5.9	353	D	0
	16:40	55	72	43	57	46	<36 (I/A)	5.8	313	D	0
	16:55	54	68	45	58	48	<38 (I/A)	6.8	339	D	0
	21:30	45	58	36	49	39	<29 (I/A)	5.4	326	D	0
	21:45	46	59	33	49	38	<28 (I/A)	6.9	332	D	0.2
	22:00	41	56	28	45	32	<22 (I/A)	6	312	D	0
	22:15	43	55	29	46	35	<25 (I/A)	5.7	312	D	0
	23:00	41	51	35	43	37	<27 (I/A)	4.6	307	D	0.2
	23:15	39	47	31	42	34	<24 (I/A)	4.8	302	D	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 7th to the 10th of June 2021. 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)

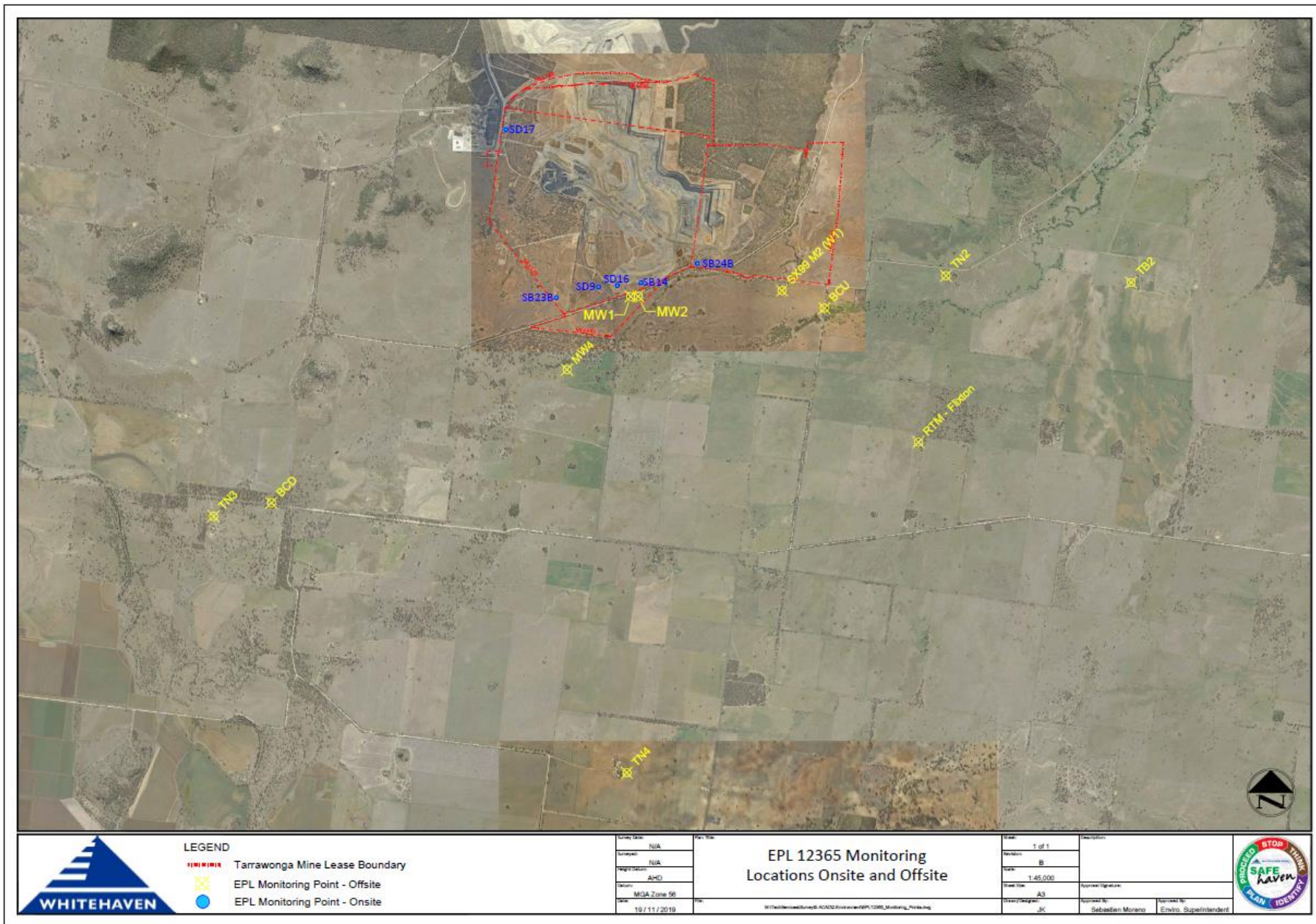
Location	Parameter	Units of Measure	Frequency	No. of Blasts for the Month	Average Value	Max Value	100%ile Limit	(Potential) Non-compliance /breach	Date of Max. Value Obtained
Coomalgah	Blast Noise	dB (Lin Peak)	Every Blast	4	100.05	104.30	120	Nil	9/06/2021
(TB2)	Blast Vibration	mm/s	Every Blast	4	0.13	0.24	10	Nil	9/06/2021

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 (µg/m ³)	Continuous	0	6.6	19.7

**Mine owned property – no limit apply*

Figure 1 – EPL 12365 Monitoring Locations



LEGEND
 Tarrawonga Mine Lease Boundary
 EPL Monitoring Point - Offsite
 EPL Monitoring Point - Onsite

Drawn Date:	N/A
Drawn By:	N/A
Project Name:	AMD
Location:	MGA Zone 96
Date:	19/11/2019

EPL 12365 Monitoring Locations Onsite and Offsite

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Sheet Size:	A3
Drawn By:	JK
Checked By:	Sebastian Moreno
Approved By:	Enviro. Superintendent

