

WERRIS CREEK COAL EPL – MONTHLY SUMMARY

Site Information

EPL No.: 12290

EPA Website Link: <http://www.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=31280&SYSUID=1&LICID=12290>

Licensee: Werris Creek Coal Pty Limited

Premises: Werris Creek Coal, 1435 Werris Creek Road, WERRIS CREEK NSW 2341

EPL Monitoring Points: See Figure at end of Document

Sampling Period: January 2016

Publication Date: 18th February 2016

Table 1 - No Pollutant Limits Apply

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Measurements for the Month	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max Value
28	PM10	µg/m ³	Every 6 days	5	24/01/16	09/02/16	1.8	7.0	6.1	15.0
	Solid Particles	g/m ² /month	Continuous	1	22/01/16	01/02/16	<0.1	<0.1	<0.1	<0.1
29	PM10	µg/m ³	Every 6 days	5	24/01/16	09/02/16	7.4	15.7	15.8	22.7
	Solid Particles	g/m ² /month	Continuous	1	22/01/16	01/02/16	1.4	1.4	1.4	1.4
30	PM10	µg/m ³	Every 6 days	Continuous	31/01/16	01/02/16	0.0	8.7	7.6	43.7
	Solid Particles	g/m ² /month	Continuous	1	22/01/16	01/02/16	<0.1	<0.1	<0.1	<0.1
10	Conductivity	µS/cm	Special Frequency 1	0	-	-	-	-	-	-
	Nitrate	mg/L	Special Frequency 1	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Special Frequency 1	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Special Frequency 1	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Special Frequency 1	0	-	-	-	-	-	-
12	Conductivity	µS/cm	Special Frequency 1	0	-	-	-	-	-	-
	Nitrate	mg/L	Special Frequency 1	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Special Frequency 1	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Special Frequency 1	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Special Frequency 1	0	-	-	-	-	-	-
14	Conductivity	µS/cm	Special Frequency 1	0	-	-	-	-	-	-
	Nitrate	mg/L	Special Frequency 1	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Special Frequency 1	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Special Frequency 1	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Special Frequency 1	0	-	-	-	-	-	-

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23	Conductivity	µS/cm	Special Frequency 2	0	-	-	-	-	-	-
	Nitrate	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Oil and Grease	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	pH	pH	Special Frequency 2	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Total Suspended Solids	mg/L	Special Frequency 2	0	-	-	-	-	-	-
24	Conductivity	µS/cm	Special Frequency 2	0	-	-	-	-	-	-
	Nitrate	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Oil and Grease	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	pH	pH	Special Frequency 2	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Total Suspended Solids	mg/L	Special Frequency 2	0	-	-	-	-	-	-
25	Conductivity	µS/cm	Special Frequency 2	0	-	-	-	-	-	-
	Nitrate	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Oil and Grease	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	pH	pH	Special Frequency 2	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Total Suspended Solids	mg/L	Special Frequency 2	0	-	-	-	-	-	-
26	Conductivity	µS/cm	Special Frequency 2	0	-	-	-	-	-	-
	Nitrate	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Oil and Grease	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	pH	pH	Special Frequency 2	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Total Suspended Solids	mg/L	Special Frequency 2	0	-	-	-	-	-	-

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Table 2 - Pollutant Limits Apply

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of samples for the Month	Date Sampled	Date Obtained	Min Value	Max Value	100%ile Limit	Exceedance (Yes/No)
10	Total Suspended Solids	mg/L	Special Frequency 1	0	-	-	-	-	50*	No
	Oil and Grease	mg/L	Special Frequency 1	0	-	-	-	-	10	No
	pH	pH	Special Frequency 1	0	-	-	-	-	6.5-8.5	No
12	Total Suspended Solids	mg/L	Special Frequency 1	0	-	-	-	-	50*	No
	Oil and Grease	mg/L	Special Frequency 1	0	-	-	-	-	10	No
	pH	pH	Special Frequency 1	0	-	-	-	-	6.5-8.5	No
14	Total Suspended Solids	mg/L	Special Frequency 1	0	-	-	-	-	50*	No
	Oil and Grease	mg/L	Special Frequency 1	0	-	-	-	-	10	No
	pH	pH	Special Frequency 1	0	-	-	-	-	6.5-8.5	No

* Total Suspended Solids permitted to exceed 50mg/L if 5 day rainfall is greater than 39.2mm prior to discharge

Table 3 – Monitoring (Quarterly & 6 monthly – no limits apply)

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Measurements for the Period	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max Value
16	Conductivity	µS/cm	Every 3 Months	0	-	-	-	-	-	-
	Nitrate	mg/L	Every 3 Months	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Every 3 Months	0	-	-	-	-	-	-
	Oil and Grease	mg/L	Every 3 Months	0	-	-	-	-	-	-
	pH	pH	Every 3 Months	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Every 3 Months	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Every 3 Months	0	-	-	-	-	-	-
	Total Suspended Solids	mg/L	Every 3 Months	0	-	-	-	-	-	-
27	Conductivity	µS/cm	Every 3 Months	0	-	-	-	-	-	-
	Nitrate	mg/L	Every 3 Months	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Every 3 Months	0	-	-	-	-	-	-
	Oil and Grease	mg/L	Every 3 Months	0	-	-	-	-	-	-
	pH	pH	Every 3 Months	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Every 3 Months	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Every 3 Months	0	-	-	-	-	-	-
	Total Suspended Solids	mg/L	Every 3 Months	0	-	-	-	-	-	-

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EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Measurements for the Period	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max Value
17	Conductivity	µS/cm	Every 6 Months	0	-	-	-	-	-	-
	Nitrate	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	pH	pH	Every 6 Months	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Standing Water Level	Metres	Every 6 Months	0	-	-	-	-	-	-
18	Conductivity	µS/cm	Every 6 Months	0	-	-	-	-	-	-
	Nitrate	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	pH	pH	Every 6 Months	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Standing Water Level	Metres	Every 6 Months	0	-	-	-	-	-	-
19	Conductivity	µS/cm	Every 6 Months	0	-	-	-	-	-	-
	Nitrate	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	pH	pH	Every 6 Months	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Standing Water Level	Metres	Every 6 Months	0	-	-	-	-	-	-
20	Conductivity	µS/cm	Every 6 Months	0	-	-	-	-	-	-
	Nitrate	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	pH	pH	Every 6 Months	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Standing Water Level	Metres	Every 6 Months	0	-	-	-	-	-	-
21	Conductivity	µS/cm	Every 6 Months	0	-	-	-	-	-	-
	Nitrate	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	pH	pH	Every 6 Months	0	-	-	-	-	-	-

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EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Measurements for the Period	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max Value
	Phosphorus (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Standing Water Level	Metres	Every 6 Months	0	-	-	-	-	-	-
22	Conductivity	µS/cm	Every 6 Months	0	-	-	-	-	-	-
	Nitrate	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	pH	pH	Every 6 Months	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Standing Water Level	Metres	Every 6 Months	0	-	-	-	-	-	-

Table 4 – Monitoring (Noise – Limits Apply)

Location	Date	Measurement Period	Start Time	Measured levels – dB(A)		Limit(s)	Weather (inversion oC/100m, wind m/s & °)	Observations	(Potential) Non-compliance /breach
				LA1, 1 Minute	LAeq, 15 Minute				
R24	19 th January 2016	60 minutes	2:19 pm	n/a	38	Day 37	n/a 2.0,199	Tractor (36), birds & insects (31), traffic (29), WCC inaudible (<20)	No
R12	19 th January 2016	60 minutes	3:29 pm	n/a	33	Day 38	n/a 1.9,223	Birds & insects (32), traffic (27), WCC inaudible (<20)	No
R96	19 th January 2016	60 minutes	3:49 pm	n/a	30	Day 38	n/a 2.2,248	Wind (28), birds & insects (24), traffic (22), WCC inaudible (<20)	No
R24	19 th January 2016	60 minutes	8:17 pm	n/a	58	Night 37	+6.6, 2.7,108	Insects (58), traffic (44), WCC inaudible (<20)	No
R12	19 th January 2016	60 minutes	9:26 pm	n/a	41	Night 38	+8.3, 1.7,75	Traffic (40), insects (35), WCC inaudible (<20)	No
R96	19 th January 2016	60 minutes	6:59 pm	n/a	50	Night 37	+1.8, 0.9,177	Birds & insects (50), traffic (26), WCC inaudible (<20)	No

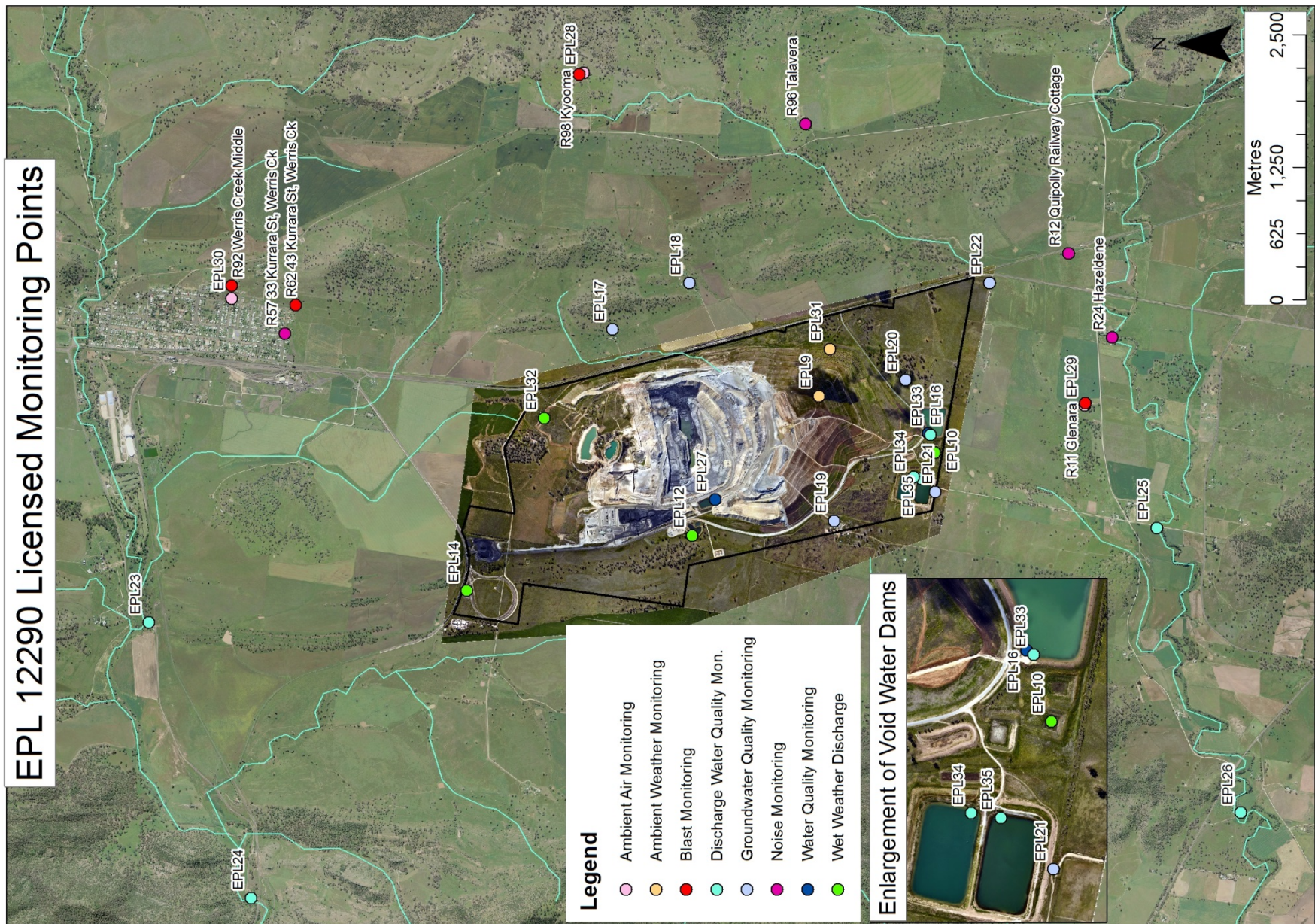


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Table 5 – Monitoring (Blasts – Limits Apply)

Location	Parameter	Units of Measure	Frequency	No. of Blasts for the Month	Average Value	Max Value	100%ile Limit	(Potential) Non-compliance /breach
R11	Blast Noise	dB (Lin Peak)	Every Blast	11	101.3	107.3	120.0	No
	Blast Vibration	mm/s	Every Blast	11	0.12	0.31	10.00	No
R98	Blast Noise	dB (Lin Peak)	Every Blast	11	102.3	113.3	120.0	No
	Blast Vibration	mm/s	Every Blast	11	0.48	1.12	10.00	No
R62	Blast Noise	dB (Lin Peak)	Every Blast	11	100.7	110.6	120.0	No
	Blast Vibration	mm/s	Every Blast	11	0.25	0.46	10.00	No
R92	Blast Noise	dB (Lin Peak)	Every Blast	11	99.3	111.3	120.0	No
	Blast Vibration	mm/s	Every Blast	11	0.16	0.38	10.00	No

WERRIS CREEK COAL EPL – MONTHLY SUMMARY



WCC EPL12290 Monitoring Location Plan

WERRIS CREEK COAL EPL – MONTHLY SUMMARY
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Licensee: Werris Creek Coal Pty Limited

Premises: Werris Creek Coal, 1435 Werris Creek Road, WERRIS CREEK NSW 2341

EPL Monitoring Points: See Figure at end of Document

Sampling Period: February 2016

Publication Date: 9th March 2016

Table 1 - No Pollutant Limits Apply

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Measurements for the Month	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max Value
28	PM10	µg/m ³	Every 6 days	5	23/02/16	04/03/16	2.7	10.5	9.4	22.1
	Solid Particles	g/m ² /month	Continuous	1	22/02/16	26/02/16	0.1	0.1	0.1	0.1
29	PM10	µg/m ³	Every 6 days	5	23/02/16	04/03/16	10.7	25.3	20.0	52.6
	Solid Particles	g/m ² /month	Continuous	1	22/02/16	26/02/16	1.2	1.2	1.2	1.2
30	PM10	µg/m ³	Every 6 days	Continuous	29/02/16	01/03/16	0.5	11.4	10.3	32.7
	Solid Particles	g/m ² /month	Continuous	1	22/02/16	26/02/16	0.5	0.5	0.5	0.5
10	Conductivity	µS/cm	Special Frequency 1	0	-	-	-	-	-	-
	Nitrate	mg/L	Special Frequency 1	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Special Frequency 1	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Special Frequency 1	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Special Frequency 1	0	-	-	-	-	-	-
12	Conductivity	µS/cm	Special Frequency 1	1	01/02/16	08/02/16	538	538	538	538
	Nitrate	mg/L	Special Frequency 1	1	01/02/16	08/02/16	0.06	0.06	0.06	0.06
	Nitrogen (Total)	mg/L	Special Frequency 1	1	01/02/16	08/02/16	1.2	1.2	1.2	1.2
	Phosphorus (Total)	mg/L	Special Frequency 1	1	01/02/16	08/02/16	0.06	0.06	0.06	0.06
	Reactive Phosphorus	mg/L	Special Frequency 1	1	01/02/16	08/02/16	<0.01	<0.01	<0.01	<0.01
14	Conductivity	µS/cm	Special Frequency 1	0	-	-	-	-	-	-
	Nitrate	mg/L	Special Frequency 1	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Special Frequency 1	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Special Frequency 1	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Special Frequency 1	0	-	-	-	-	-	-

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EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Measurements for the Month	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max Value
23	Conductivity	µS/cm	Special Frequency 2	0	-	-	-	-	-	-
	Nitrate	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Oil and Grease	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	pH	pH	Special Frequency 2	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Total Suspended Solids	mg/L	Special Frequency 2	0	-	-	-	-	-	-
24	Conductivity	µS/cm	Special Frequency 2	0	-	-	-	-	-	-
	Nitrate	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Oil and Grease	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	pH	pH	Special Frequency 2	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Total Suspended Solids	mg/L	Special Frequency 2	0	-	-	-	-	-	-
25	Conductivity	µS/cm	Special Frequency 2	1	01/02/16	08/02/16	423	423	423	423
	Nitrate	mg/L	Special Frequency 2	1	01/02/16	08/02/16	0.04	0.04	0.04	0.04
	Nitrogen (Total)	mg/L	Special Frequency 2	1	01/02/16	08/02/16	1.8	1.8	1.8	1.8
	Oil and Grease	mg/L	Special Frequency 2	1	01/02/16	08/02/16	140	140	140	140
	pH	pH	Special Frequency 2	1	01/02/16	08/02/16	7.1	7.1	7.1	7.1
	Phosphorus (Total)	mg/L	Special Frequency 2	1	01/02/16	08/02/16	0.57	0.57	0.57	0.57
	Reactive Phosphorus	mg/L	Special Frequency 2	1	01/02/16	08/02/16	0.12	0.12	0.12	0.12
	Total Suspended Solids	mg/L	Special Frequency 2	1	01/02/16	08/02/16	286	286	286	286
26	Conductivity	µS/cm	Special Frequency 2	1	01/02/16	08/02/16	1090	1090	1090	1090
	Nitrate	mg/L	Special Frequency 2	1	01/02/16	08/02/16	0.02	0.02	0.02	0.02
	Nitrogen (Total)	mg/L	Special Frequency 2	1	01/02/16	08/02/16	0.2	0.2	0.2	0.2
	Oil and Grease	mg/L	Special Frequency 2	1	01/02/16	08/02/16	10	10	10	10
	pH	pH	Special Frequency 2	1	01/02/16	08/02/16	8.0	8.0	8.0	8.0
	Phosphorus (Total)	mg/L	Special Frequency 2	1	01/02/16	08/02/16	0.15	0.15	0.15	0.15
	Reactive Phosphorus	mg/L	Special Frequency 2	1	01/02/16	08/02/16	0.11	0.11	0.11	0.11
	Total Suspended Solids	mg/L	Special Frequency 2	1	01/02/16	08/02/16	7	7	7	7

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Table 2 - Pollutant Limits Apply

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of samples for the Month	Date Sampled	Date Obtained	Min Value	Max Value	100%ile Limit	Exceedance (Yes/No)
10	Total Suspended Solids	mg/L	Special Frequency 1	0	-	-	-	-	50*	No
	Oil and Grease	mg/L	Special Frequency 1	0	-	-	-	-	10	No
	pH	pH	Special Frequency 1	0	-	-	-	-	6.5-8.5	No
12	Total Suspended Solids	mg/L	Special Frequency 1	1	01/02/16	08/02/16	6	6	50*	No
	Oil and Grease	mg/L	Special Frequency 1	1	01/02/16	08/02/16	9	9	10	No
	pH	pH	Special Frequency 1	1	01/02/16	08/02/16	7.1	7.1	6.5-8.5	No
14	Total Suspended Solids	mg/L	Special Frequency 1	0	-	-	-	-	50*	No
	Oil and Grease	mg/L	Special Frequency 1	0	-	-	-	-	10	No
	pH	pH	Special Frequency 1	0	-	-	-	-	6.5-8.5	No

* Total Suspended Solids permitted to exceed 50mg/L if 5 day rainfall is greater than 39.2mm prior to discharge

Table 3 – Monitoring (Quarterly & 6 monthly – no limits apply)

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Measurements for the Period	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max Value
16	Conductivity	µS/cm	Every 3 Months	1	29/02/2016	08/03/2016	1040	1040	1040	1040
	Nitrate	mg/L	Every 3 Months	1	29/02/2016	08/03/2016	1.63	1.63	1.63	1.63
	Nitrogen (Total)	mg/L	Every 3 Months	1	29/02/2016	08/03/2016	2.1	2.1	2.1	2.1
	Oil and Grease	mg/L	Every 3 Months	1	29/02/2016	08/03/2016	<5	<5	<5	<5
	pH	pH	Every 3 Months	1	29/02/2016	08/03/2016	8.5	8.5	8.5	8.5
	Phosphorus (Total)	mg/L	Every 3 Months	1	29/02/2016	08/03/2016	0.02	0.02	0.02	0.02
	Reactive Phosphorus	mg/L	Every 3 Months	1	29/02/2016	08/03/2016	<0.01	<0.01	<0.01	<0.01
27	Total Suspended Solids	mg/L	Every 3 Months	1	29/02/2016	08/03/2016	20	20	20	20
	Conductivity	µS/cm	Every 3 Months	1	29/02/2016	08/03/2016	1000	1000	1000	1000
	Nitrate	mg/L	Every 3 Months	1	29/02/2016	08/03/2016	1.78	1.78	1.78	1.78
	Nitrogen (Total)	mg/L	Every 3 Months	1	29/02/2016	08/03/2016	2.5	2.5	2.5	2.5
	Oil and Grease	mg/L	Every 3 Months	1	29/02/2016	08/03/2016	6	6	6	6
	pH	pH	Every 3 Months	1	29/02/2016	08/03/2016	8.4	8.4	8.4	8.4
	Phosphorus (Total)	mg/L	Every 3 Months	1	29/02/2016	08/03/2016	0.02	0.02	0.02	0.02
	Reactive Phosphorus	mg/L	Every 3 Months	1	29/02/2016	08/03/2016	<0.01	<0.01	<0.01	<0.01

WERRIS CREEK COAL EPL – MONTHLY SUMMARY

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Measurements for the Period	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max Value
	Total Suspended Solids	mg/L	Every 3 Months	1	29/02/2016	08/03/2016	13	13	13	13
17	Conductivity	µS/cm	Every 6 Months	0	-	-	-	-	-	-
	Nitrate	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	pH	pH	Every 6 Months	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Standing Water Level	Metres	Every 6 Months	0	-	-	-	-	-	-
18	Conductivity	µS/cm	Every 6 Months	0	-	-	-	-	-	-
	Nitrate	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	pH	pH	Every 6 Months	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Standing Water Level	Metres	Every 6 Months	0	-	-	-	-	-	-
19	Conductivity	µS/cm	Every 6 Months	0	-	-	-	-	-	-
	Nitrate	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	pH	pH	Every 6 Months	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Standing Water Level	Metres	Every 6 Months	0	-	-	-	-	-	-
20	Conductivity	µS/cm	Every 6 Months	0	-	-	-	-	-	-
	Nitrate	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	pH	pH	Every 6 Months	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Standing Water Level	Metres	Every 6 Months	0	-	-	-	-	-	-
21	Conductivity	µS/cm	Every 6 Months	0	-	-	-	-	-	-
	Nitrate	mg/L	Every 6 Months	0	-	-	-	-	-	-

WERRIS CREEK COAL EPL – MONTHLY SUMMARY

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Measurements for the Period	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max Value
	Nitrogen (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	pH	pH	Every 6 Months	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Standing Water Level	Metres	Every 6 Months	0	-	-	-	-	-	-
22	Conductivity	µS/cm	Every 6 Months	0	-	-	-	-	-	-
	Nitrate	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	pH	pH	Every 6 Months	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Standing Water Level	Metres	Every 6 Months	0	-	-	-	-	-	-

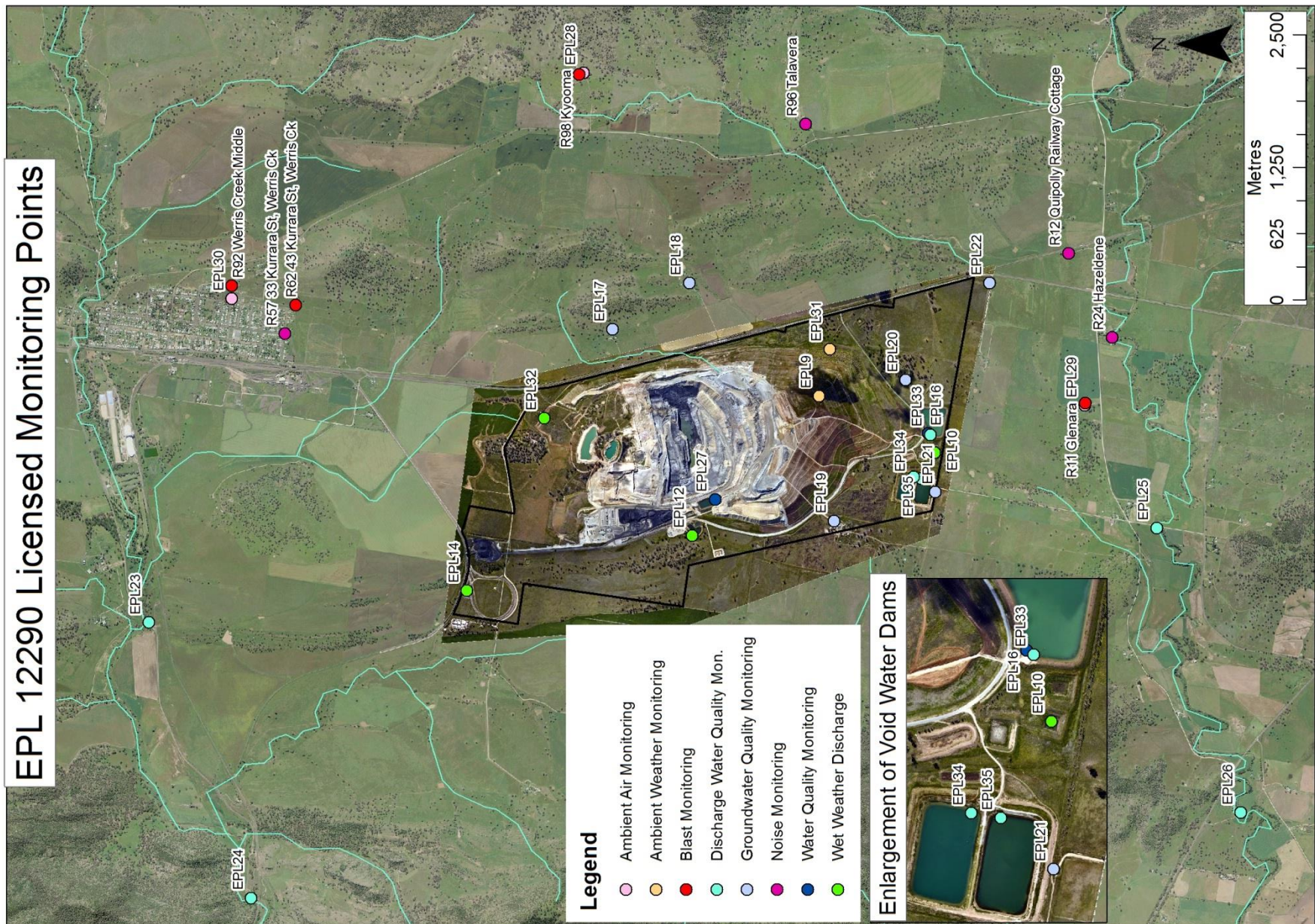
Table 4 – Monitoring (Noise – Limits Apply)

Location	Date	Measurement Period	Start Time	Measured levels – dB(A)		Limit(s)	Weather (inversion oC/100m, wind m/s & °)	Observations	(Potential) Non-compliance /breach
				LA1, 1 Minute	LAeq, 15 Minute				
R24	23 rd February 2016	60 minutes	2:50 pm	n/a	42	Day 37	n/a 2.2,098	Birds & insects (42), traffic (29), WCC inaudible (<20)	No
R12	23 rd February 2016	60 minutes	3:57 pm	n/a	38	Day 38	n/a 1.5,196	Traffic (37), rail work (30), birds & insects (26), WCC inaudible (<20)	No
R96	23 rd February 2016	60 minutes	12:47 pm	n/a	35	Day 38	n/a 1.3,114	Birds & insects (35), WCC inaudible (<20)	No
R24	23 rd February 2016	60 minutes	8:16 pm	n/a	53	Night 37	+1.1, 2.7,156	Insects (52), traffic (44), rail work (31), WCC inaudible (<20)	No
R12	23 rd February 2016	60 minutes	9:23 pm	n/a	48	Night 38	+6.6, 1.5,147	Insects (47), traffic (41), rail work (32), WCC inaudible (<20)	No
R96	23 rd February 2016	60 minutes	6:50 pm	n/a	42	Night 37	Lapse,5.6,174	Birds & insects (41), wind (33), traffic (26), WCC inaudible (<20)	No

WERRIS CREEK COAL EPL – MONTHLY SUMMARY
Table 5 – 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
R11	Blast Noise	dB (Lin Peak)	Every Blast	12	100.6	108.7	120.0	No
	Blast Vibration	mm/s	Every Blast	12	0.14	0.23	10.00	No
R98	Blast Noise	dB (Lin Peak)	Every Blast	12	99.5	109.9	120.0	No
	Blast Vibration	mm/s	Every Blast	12	0.64	1.43	10.00	No
R62	Blast Noise	dB (Lin Peak)	Every Blast	12	98.0	109.3	120.0	No
	Blast Vibration	mm/s	Every Blast	12	0.27	0.65	10.00	No
R92	Blast Noise	dB (Lin Peak)	Every Blast	12	98.3	114.2	120.0	No
	Blast Vibration	mm/s	Every Blast	12	0.17	0.28	10.00	No

WERRIS CREEK COAL EPL – MONTHLY SUMMARY



WCC EPL12290 Monitoring Location Plan

WERRIS CREEK COAL EPL – MONTHLY SUMMARY

Site Information

EPL No.: 12290

EPA Website Link: <http://www.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=31280&SYSUID=1&LICID=12290>

Licensee: Werris Creek Coal Pty Limited

Premises: Werris Creek Coal, 1435 Werris Creek Road, WERRIS CREEK NSW 2341

EPL Monitoring Points: See Figure at end of Document

Sampling Period: March 2016

Obtained Date: 7th April 2016

Publication Date: 12th April 2016

Table 1 - No Pollutant Limits Apply

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Measurements for the Month	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max Value
28	PM10	µg/m ³	Every 6 days	5	24/03/16	01/04/16	4.4	10.4	7.8	19.4
	Solid Particles	g/m ² /month	Continuous	1	24/03/16	01/04/16	0.4	0.4	0.4	0.4
29	PM10	µg/m ³	Every 6 days	5	24/03/16	01/04/16	15.2	28.4	21.9	45.4
	Solid Particles	g/m ² /month	Continuous	1	24/03/16	01/04/16	1.1	1.1	1.1	1.1
30	PM10	µg/m ³	Every 6 days	Continuous	31/03/16	01/04/16	0.0	9.0	9.3	16.8
	Solid Particles	g/m ² /month	Continuous	1	24/03/16	01/04/16	0.1	0.1	0.1	0.1
10	Conductivity	µS/cm	Special Frequency 1	0	-	-	-	-	-	-
	Nitrate	mg/L	Special Frequency 1	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Special Frequency 1	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Special Frequency 1	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Special Frequency 1	0	-	-	-	-	-	-
12	Conductivity	µS/cm	Special Frequency 1	0	-	-	-	-	-	-
	Nitrate	mg/L	Special Frequency 1	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Special Frequency 1	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Special Frequency 1	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Special Frequency 1	0	-	-	-	-	-	-
14	Conductivity	µS/cm	Special Frequency 1	0	-	-	-	-	-	-
	Nitrate	mg/L	Special Frequency 1	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Special Frequency 1	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Special Frequency 1	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Special Frequency 1	0	-	-	-	-	-	-

WERRIS CREEK COAL EPL – MONTHLY SUMMARY

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Measurements for the Month	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max Value
23	Conductivity	µS/cm	Special Frequency 2	0	-	-	-	-	-	-
	Nitrate	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Oil and Grease	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	pH	pH	Special Frequency 2	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Total Suspended Solids	mg/L	Special Frequency 2	0	-	-	-	-	-	-
24	Conductivity	µS/cm	Special Frequency 2	0	-	-	-	-	-	-
	Nitrate	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Oil and Grease	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	pH	pH	Special Frequency 2	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Total Suspended Solids	mg/L	Special Frequency 2	0	-	-	-	-	-	-
25	Conductivity	µS/cm	Special Frequency 2	0	-	-	-	-	-	-
	Nitrate	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Oil and Grease	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	pH	pH	Special Frequency 2	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Total Suspended Solids	mg/L	Special Frequency 2	0	-	-	-	-	-	-
26	Conductivity	µS/cm	Special Frequency 2	0	-	-	-	-	-	-
	Nitrate	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Oil and Grease	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	pH	pH	Special Frequency 2	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Special Frequency 2	0	-	-	-	-	-	-

WERRIS CREEK COAL EPL – MONTHLY SUMMARY

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Measurements for the Month	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max Value
	Total Suspended Solids	mg/L	Special Frequency 2	0	-	-	-	-	-	-

Table 2 - Pollutant Limits Apply

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of samples for the Month	Date Sampled	Date Obtained	Min Value	Max Value	100%ile Limit	Exceedance (Yes/No)
10	Total Suspended Solids	mg/L	Special Frequency 1	0	-	-	-	-	50*	No
	Oil and Grease	mg/L	Special Frequency 1	0	-	-	-	-	10	No
	pH	pH	Special Frequency 1	0	-	-	-	-	6.5-8.5	No
12	Total Suspended Solids	mg/L	Special Frequency 1	0	-	-	-	-	50*	No
	Oil and Grease	mg/L	Special Frequency 1	0	-	-	-	-	10	No
	pH	pH	Special Frequency 1	0	-	-	-	-	6.5-8.5	No
14	Total Suspended Solids	mg/L	Special Frequency 1	0	-	-	-	-	50*	No
	Oil and Grease	mg/L	Special Frequency 1	0	-	-	-	-	10	No
	pH	pH	Special Frequency 1	0	-	-	-	-	6.5-8.5	No

* Total Suspended Solids permitted to exceed 50mg/L if 5 day rainfall is greater than 39.2mm prior to discharge

Table 3 – Monitoring (Quarterly & 6 monthly – no limits apply)

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Measurements for the Period	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max Value
16	Conductivity	µS/cm	Every 3 Months	0	-	-	-	-	-	-
	Nitrate	mg/L	Every 3 Months	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Every 3 Months	0	-	-	-	-	-	-
	Oil and Grease	mg/L	Every 3 Months	0	-	-	-	-	-	-
	pH	pH	Every 3 Months	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Every 3 Months	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Every 3 Months	0	-	-	-	-	-	-
	Total Suspended Solids	mg/L	Every 3 Months	0	-	-	-	-	-	-
27	Conductivity	µS/cm	Every 3 Months	0	-	-	-	-	-	-
	Nitrate	mg/L	Every 3 Months	0	-	-	-	-	-	-

WERRIS CREEK COAL EPL – MONTHLY SUMMARY

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Measurements for the Period	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max Value
	Nitrogen (Total)	mg/L	Every 3 Months	0	-	-	-	-	-	-
	Oil and Grease	mg/L	Every 3 Months	0	-	-	-	-	-	-
	pH	pH	Every 3 Months	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Every 3 Months	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Every 3 Months	0	-	-	-	-	-	-
	Total Suspended Solids	mg/L	Every 3 Months	0	-	-	-	-	-	-
17	Conductivity	µS/cm	Every 6 Months	1	22/03/16	Bore dry	-	-	-	-
	Nitrate	mg/L	Every 6 Months	1	22/03/16	Bore dry	-	-	-	-
	Nitrogen (Total)	mg/L	Every 6 Months	1	22/03/16	Bore dry	-	-	-	-
	pH	pH	Every 6 Months	1	22/03/16	Bore dry	-	-	-	-
	Phosphorus (Total)	mg/L	Every 6 Months	1	22/03/16	Bore dry	-	-	-	-
	Reactive Phosphorus	mg/L	Every 6 Months	1	22/03/16	Bore dry	-	-	-	-
	Standing Water Level	Metres	Every 6 Months	1	22/03/16	01/04/16	Dry	Dry	Dry	Dry
18	Conductivity	µS/cm	Every 6 Months	1	22/03/16	01/04/16	922	922	922	922
	Nitrate	mg/L	Every 6 Months	1	22/03/16	01/04/16	5.72	5.72	5.72	5.72
	Nitrogen (Total)	mg/L	Every 6 Months	1	22/03/16	01/04/16	6.10	6.10	6.10	6.10
	pH	pH	Every 6 Months	1	22/03/16	01/04/16	7.4	7.4	7.4	7.4
	Phosphorus (Total)	mg/L	Every 6 Months	1	22/03/16	01/04/16	0.06	0.06	0.06	0.06
	Reactive Phosphorus	mg/L	Every 6 Months	1	22/03/16	01/04/16	0.06	0.06	0.06	0.06
	Standing Water Level	Metres	Every 6 Months	1	22/03/16	01/04/16	43.40	43.40	43.40	43.40
19	Conductivity	µS/cm	Every 6 Months	1	14/03/16	24/03/16	3020	3020	3020	3020
	Nitrate	mg/L	Every 6 Months	1	14/03/16	24/03/16	15.7	15.7	15.7	15.7
	Nitrogen (Total)	mg/L	Every 6 Months	1	14/03/16	24/03/16	17.1	17.1	17.1	17.1
	pH	pH	Every 6 Months	1	14/03/16	24/03/16	6.8	6.8	6.8	6.8
	Phosphorus (Total)	mg/L	Every 6 Months	1	14/03/16	24/03/16	0.22	0.22	0.22	0.22
	Reactive Phosphorus	mg/L	Every 6 Months	1	14/03/16	24/03/16	0.11	0.11	0.11	0.11
	Standing Water Level	Metres	Every 6 Months	1	14/03/16	24/03/16	19.40	19.40	19.40	19.40
20	Conductivity	µS/cm	Every 6 Months	1	14/03/16	24/03/16	1010	1010	1010	1010
	Nitrate	mg/L	Every 6 Months	1	14/03/16	24/03/16	1.76	1.76	1.76	1.76
	Nitrogen (Total)	mg/L	Every 6 Months	1	14/03/16	24/03/16	2.00	2.00	2.00	2.00
	pH	pH	Every 6 Months	1	14/03/16	24/03/16	7.9	7.9	7.9	7.9

WERRIS CREEK COAL EPL – MONTHLY SUMMARY

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Measurements for the Period	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max Value
	Phosphorus (Total)	mg/L	Every 6 Months	1	14/03/16	24/03/16	0.10	0.10	0.10	0.10
	Reactive Phosphorus	mg/L	Every 6 Months	1	14/03/16	24/03/16	0.03	0.03	0.03	0.03
	Standing Water Level	Metres	Every 6 Months	1	14/03/16	24/03/16	16.81	16.81	16.81	16.81
21	Conductivity	µS/cm	Every 6 Months	1	14/03/16	24/03/16	2000	2000	2000	2000
	Nitrate	mg/L	Every 6 Months	1	14/03/16	24/03/16	0.97	0.97	0.97	0.97
	Nitrogen (Total)	mg/L	Every 6 Months	1	14/03/16	24/03/16	1.30	1.30	1.30	1.30
	pH	pH	Every 6 Months	1	14/03/16	24/03/16	7.3	7.3	7.3	7.3
	Phosphorus (Total)	mg/L	Every 6 Months	1	14/03/16	24/03/16	0.08	0.08	0.08	0.08
	Reactive Phosphorus	mg/L	Every 6 Months	1	14/03/16	24/03/16	0.07	0.07	0.07	0.07
	Standing Water Level	Metres	Every 6 Months	1	14/03/16	24/03/16	12.55	12.55	12.55	12.55
22	Conductivity	µS/cm	Every 6 Months	1	23/03/16	01/04/16	1870	1870	1870	1870
	Nitrate	mg/L	Every 6 Months	1	23/03/16	01/04/16	3.52	3.52	3.52	3.52
	Nitrogen (Total)	mg/L	Every 6 Months	1	23/03/16	01/04/16	5.0	5.0	5.0	5.0
	pH	pH	Every 6 Months	1	23/03/16	01/04/16	7.3	7.3	7.3	7.3
	Phosphorus (Total)	mg/L	Every 6 Months	1	23/03/16	01/04/16	0.16	0.16	0.16	0.16
	Reactive Phosphorus	mg/L	Every 6 Months	1	23/03/16	01/04/16	0.04	0.04	0.04	0.04
	Standing Water Level	Metres	Every 6 Months	1	23/03/16	01/04/16	15.44	15.44	15.44	15.44

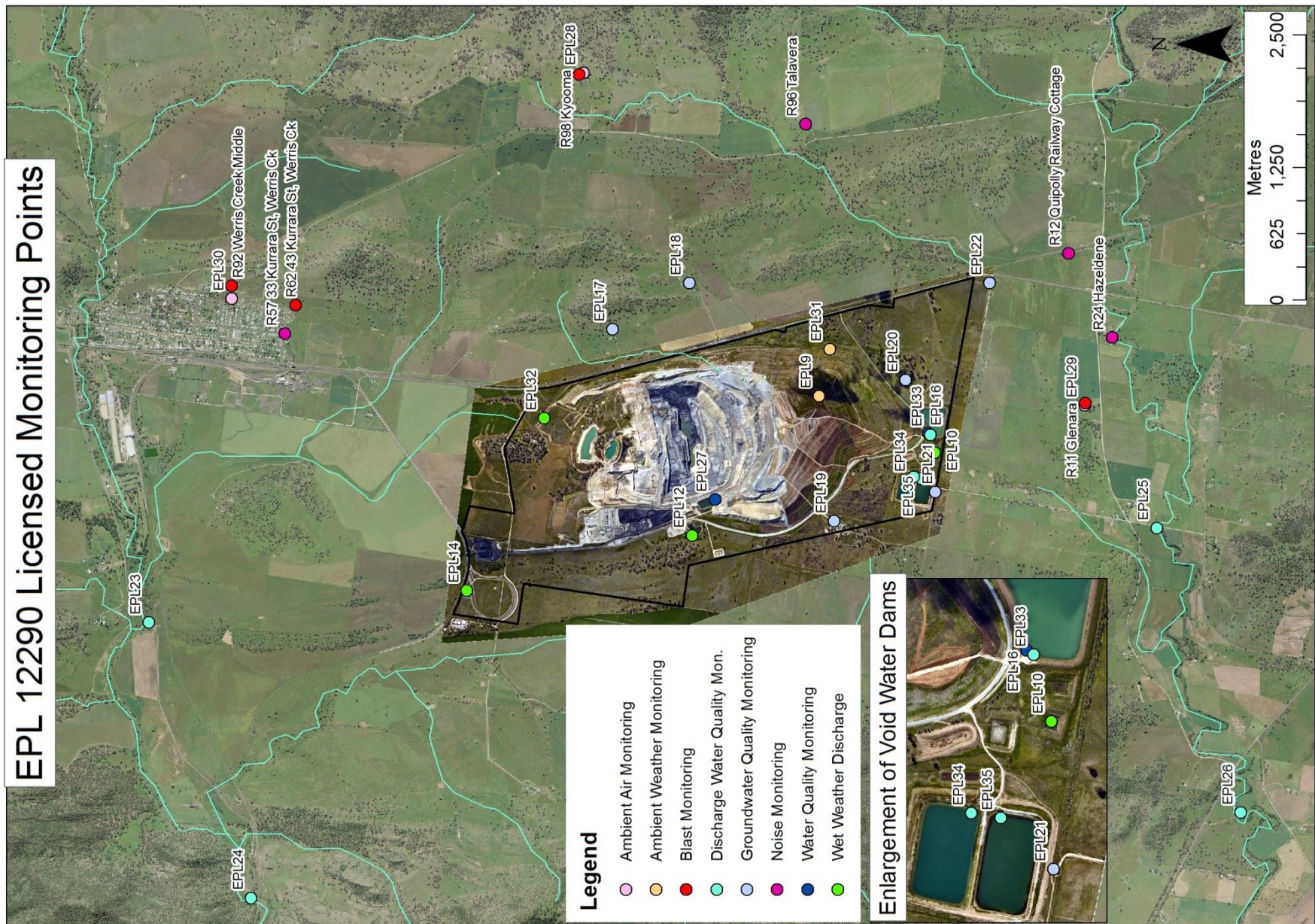
Table 4 – Monitoring (Noise – Limits Apply)

Location	Date	Measurement Period	Start Time	Measured levels – dB(A)		Limit(s)	Weather (inversion oC/100m, wind m/s & °)	Observations	(Potential) Non-compliance /breach	Date Obtained
				LA1, 1 Minute	LAeq, 15 Minute					
R24	30 th March 2016	60 minutes	4:01 pm	n/a	37	Day 37	n/a 4.5,29 4	Birds (36), traffic (29), WCC (22)	No	07/04/16
R12	31 st March 2016	60 minutes	7:25 am	n/a	42	Day 38	n/a 0.4,22 6	Traffic (42), WCC (27) , birds (26)	No	07/04/16
R96	30 th March 2016	60 minutes	12:42 pm	n/a	39	Day 38	n/a 4.5,30 6	Wind (37), birds (32), traffic (26), train (26), WCC (22)	No	07/04/16
R24	30 th March 2016	60 minutes	8:09 pm	29	35	Night 37	Lapse,4.1,353	Traffic (34), WCC (27) , insects (25)	No	07/04/16
R12	30 th March 2016	60 minutes	9:15 pm	28	39	Night 38	Lapse,3.7,340	Traffic (39), WCC (25) , insects (23)	No	07/04/16
R96	30 th March 2016	60 minutes	6:54 pm	50	44	Night 37	Lapse,4.3,334	WCC (43) , insects (32), traffic (31)	No	07/04/16

WERRIS CREEK COAL EPL – MONTHLY SUMMARY
Table 5 – 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 Obtained
R11	Blast Noise	dB (Lin Peak)	Every Blast	14	99.0	112.0	120.0	No	31/03/16
	Blast Vibration	mm/s	Every Blast	14	0.10	0.25	10.00	No	31/03/16
R98	Blast Noise	dB (Lin Peak)	Every Blast	14	100.4	110.3	120.0	No	31/03/16
	Blast Vibration	mm/s	Every Blast	14	0.47	1.28	10.00	No	31/03/16
R62	Blast Noise	dB (Lin Peak)	Every Blast	14	97.9	106.2	120.0	No	31/03/16
	Blast Vibration	mm/s	Every Blast	14	0.25	0.50	10.00	No	31/03/16
R92	Blast Noise	dB (Lin Peak)	Every Blast	14	100.0	111.7	120.0	No	31/03/16
	Blast Vibration	mm/s	Every Blast	14	0.16	0.46	10.00	No	31/03/16

WERRIS CREEK COAL EPL – MONTHLY SUMMARY



WCC EPL12290 Monitoring Location Plan

WERRIS CREEK COAL EPL – MONTHLY SUMMARY

Site Information

EPL No.: 12290

EPA Website Link: <http://www.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=31280&SYSUID=1&LICID=12290>

Licensee: Werris Creek Coal Pty Limited

Premises: Werris Creek Coal, 1435 Werris Creek Road, WERRIS CREEK NSW 2341

EPL Monitoring Points: See figure at end of document

Sampling Period: April 2016

Obtained Date: 3rd May 2016

Publication Date: 13th May 2016

Table 1 - No Pollutant Limits Apply

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Measurements for the Month	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max Value
28	PM10	µg/m ³	Every 6 days	5	23/04/16	03/05/16	7.7	12.4	13.7	18.3
	Solid Particles	g/m ² /month	Continuous	1	25/04/16	03/05/16	0.2	0.2	0.2	0.2
29	PM10	µg/m ³	Every 6 days	5	23/04/16	02/05/16	6.9	29.2	27.6	54.9
	Solid Particles	g/m ² /month	Continuous	1	25/04/16	03/05/16	0.7	0.7	0.7	0.7
30	PM10	µg/m ³	Every 6 days	Continuous	30/04/16	01/05/16	0.0	11.0	10.8	26.5
	Solid Particles	g/m ² /month	Continuous	1	25/04/16	03/05/16	0.3	0.3	0.3	0.3
10	Conductivity	µS/cm	Special Frequency 1	0	-	-	-	-	-	-
	Nitrate	mg/L	Special Frequency 1	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Special Frequency 1	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Special Frequency 1	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Special Frequency 1	0	-	-	-	-	-	-
12	Conductivity	µS/cm	Special Frequency 1	0	-	-	-	-	-	-
	Nitrate	mg/L	Special Frequency 1	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Special Frequency 1	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Special Frequency 1	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Special Frequency 1	0	-	-	-	-	-	-
14	Conductivity	µS/cm	Special Frequency 1	0	-	-	-	-	-	-
	Nitrate	mg/L	Special Frequency 1	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Special Frequency 1	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Special Frequency 1	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Special Frequency 1	0	-	-	-	-	-	-

WERRIS CREEK COAL EPL – MONTHLY SUMMARY

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Measurements for the Month	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max Value
23	Conductivity	µS/cm	Special Frequency 2	0	-	-	-	-	-	-
	Nitrate	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Oil and Grease	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	pH	pH	Special Frequency 2	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Total Suspended Solids	mg/L	Special Frequency 2	0	-	-	-	-	-	-
24	Conductivity	µS/cm	Special Frequency 2	0	-	-	-	-	-	-
	Nitrate	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Oil and Grease	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	pH	pH	Special Frequency 2	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Total Suspended Solids	mg/L	Special Frequency 2	0	-	-	-	-	-	-
25	Conductivity	µS/cm	Special Frequency 2	0	-	-	-	-	-	-
	Nitrate	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Oil and Grease	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	pH	pH	Special Frequency 2	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Total Suspended Solids	mg/L	Special Frequency 2	0	-	-	-	-	-	-
26	Conductivity	µS/cm	Special Frequency 2	0	-	-	-	-	-	-
	Nitrate	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Oil and Grease	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	pH	pH	Special Frequency 2	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Total Suspended Solids	mg/L	Special Frequency 2	0	-	-	-	-	-	-

WERRIS CREEK COAL EPL – MONTHLY SUMMARY

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Measurements for the Month	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max Value
	Total Suspended Solids	mg/L	Special Frequency 2	0	-	-	-	-	-	-

Table 2 - Pollutant Limits Apply

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of samples for the Month	Date Sampled	Date Obtained	Min Value	Max Value	100%ile Limit	Exceedance (Yes/No)
10	Total Suspended Solids	mg/L	Special Frequency 1	0	-	-	-	-	50*	No
	Oil and Grease	mg/L	Special Frequency 1	0	-	-	-	-	10	No
	pH	pH	Special Frequency 1	0	-	-	-	-	6.5-8.5	No
12	Total Suspended Solids	mg/L	Special Frequency 1	0	-	-	-	-	50*	No
	Oil and Grease	mg/L	Special Frequency 1	0	-	-	-	-	10	No
	pH	pH	Special Frequency 1	0	-	-	-	-	6.5-8.5	No
14	Total Suspended Solids	mg/L	Special Frequency 1	0	-	-	-	-	50*	No
	Oil and Grease	mg/L	Special Frequency 1	0	-	-	-	-	10	No
	pH	pH	Special Frequency 1	0	-	-	-	-	6.5-8.5	No

* Total Suspended Solids permitted to exceed 50mg/L if 5 day rainfall is greater than 39.2mm prior to discharge

Table 3 – Monitoring (Quarterly & 6 monthly – no limits apply)

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Measurements for the Period	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max Value
16	Conductivity	µS/cm	Every 3 Months	0	-	-	-	-	-	-
	Nitrate	mg/L	Every 3 Months	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Every 3 Months	0	-	-	-	-	-	-
	Oil and Grease	mg/L	Every 3 Months	0	-	-	-	-	-	-
	pH	pH	Every 3 Months	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Every 3 Months	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Every 3 Months	0	-	-	-	-	-	-
27	Total Suspended Solids	mg/L	Every 3 Months	0	-	-	-	-	-	-
	Conductivity	µS/cm	Every 3 Months	0	-	-	-	-	-	-
27	Nitrate	mg/L	Every 3 Months	0	-	-	-	-	-	-

WERRIS CREEK COAL EPL – MONTHLY SUMMARY

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Measurements for the Period	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max Value
	Nitrogen (Total)	mg/L	Every 3 Months	0	-	-	-	-	-	-
	Oil and Grease	mg/L	Every 3 Months	0	-	-	-	-	-	-
	pH	pH	Every 3 Months	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Every 3 Months	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Every 3 Months	0	-	-	-	-	-	-
	Total Suspended Solids	mg/L	Every 3 Months	0	-	-	-	-	-	-
17	Conductivity	µS/cm	Every 6 Months	0	-	-	-	-	-	-
	Nitrate	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	pH	pH	Every 6 Months	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Standing Water Level	Metres	Every 6 Months	0	-	-	-	-	-	-
18	Conductivity	µS/cm	Every 6 Months	0	-	-	-	-	-	-
	Nitrate	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	pH	pH	Every 6 Months	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Standing Water Level	Metres	Every 6 Months	0	-	-	-	-	-	-
19	Conductivity	µS/cm	Every 6 Months	0	-	-	-	-	-	-
	Nitrate	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	pH	pH	Every 6 Months	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Standing Water Level	Metres	Every 6 Months	0	-	-	-	-	-	-
20	Conductivity	µS/cm	Every 6 Months	0	-	-	-	-	-	-
	Nitrate	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	pH	pH	Every 6 Months	0	-	-	-	-	-	-

WERRIS CREEK COAL EPL – MONTHLY SUMMARY

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Measurements for the Period	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max Value
	Phosphorus (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Standing Water Level	Metres	Every 6 Months	0	-	-	-	-	-	-
21	Conductivity	µS/cm	Every 6 Months	0	-	-	-	-	-	-
	Nitrate	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	pH	pH	Every 6 Months	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Standing Water Level	Metres	Every 6 Months	0	-	-	-	-	-	-
22	Conductivity	µS/cm	Every 6 Months	0	-	-	-	-	-	-
	Nitrate	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	pH	pH	Every 6 Months	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Standing Water Level	Metres	Every 6 Months	0	-	-	-	-	-	-

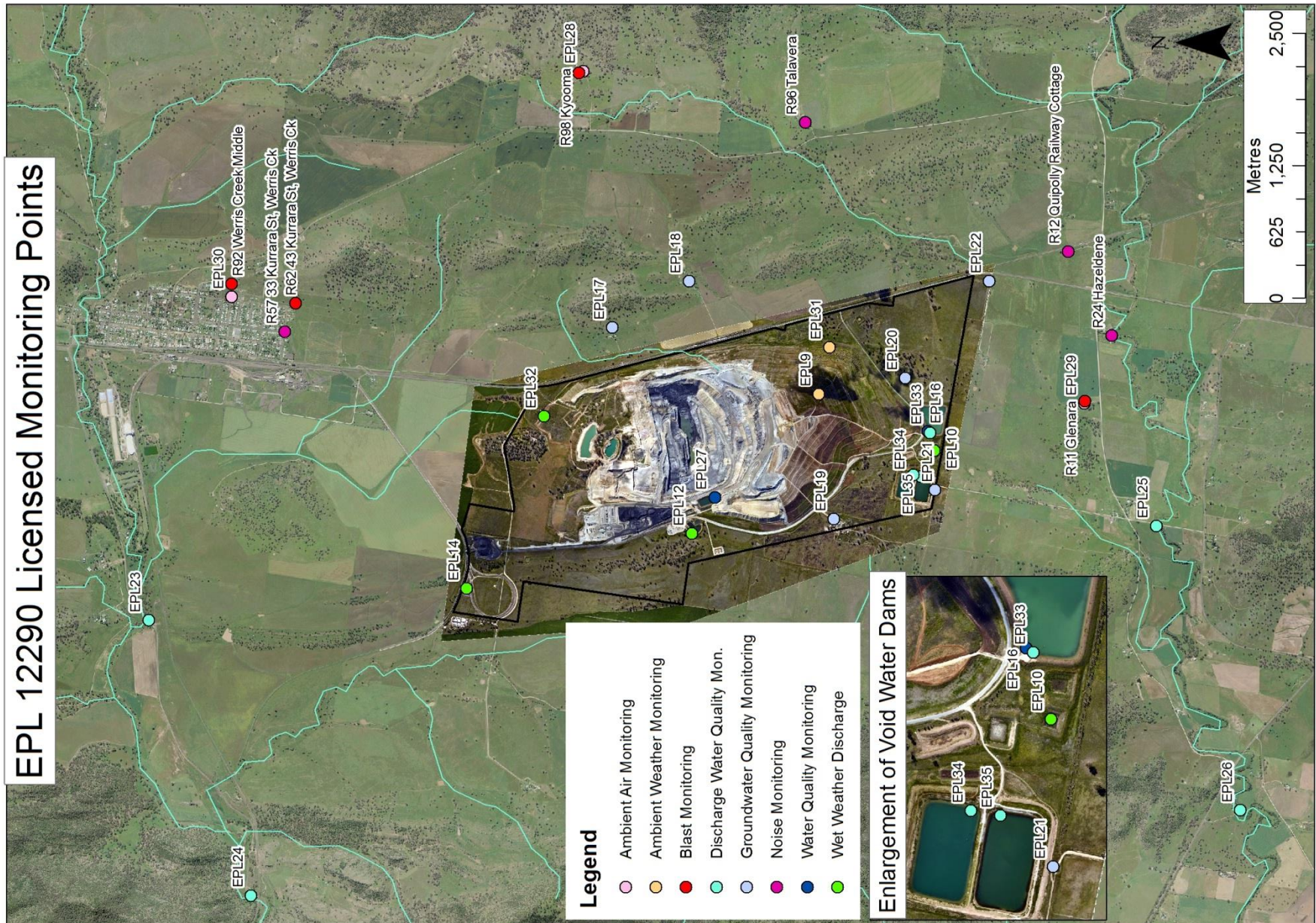
Table 4 – Monitoring (Noise – Limits Apply)

Location	Date	Measurement Period	Start Time	Measured levels – dB(A)		Limit(s)	Weather (inversion oC/100m, wind m/s & °)	Observations	(Potential) Non-compliance /breach	Date Obtained
				LA1, 1 Minute	LAeq, 15 Minute					
R24	19 th April 2016	60 minutes	2:38 pm	N/A	33	Day 37	N/A 1.3,194	Birds (31), traffic (28), WCC inaudible (<20)	No	29/04/16
R12	19 th April 2016	60 minutes	3:45 pm	N/A	32	Day 38	N/A 1.0,241	Traffic (32), WCC inaudible (<20)	No	29/04/16
R96	19 th April 2016	60 minutes	12:49 pm	N/A	31	Day 38	N/A 2.7,318	Birds (28), wind (26), traffic (23), WCC inaudible (<20)	No	29/04/16
R24	19 th April 2016	60 minutes	8:20 pm	N/A	46	Night 37	+4.2, 1.4,149	Traffic (46), WCC inaudible (<20)	No	29/04/16
R12	19 th April 2016	60 minutes	9:15 pm	N/A	37	Night 38	+5.5, 1.0,178	Traffic (37), insects (22), WCC inaudible (<20)	No	29/04/16
R96	19 th April 2016	60 minutes	6:54 pm	N/A	24	Night 37	+2.2, 2.4,148	Insects (22), traffic (20), WCC inaudible (<20)	No	29/04/16

WERRIS CREEK COAL EPL – MONTHLY SUMMARY
Table 5 – 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 Obtained
R11	Blast Noise	dB (Lin Peak)	Every Blast	12	98.8	105.0	120.0	No	28/04/16
	Blast Vibration	mm/s	Every Blast	12	0.19	0.43	10.00	No	28/04/16
R98	Blast Noise	dB (Lin Peak)	Every Blast	12	102.2	108.2	120.0	No	28/04/16
	Blast Vibration	mm/s	Every Blast	12	0.68	1.35	10.00	No	28/04/16
R62	Blast Noise	dB (Lin Peak)	Every Blast	12	97.1	105.7	120.0	No	28/04/16
	Blast Vibration	mm/s	Every Blast	12	0.32	0.64	10.00	No	28/04/16
R92	Blast Noise	dB (Lin Peak)	Every Blast	12	98.1	113.3	120.0	No	28/04/16
	Blast Vibration	mm/s	Every Blast	12	0.19	0.37	10.00	No	28/04/16

WERRIS CREEK COAL EPL – MONTHLY SUMMARY



WCC EPL12290 Monitoring Location Plan

WERRIS CREEK COAL EPL – MONTHLY SUMMARY

Site Information

EPL No.: 12290

EPA Website Link: <http://www.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=31280&SYSUID=1&LICID=12290>

Licensee: Werris Creek Coal Pty Limited

Premises: Werris Creek Coal, 1435 Werris Creek Road, WERRIS CREEK NSW 2341

EPL Monitoring Points: See figure at end of document

Sampling Period: May 2016

Obtained Date: 6th June 2016

Publication Date: 10th June 2016

Table 1 - No Pollutant Limits Apply

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Measurements for the Month	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max Value
28	PM10	µg/m ³	Every 6 days	5	01/06/16	06/06/16	7.5	11.6	12.1	14.5
	Solid Particles	g/m ² /month	Continuous	1	26/05/16	01/06/16	0.4	0.4	0.4	0.4
29	PM10	µg/m ³	Every 6 days	5	01/06/16	06/06/16	6.8	26.5	26	47.2
	Solid Particles	g/m ² /month	Continuous	1	26/05/16	01/06/16	0.8	0.8	0.8	0.8
30	PM10	µg/m ³	Every 6 days	Continuous	31/05/16	01/06/16	0.0	9.2	8.0	33.8
	Solid Particles	g/m ² /month	Continuous	1	26/05/16	01/06/16	0.4	0.4	0.4	0.4
10	Conductivity	µS/cm	Special Frequency 1	0	-	-	-	-	-	-
	Nitrate	mg/L	Special Frequency 1	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Special Frequency 1	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Special Frequency 1	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Special Frequency 1	0	-	-	-	-	-	-
12	Conductivity	µS/cm	Special Frequency 1	0	-	-	-	-	-	-
	Nitrate	mg/L	Special Frequency 1	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Special Frequency 1	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Special Frequency 1	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Special Frequency 1	0	-	-	-	-	-	-
14	Conductivity	µS/cm	Special Frequency 1	0	-	-	-	-	-	-

WERRIS CREEK COAL EPL – MONTHLY SUMMARY

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Measurements for the Month	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max Value
	Nitrate	mg/L	Special Frequency 1	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Special Frequency 1	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Special Frequency 1	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Special Frequency 1	0	-	-	-	-	-	-
23	Conductivity	µS/cm	Special Frequency 2	0	-	-	-	-	-	-
	Nitrate	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Oil and Grease	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	pH	pH	Special Frequency 2	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Total Suspended Solids	mg/L	Special Frequency 2	0	-	-	-	-	-	-
24	Conductivity	µS/cm	Special Frequency 2	0	-	-	-	-	-	-
	Nitrate	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Oil and Grease	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	pH	pH	Special Frequency 2	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Total Suspended Solids	mg/L	Special Frequency 2	0	-	-	-	-	-	-
25	Conductivity	µS/cm	Special Frequency 2	0	-	-	-	-	-	-
	Nitrate	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Oil and Grease	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	pH	pH	Special Frequency 2	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Total Suspended Solids	mg/L	Special Frequency 2	0	-	-	-	-	-	-

WERRIS CREEK COAL EPL – MONTHLY SUMMARY

26	Conductivity	µS/cm	Special Frequency 2	0	-	-	-	-	-	-
	Nitrate	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Oil and Grease	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	pH	pH	Special Frequency 2	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Total Suspended Solids	mg/L	Special Frequency 2	0	-	-	-	-	-	-

Table 2 - Pollutant Limits Apply

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of samples for the Month	Date Sampled	Date Obtained	Min Value	Max Value	100%ile Limit	Exceedance (Yes/No)
10	Total Suspended Solids	mg/L	Special Frequency 1	0	-	-	-	-	50*	No
	Oil and Grease	mg/L	Special Frequency 1	0	-	-	-	-	10	No
	pH	pH	Special Frequency 1	0	-	-	-	-	6.5-8.5	No
12	Total Suspended Solids	mg/L	Special Frequency 1	0	-	-	-	-	50*	No
	Oil and Grease	mg/L	Special Frequency 1	0	-	-	-	-	10	No
	pH	pH	Special Frequency 1	0	-	-	-	-	6.5-8.5	No
14	Total Suspended Solids	mg/L	Special Frequency 1	0	-	-	-	-	50*	No
	Oil and Grease	mg/L	Special Frequency 1	0	-	-	-	-	10	No
	pH	pH	Special Frequency 1	0	-	-	-	-	6.5-8.5	No

* Total Suspended Solids permitted to exceed 50mg/L if 5 day rainfall is greater than 39.2mm prior to discharge

Table 3 – Monitoring (Quarterly & 6 monthly – no limits apply)

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Measurements for the Period	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max Value
16	Conductivity	µS/cm	Every 3 Months	1	11/05/2016	18/05/2016	1340	1340	1340	1340
	Nitrate	mg/L	Every 3 Months	1	11/05/2016	18/05/2016	3.28	3.28	3.28	3.28
	Nitrogen (Total)	mg/L	Every 3 Months	1	11/05/2016	18/05/2016	4	4	4	4

WERRIS CREEK COAL EPL – MONTHLY SUMMARY

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Measurements for the Period	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max Value
	Oil and Grease	mg/L	Every 3 Months	1	11/05/2016	18/05/2016	<5	<5	<5	<5
	pH	pH	Every 3 Months	1	11/05/2016	18/05/2016	8.5	8.5	8.5	8.5
	Phosphorus (Total)	mg/L	Every 3 Months	1	11/05/2016	18/05/2016	<0.01	<0.01	<0.01	<0.01
	Reactive Phosphorus	mg/L	Every 3 Months	1	11/05/2016	18/05/2016	<0.01	<0.01	<0.01	<0.01
	Total Suspended Solids	mg/L	Every 3 Months	1	11/05/2016	18/05/2016	7	7	7	7
27	Conductivity	µS/cm	Every 3 Months	1	11/05/2016	18/05/2016	1190	1190	1190	1190
	Nitrate	mg/L	Every 3 Months	1	11/05/2016	18/05/2016	3.38	3.38	3.38	3.38
	Nitrogen (Total)	mg/L	Every 3 Months	1	11/05/2016	18/05/2016	4.4	4.4	4.4	4.4
	Oil and Grease	mg/L	Every 3 Months	1	11/05/2016	18/05/2016	<5	<5	<5	<5
	pH	pH	Every 3 Months	1	11/05/2016	18/05/2016	8.4	8.4	8.4	8.4
	Phosphorus (Total)	mg/L	Every 3 Months	1	11/05/2016	18/05/2016	0.01	0.01	0.01	0.01
	Reactive Phosphorus	mg/L	Every 3 Months	1	11/05/2016	18/05/2016	<0.01	<0.01	<0.01	<0.01
	Total Suspended Solids	mg/L	Every 3 Months	1	11/05/2016	18/05/2016	13	13	13	13
17	Conductivity	µS/cm	Every 6 Months	0	-	-	-	-	-	-
	Nitrate	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	pH	pH	Every 6 Months	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Standing Water Level	Metres	Every 6 Months	0	-	-	-	-	-	-
18	Conductivity	µS/cm	Every 6 Months	0	-	-	-	-	-	-
	Nitrate	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	pH	pH	Every 6 Months	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Every 6 Months	0	-	-	-	-	-	-

WERRIS CREEK COAL EPL – MONTHLY SUMMARY

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Measurements for the Period	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max Value
	Standing Water Level	Metres	Every 6 Months	0	-	-	-	-	-	-
19	Conductivity	µS/cm	Every 6 Months	0	-	-	-	-	-	-
	Nitrate	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	pH	pH	Every 6 Months	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Standing Water Level	Metres	Every 6 Months	0	-	-	-	-	-	-
20	Conductivity	µS/cm	Every 6 Months	0	-	-	-	-	-	-
	Nitrate	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	pH	pH	Every 6 Months	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Standing Water Level	Metres	Every 6 Months	0	-	-	-	-	-	-
21	Conductivity	µS/cm	Every 6 Months	0	-	-	-	-	-	-
	Nitrate	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	pH	pH	Every 6 Months	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Standing Water Level	Metres	Every 6 Months	0	-	-	-	-	-	-
22	Conductivity	µS/cm	Every 6 Months	0	-	-	-	-	-	-
	Nitrate	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	pH	pH	Every 6 Months	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Every 6 Months	0	-	-	-	-	-	-

WERRIS CREEK COAL EPL – MONTHLY SUMMARY

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Measurements for the Period	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max Value
	Standing Water Level	Metres	Every 6 Months	0	-	-	-	-	-	-

Table 4 – Monitoring (Noise – Limits Apply)

Location	Date	Measurement Period	Start Time	Measured levels – dB(A)		Limit(s)	Weather (inversion oC/100m, wind m/s & °)	Observations	(Potential) Non-compliance /breach	Date Obtained
				LA1, 1 Minute	LAeq, 15 Minute					
R24	24th May 2016	60 minutes	11:42 am	N/A	33	Day 37	n/a 2.3,307	Traffic (29), roadworks (28), wind (28), WCC inaudible (<20)	No	30/05/16
R12	24th May 2016	60 minutes	12:48 pm	N/A	37	Day 38	n/a 2.8,310	Traffic (37), WCC inaudible (<20)	No	30/05/16
R96	24th May 2016	60 minutes	12:20 pm	N/A	34	Day 38	n/a 2.7,321	Birds (31), wind (28), traffic (25), WCC (22)	No	30/05/16
R24	24th May 2016	60 minutes	8:30 pm	<20	40	Night 37	+3.2,1.9,322	Traffic (40), WCC inaudible (<20)	No	29/04/16
R12	24th May 2016	60 minutes	9:58 pm	<20	43	Night 38	+6.7,1.4,352	Traffic (43), WCC inaudible (<20)	No	29/04/16
R96	24th May 2016	60 minutes	9:40 pm	24	26	Night 37	+6.3,1.8,339	Traffic (24), WCC (21)	No	29/04/16

WERRIS CREEK COAL EPL – MONTHLY SUMMARY
Table 5 – 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 Obtained
R11	Blast Noise	dB (Lin Peak)	Every Blast	10	98.0	108.1	120.0	No	27/05/16
	Blast Vibration	mm/s	Every Blast	10	0.24	0.61	10.00	No	27/05/16
R98	Blast Noise	dB (Lin Peak)	Every Blast	10	97.6	103.5	120.0	No	27/05/16
	Blast Vibration	mm/s	Every Blast	10	0.82	1.36	10.00	No	27/05/16
R62	Blast Noise	dB (Lin Peak)	Every Blast	10	93.5	106.4	120.0	No	27/05/16
	Blast Vibration	mm/s	Every Blast	10	0.45	0.62	10.00	No	27/05/16
R92	Blast Noise	dB (Lin Peak)	Every Blast	10	93.6	105.9	120.0	No	27/05/16
	Blast Vibration	mm/s	Every Blast	10	0.23	0.45	10.00	No	27/05/16



WERRIS CREEK COAL EPL – MONTHLY SUMMARY

Site Information

EPL No.: 12290

EPA Website Link: <http://www.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=31280&SYSUID=1&LICID=12290>

Licensee: Werris Creek Coal Pty Limited

Premises: Werris Creek Coal, 1435 Werris Creek Road, WERRIS CREEK NSW 2341

EPL Monitoring Points: See figure at end of document

Sampling Period: June 2016

Obtained Date: 12 July 2016

Publication Date: 22 July 2016

Table 1 - No Pollutant Limits Apply

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Measurements for the Month	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max Value
28	PM10	µg/m ³	Every 6 days	5	22/06/16	08/07/16	0.0	0.6	0.5	1.6
	Solid Particles	g/m ² /month	Continuous	1	24/06/16	08/07/16	0.2	0.2	0.2	0.2
29	PM10	µg/m ³	Every 6 days	5	22/06/16	08/07/16	0.0	4.9	0.8	22.7
	Solid Particles	g/m ² /month	Continuous	1	24/06/16	08/07/16	0.9	0.9	0.9	0.9
30	PM10	µg/m ³	Every 6 days	Continuous	22/06/16	08/07/16	-6.5	3.8	2.9	18.4
	Solid Particles	g/m ² /month	Continuous	1	26/05/16	01/06/16	0.3	0.3	0.3	0.3
10	Conductivity	µS/cm	Special Frequency 1	0	-	-	-	-	-	-
	Nitrate	mg/L	Special Frequency 1	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Special Frequency 1	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Special Frequency 1	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Special Frequency 1	0	-	-	-	-	-	-
12	Conductivity	µS/cm	Special Frequency 1	1	22/6/2016	22/6/2016	590	590	590	590
	Nitrate	mg/L	Special Frequency 1	1	22/6/2016	22/6/2016	3.8	3.8	3.8	3.8
	Nitrogen (Total)	mg/L	Special Frequency 1	1	22/6/2016	22/6/2016	4.6	4.6	4.6	4.6
	Phosphorus (Total)	mg/L	Special Frequency 1	1	22/6/2016	22/6/2016	0.10	0.10	0.10	0.10
	Reactive Phosphorus	mg/L	Special Frequency 1	1	22/6/2016	22/6/2016	0.04	0.04	0.04	0.04
14	Conductivity	µS/cm	Special Frequency 1	0	-	-	-	-	-	-
	Nitrate	mg/L	Special Frequency 1	0	-	-	-	-	-	-

WERRIS CREEK COAL EPL – MONTHLY SUMMARY

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Measurements for the Month	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max Value
	Nitrogen (Total)	mg/L	Special Frequency 1	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Special Frequency 1	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Special Frequency 1	0	-	-	-	-	-	-
23	Conductivity	µS/cm	Special Frequency 2	0	-	-	-	-	-	-
	Nitrate	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Oil and Grease	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	pH	pH	Special Frequency 2	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Special Frequency 2	0	-	-	-	-	-	-
24	Total Suspended Solids	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Conductivity	µS/cm	Special Frequency 2	0	-	-	-	-	-	-
	Nitrate	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Oil and Grease	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	pH	pH	Special Frequency 2	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Special Frequency 2	0	-	-	-	-	-	-
25	Reactive Phosphorus	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Total Suspended Solids	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Conductivity	µS/cm	Special Frequency 2	1	23/06/2016	-	Dry	Dry	Dry	Dry
	Nitrate	mg/L	Special Frequency 2	1	23/06/2016	-	Dry	Dry	Dry	Dry
	Nitrogen (Total)	mg/L	Special Frequency 2	1	23/06/2016	-	Dry	Dry	Dry	Dry
	Oil and Grease	mg/L	Special Frequency 2	1	23/06/2016	-	Dry	Dry	Dry	Dry
	pH	pH	Special Frequency 2	1	23/06/2016	-	Dry	Dry	Dry	Dry
	Phosphorus (Total)	mg/L	Special Frequency 2	1	23/06/2016	-	Dry	Dry	Dry	Dry
	Reactive Phosphorus	mg/L	Special Frequency 2	1	23/06/2016	-	Dry	Dry	Dry	Dry

WERRIS CREEK COAL EPL – MONTHLY SUMMARY

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Measurements for the Month	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max Value
	Total Suspended Solids	mg/L	Special Frequency 2	1	23/06/2016	-	Dry	Dry	Dry	Dry
26	Conductivity	µS/cm	Special Frequency 2	1	23/06/2016	06/07/2016	1003	1003	1003	1003
	Nitrate	mg/L	Special Frequency 2	1	23/06/2016	06/07/2016	<0.1	<0.1	<0.1	<0.1
	Nitrogen (Total)	mg/L	Special Frequency 2	1	23/06/2016	06/07/2016	0.2	0.2	0.2	0.2
	Oil and Grease	mg/L	Special Frequency 2	1	23/06/2016	06/07/2016	<5	<5	<5	<5
	pH	pH	Special Frequency 2	1	23/06/2016	06/07/2016	7.9	7.9	7.9	7.9
	Phosphorus (Total)	mg/L	Special Frequency 2	1	23/06/2016	06/07/2016	0.10	0.10	0.10	0.10
	Reactive Phosphorus	mg/L	Special Frequency 2	1	23/06/2016	06/07/2016	0.07	0.07	0.07	0.07
	Total Suspended Solids	mg/L	Special Frequency 2	1	23/06/2016	06/07/2016	4	4	4	4

Table 2 - Pollutant Limits Apply

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of samples for the Month	Date Sampled	Date Obtained	Min Value	Max Value	100%ile Limit	Exceedance (Yes/No)
10	Total Suspended Solids	mg/L	Special Frequency 1	0	-	-	-	-	50*	No
	Oil and Grease	mg/L	Special Frequency 1	0	-	-	-	-	10	No
	pH	pH	Special Frequency 1	0	-	-	-	-	6.5-8.5	No
12	Total Suspended Solids	mg/L	Special Frequency 1	1	22/6/2016	22/6/2016	12	12	50*	No
	Oil and Grease	mg/L	Special Frequency 1	1	22/6/2016	22/6/2016	<5	<5	10	No
	pH	pH	Special Frequency 1	1	22/6/2016	22/6/2016	7.8	7.8	6.5-8.5	No
14	Total Suspended Solids	mg/L	Special Frequency 1	0	-	-	-	-	50*	No
	Oil and Grease	mg/L	Special Frequency 1	0	-	-	-	-	10	No
	pH	pH	Special Frequency 1	0	-	-	-	-	6.5-8.5	No

* Total Suspended Solids permitted to exceed 50mg/L if 5 day rainfall is greater than 39.2mm prior to discharge

WERRIS CREEK COAL EPL – MONTHLY SUMMARY
Table 3 – Monitoring (Quarterly & 6 monthly – no limits apply)

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Measurements for the Period	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max Value
16	Conductivity	µS/cm	Every 3 Months	0	-	-	-	-	-	-
	Nitrate	mg/L	Every 3 Months	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Every 3 Months	0	-	-	-	-	-	-
	Oil and Grease	mg/L	Every 3 Months	0	-	-	-	-	-	-
	pH	pH	Every 3 Months	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Every 3 Months	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Every 3 Months	0	-	-	-	-	-	-
	Total Suspended Solids	mg/L	Every 3 Months	0	-	-	-	-	-	-
27	Conductivity	µS/cm	Every 3 Months	0	-	-	-	-	-	-
	Nitrate	mg/L	Every 3 Months	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Every 3 Months	0	-	-	-	-	-	-
	Oil and Grease	mg/L	Every 3 Months	0	-	-	-	-	-	-
	pH	pH	Every 3 Months	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Every 3 Months	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Every 3 Months	0	-	-	-	-	-	-
	Total Suspended Solids	mg/L	Every 3 Months	0	-	-	-	-	-	-
17	Conductivity	µS/cm	Every 6 Months	0	-	-	-	-	-	-
	Nitrate	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	pH	pH	Every 6 Months	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Standing Water Level	Metres	Every 6 Months	0	-	-	-	-	-	-
18	Conductivity	µS/cm	Every 6 Months	0	-	-	-	-	-	-
	Nitrate	mg/L	Every 6 Months	0	-	-	-	-	-	-

WERRIS CREEK COAL EPL – MONTHLY SUMMARY

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Measurements for the Period	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max Value
	Nitrogen (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	pH	pH	Every 6 Months	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Standing Water Level	Metres	Every 6 Months	0	-	-	-	-	-	-
19	Conductivity	µS/cm	Every 6 Months	0	-	-	-	-	-	-
	Nitrate	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	pH	pH	Every 6 Months	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Standing Water Level	Metres	Every 6 Months	0	-	-	-	-	-	-
20	Conductivity	µS/cm	Every 6 Months	0	-	-	-	-	-	-
	Nitrate	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	pH	pH	Every 6 Months	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Standing Water Level	Metres	Every 6 Months	0	-	-	-	-	-	-
21	Conductivity	µS/cm	Every 6 Months	0	-	-	-	-	-	-
	Nitrate	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	pH	pH	Every 6 Months	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Standing Water Level	Metres	Every 6 Months	0	-	-	-	-	-	-
22	Conductivity	µS/cm	Every 6 Months	0	-	-	-	-	-	-
	Nitrate	mg/L	Every 6 Months	0	-	-	-	-	-	-

WERRIS CREEK COAL EPL – MONTHLY SUMMARY

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Measurements for the Period	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max Value
	Nitrogen (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	pH	pH	Every 6 Months	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Standing Water Level	Metres	Every 6 Months	0	-	-	-	-	-	-

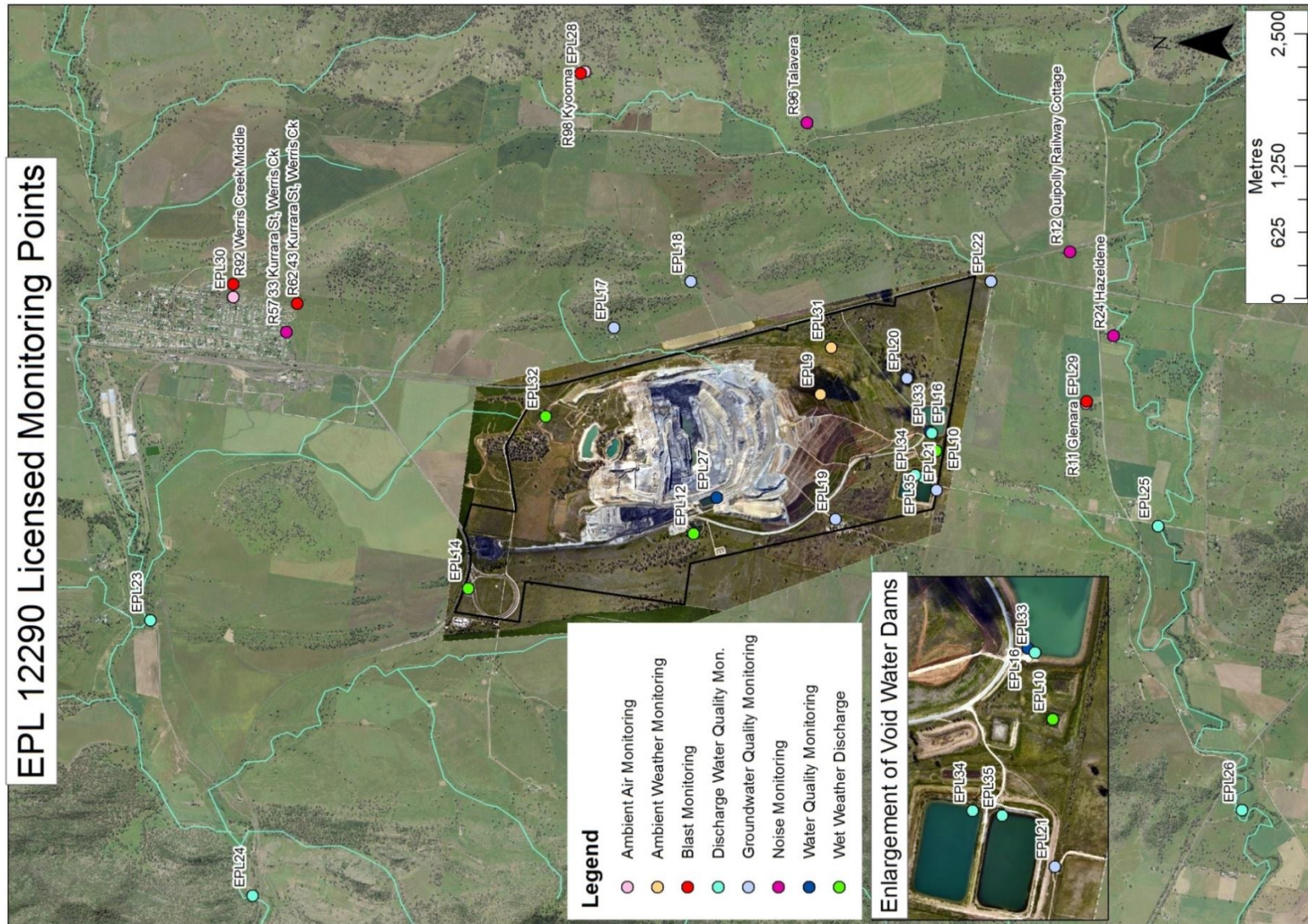
Table 4 – Monitoring (Noise – Limits Apply)

Location	Date	Measurement Period	Start Time	Measured levels – dB(A)		Limit(s)	Weather (inversion oC/100m, wind m/s & °)	Observations	(Potential) Non-compliance /breach	Date Obtained
				LA1, 1 Minute	LAeq, 15 Minute					
R24	28/06/2016	60 minutes	3.59 pm	N/A	37	Day 37	n/a 2.2,323	Traffic (39), birds (37), WCC inaudible (<20)	No	12/07/2016
R12	28/06/2016	60 minutes	3.20 pm	N/A	38	Day 38	n/a 1.6,296	Traffic (44), birds (27), WCC inaudible (<20)	No	12/07/2016
R96	28/06/2016	60 minutes	11:28 am	N/A	38	Day 38	n/a 2.0,197	Birds (39), train (28), traffic (27), WCC inaudible (<20)	No	12/07/2016
R24	28/06/2016	60 minutes	8:24 pm	<20	36	Night 37	+5.3,1.2,183	Traffic (36), WCC inaudible (<20)	No	12/07/2016
R12	28/06/2016	60 minutes	9:32 pm	<20	47	Night 38	+6.8,0.3,183	Traffic (47), WCC inaudible (<20)	No	12/07/2016
R96	28/06/2016	60 minutes	6:16 pm	34	32	Night 37	+3.3,1.0,2.5	Traffic (30), WCC (28)	No	12/07/2016

WERRIS CREEK COAL EPL – MONTHLY SUMMARY
Table 5 – 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 Obtained
R11	Blast Noise	dB (Lin Peak)	Every Blast	6	101.0	107.5	120.0	No	28/06/16
	Blast Vibration	mm/s	Every Blast	6	0.22	0.37	10.00	No	28/06/16
R98	Blast Noise	dB (Lin Peak)	Every Blast	6	99.5	102.1	120.0	No	28/06/16
	Blast Vibration	mm/s	Every Blast	6	0.77	2.01	10.00	No	28/06/16
R62	Blast Noise	dB (Lin Peak)	Every Blast	6	95.5	103.0	120.0	No	28/06/16
	Blast Vibration	mm/s	Every Blast	6	0.35	0.72	10.00	No	28/06/16
R92	Blast Noise	dB (Lin Peak)	Every Blast	6	96.4	103.9	120.0	No	28/06/16
	Blast Vibration	mm/s	Every Blast	6	0.20	0.30	10.00	No	28/06/16

WERRIS CREEK COAL EPL – MONTHLY SUMMARY



WERRIS CREEK COAL EPL – MONTHLY SUMMARY

Site Information

EPL No.: 12290

EPA Website Link: <http://www.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=31280&SYSUID=1&LICID=12290>

Licensee: Werris Creek Coal Pty Limited

Premises: Werris Creek Coal, 1435 Werris Creek Road, WERRIS CREEK NSW 2341

EPL Monitoring Points: See figure at end of document

Sampling Period: July 2016

Obtained Date: 11/08/2016

Publication Date: 12/08/2016

Table 1 - No Pollutant Limits Apply

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Measurements for the Month	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max Value
28	PM10	µg/m ³	Every 6 days	5	20/7/2016	2/8/2016	2.1	6.0	6.6	11.3
	Solid Particles	g/m ² /month	Continuous	1	22/7/2016	11/8/2016	0.3	0.3	0.3	0.3
29	PM10	µg/m ³	Every 6 days	5	20/7/2016	2/8/2016	0.8	6.9	7.0	12.9
	Solid Particles	g/m ² /month	Continuous	1	22/7/2016	11/8/2016	2.0	2.0	2.0	2.0
30	PM10	µg/m ³	Every 6 days	Continuous	31/7/2016	1/8/2016	0.0	5.5	5.7	14.4
	Solid Particles	g/m ² /month	Continuous	1	22/7/2016	11/8/2016	0.6	0.6	0.6	0.6
10	Conductivity	µS/cm	Special Frequency 1	0	-	-	-	-	-	-
	Nitrate	mg/L	Special Frequency 1	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Special Frequency 1	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Special Frequency 1	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Special Frequency 1	0	-	-	-	-	-	-
12	Conductivity	µS/cm	Special Frequency 1	0	-	-	-	-	-	-
	Nitrate	mg/L	Special Frequency 1	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Special Frequency 1	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Special Frequency 1	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Special Frequency 1	0	-	-	-	-	-	-
14	Conductivity	µS/cm	Special Frequency 1	0	-	-	-	-	-	-
	Nitrate	mg/L	Special Frequency 1	0	-	-	-	-	-	-

WERRIS CREEK COAL EPL – MONTHLY SUMMARY

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Measurements for the Month	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max Value
	Nitrogen (Total)	mg/L	Special Frequency 1	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Special Frequency 1	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Special Frequency 1	0	-	-	-	-	-	-
23	Conductivity	µS/cm	Special Frequency 2	0	-	-	-	-	-	-
	Nitrate	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Oil and Grease	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	pH	pH	Special Frequency 2	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Special Frequency 2	0	-	-	-	-	-	-
24	Total Suspended Solids	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Conductivity	µS/cm	Special Frequency 2	0	-	-	-	-	-	-
	Nitrate	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Oil and Grease	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	pH	pH	Special Frequency 2	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Special Frequency 2	0	-	-	-	-	-	-
25	Total Suspended Solids	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Conductivity	µS/cm	Special Frequency 2	0	-	-	-	-	-	-
	Nitrate	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Oil and Grease	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	pH	pH	Special Frequency 2	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Special Frequency 2	0	-	-	-	-	-	-

WERRIS CREEK COAL EPL – MONTHLY SUMMARY

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Measurements for the Month	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max Value
	Total Suspended Solids	mg/L	Special Frequency 2	0	-	-	-	-	-	-
26	Conductivity	µS/cm	Special Frequency 2	0	-	-	-	-	-	-
	Nitrate	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Oil and Grease	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	pH	pH	Special Frequency 2	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Total Suspended Solids	mg/L	Special Frequency 2	0	-	-	-	-	-	-

Table 2 - Pollutant Limits Apply

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of samples for the Month	Date Sampled	Date Obtained	Min Value	Max Value	100%ile Limit	Exceedance (Yes/No)
10	Total Suspended Solids	mg/L	Special Frequency 1	0	-	-	-	-	50*	No
	Oil and Grease	mg/L	Special Frequency 1	0	-	-	-	-	10	No
	pH	pH	Special Frequency 1	0	-	-	-	-	6.5-8.5	No
12	Total Suspended Solids	mg/L	Special Frequency 1	0	-	-	-	-	50*	No
	Oil and Grease	mg/L	Special Frequency 1	0	-	-	-	-	10	No
	pH	pH	Special Frequency 1	0	-	-	-	-	6.5-8.5	No
14	Total Suspended Solids	mg/L	Special Frequency 1	0	-	-	-	-	50*	No
	Oil and Grease	mg/L	Special Frequency 1	0	-	-	-	-	10	No
	pH	pH	Special Frequency 1	0	-	-	-	-	6.5-8.5	No

* Total Suspended Solids permitted to exceed 50mg/L if 5 day rainfall is greater than 39.2mm prior to discharge

WERRIS CREEK COAL EPL – MONTHLY SUMMARY
Table 3 – Monitoring (Quarterly & 6 monthly – no limits apply)

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Measurements for the Period	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max Value
16	Conductivity	µS/cm	Every 3 Months	0	-	-	-	-	-	-
	Nitrate	mg/L	Every 3 Months	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Every 3 Months	0	-	-	-	-	-	-
	Oil and Grease	mg/L	Every 3 Months	0	-	-	-	-	-	-
	pH	pH	Every 3 Months	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Every 3 Months	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Every 3 Months	0	-	-	-	-	-	-
	Total Suspended Solids	mg/L	Every 3 Months	0	-	-	-	-	-	-
27	Conductivity	µS/cm	Every 3 Months	0	-	-	-	-	-	-
	Nitrate	mg/L	Every 3 Months	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Every 3 Months	0	-	-	-	-	-	-
	Oil and Grease	mg/L	Every 3 Months	0	-	-	-	-	-	-
	pH	pH	Every 3 Months	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Every 3 Months	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Every 3 Months	0	-	-	-	-	-	-
	Total Suspended Solids	mg/L	Every 3 Months	0	-	-	-	-	-	-
17	Conductivity	µS/cm	Every 6 Months	0	-	-	-	-	-	-
	Nitrate	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	pH	pH	Every 6 Months	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Standing Water Level	Metres	Every 6 Months	0	-	-	-	-	-	-
18	Conductivity	µS/cm	Every 6 Months	0	-	-	-	-	-	-
	Nitrate	mg/L	Every 6 Months	0	-	-	-	-	-	-

WERRIS CREEK COAL EPL – MONTHLY SUMMARY

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Measurements for the Period	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max Value
	Nitrogen (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	pH	pH	Every 6 Months	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Standing Water Level	Metres	Every 6 Months	0	-	-	-	-	-	-
19	Conductivity	µS/cm	Every 6 Months	0	-	-	-	-	-	-
	Nitrate	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	pH	pH	Every 6 Months	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Standing Water Level	Metres	Every 6 Months	0	-	-	-	-	-	-
20	Conductivity	µS/cm	Every 6 Months	0	-	-	-	-	-	-
	Nitrate	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	pH	pH	Every 6 Months	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Standing Water Level	Metres	Every 6 Months	0	-	-	-	-	-	-
21	Conductivity	µS/cm	Every 6 Months	0	-	-	-	-	-	-
	Nitrate	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	pH	pH	Every 6 Months	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Standing Water Level	Metres	Every 6 Months	0	-	-	-	-	-	-
22	Conductivity	µS/cm	Every 6 Months	0	-	-	-	-	-	-
	Nitrate	mg/L	Every 6 Months	0	-	-	-	-	-	-

WERRIS CREEK COAL EPL – MONTHLY SUMMARY

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Measurements for the Period	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max Value
	Nitrogen (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	pH	pH	Every 6 Months	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Standing Water Level	Metres	Every 6 Months	0	-	-	-	-	-	-

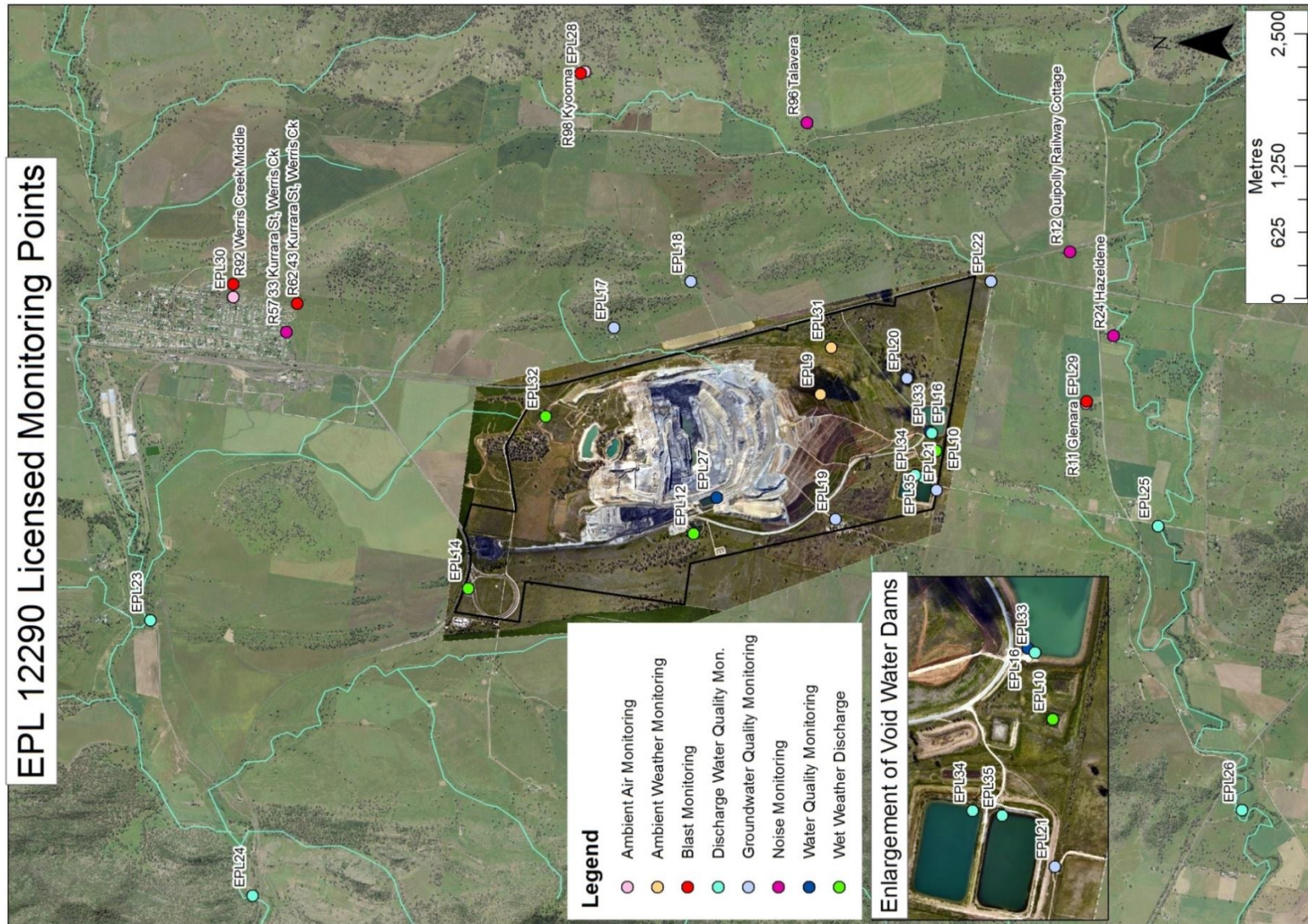
Table 4 – Monitoring (Noise – Limits Apply)

Location	Date	Measurement Period	Start Time	Measured levels – dB(A)		Limit(s)	Weather (inversion oC/100m, wind m/s & °)	Observations	(Potential) Non-compliance /breach	Date Obtained
				LA1, 1 Minute	LAeq, 15 Minute					
R24	29/07/2016	60 minutes	2.59 pm	N/A	39	Day 37	n/a 2.9,306	Traffic (39), birds (27), WCC (22)	No	5/8/2016
R12	29/07/2016	60 minutes	4.05 pm	N/A	47	Day 38	n/a 3.0,295	Traffic (47), birds (31), WCC (23)	No	5/8/2016
R96	29/07/2016	60 minutes	12:02 pm	N/A	34	Day 38	n/a 1.2,266	Birds (33), traffic (26), WCC (24)	No	5/8/2016
R24	29/07/2016	60 minutes	7:58 pm	28	43	Night 37	+9.3,2.4,333	Traffic (43), WCC (24)	No	5/8/2016
R12	29/07/2016	60 minutes	9:53 pm	<20	46	Night 38	+7.5,2.0,325	Traffic (46), WCC inaudible (<20)	No	5/8/2016
R96	29/07/2016	60 minutes	9:43 pm	26	29	Night 37	+8.0,2.1,323	Traffic (28), WCC (23)	No	5/8/2016

WERRIS CREEK COAL EPL – MONTHLY SUMMARY
Table 5 – 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 Obtained
R11	Blast Noise	dB (Lin Peak)	Every Blast	8	102.9	112.7	120.0	No	28/07/16
	Blast Vibration	mm/s	Every Blast	8	0.14	0.33	10.00	No	28/07/16
R98	Blast Noise	dB (Lin Peak)	Every Blast	8	104.7	109.3	120.0	No	28/07/16
	Blast Vibration	mm/s	Every Blast	8	0.75	1.46	10.00	No	28/07/16
R62	Blast Noise	dB (Lin Peak)	Every Blast	8	102.5	108.0	120.0	No	28/07/16
	Blast Vibration	mm/s	Every Blast	8	0.37	0.81	10.00	No	28/07/16
R92	Blast Noise	dB (Lin Peak)	Every Blast	8	100.1	104.8	120.0	No	28/07/16
	Blast Vibration	mm/s	Every Blast	8	0.25	0.64	10.00	No	28/07/16

WERRIS CREEK COAL EPL – MONTHLY SUMMARY



WERRIS CREEK COAL EPL – MONTHLY SUMMARY

Site Information

EPL No.: 12290

EPA Website Link: <http://www.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=31280&SYSUID=1&LICID=12290>

Licensee: Werris Creek Coal Pty Limited

Premises: Werris Creek Coal, 1435 Werris Creek Road, WERRIS CREEK NSW 2341

EPL Monitoring Points: See figure at end of document

Sampling Period: August 2016

Obtained Date: 5 September 2016

Publication Date: 16 September 2016

Table 1 - No Pollutant Limits Apply

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Measurements for the Month	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max Value
28	PM10	µg/m ³	Every 6 days	5	31/8/2016	2/9/2016	1.4	5.0	5.6	6.7
	Solid Particles	g/m ² /month	Continuous	1	19/8/2016	29/8/16	<0.1	<0.1	<0.1	<0.1
29	PM10	µg/m ³	Every 6 days	5	31/8/2016	1/9/2016	2.0	12.0	11.6	23.3
	Solid Particles	g/m ² /month	Continuous	1	19/8/2016	29/8/16	0.1	0.1	0.1	0.1
30	PM10	µg/m ³	Every 6 days	Continuous	31/8/2016	1/9/2016	3.0	7.8	7.2	14.7
	Solid Particles	g/m ² /month	Continuous	1	19/8/2016	29/8/16	1.2	1.2	1.2	1.2
10	Conductivity	µS/cm	Special Frequency 1	0	-	-	-	-	-	-
	Nitrate	mg/L	Special Frequency 1	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Special Frequency 1	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Special Frequency 1	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Special Frequency 1	0	-	-	-	-	-	-
12	Conductivity	µS/cm	Special Frequency 1	0	-	-	-	-	-	-
	Nitrate	mg/L	Special Frequency 1	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Special Frequency 1	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Special Frequency 1	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Special Frequency 1	0	-	-	-	-	-	-
14	Conductivity	µS/cm	Special Frequency 1	0	-	-	-	-	-	-
	Nitrate	mg/L	Special Frequency 1	0	-	-	-	-	-	-

WERRIS CREEK COAL EPL – MONTHLY SUMMARY

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Measurements for the Month	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max Value
	Nitrogen (Total)	mg/L	Special Frequency 1	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Special Frequency 1	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Special Frequency 1	0	-	-	-	-	-	-
23	Conductivity	µS/cm	Special Frequency 2	0	-	-	-	-	-	-
	Nitrate	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Oil and Grease	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	pH	pH	Special Frequency 2	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Total Suspended Solids	mg/L	Special Frequency 2	0	-	-	-	-	-	-
24	Conductivity	µS/cm	Special Frequency 2	0	-	-	-	-	-	-
	Nitrate	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Oil and Grease	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	pH	pH	Special Frequency 2	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Total Suspended Solids	mg/L	Special Frequency 2	0	-	-	-	-	-	-
25	Conductivity	µS/cm	Special Frequency 2	0	-	-	-	-	-	-
	Nitrate	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Oil and Grease	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	pH	pH	Special Frequency 2	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Special Frequency 2	0	-	-	-	-	-	-

WERRIS CREEK COAL EPL – MONTHLY SUMMARY

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Measurements for the Month	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max Value
	Total Suspended Solids	mg/L	Special Frequency 2	0	-	-	-	-	-	-
26	Conductivity	µS/cm	Special Frequency 2	0	-	-	-	-	-	-
	Nitrate	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Oil and Grease	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	pH	pH	Special Frequency 2	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Total Suspended Solids	mg/L	Special Frequency 2	0	-	-	-	-	-	-

Table 2 - Pollutant Limits Apply

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of samples for the Month	Date Sampled	Date Obtained	Min Value	Max Value	100%ile Limit	Exceedance (Yes/No)
10	Total Suspended Solids	mg/L	Special Frequency 1	0	-	-	-	-	50*	No
	Oil and Grease	mg/L	Special Frequency 1	0	-	-	-	-	10	No
	pH	pH	Special Frequency 1	0	-	-	-	-	6.5-8.5	No
12	Total Suspended Solids	mg/L	Special Frequency 1	0	-	-	-	-	50*	No
	Oil and Grease	mg/L	Special Frequency 1	0	-	-	-	-	10	No
	pH	pH	Special Frequency 1	0	-	-	-	-	6.5-8.5	No
14	Total Suspended Solids	mg/L	Special Frequency 1	0	-	-	-	-	50*	No
	Oil and Grease	mg/L	Special Frequency 1	0	-	-	-	-	10	No
	pH	pH	Special Frequency 1	0	-	-	-	-	6.5-8.5	No

* Total Suspended Solids permitted to exceed 50mg/L if 5 day rainfall is greater than 39.2mm prior to discharge

WERRIS CREEK COAL EPL – MONTHLY SUMMARY
Table 3 – Monitoring (Quarterly & 6 monthly – no limits apply)

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Measurements for the Period	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max Value
16	Conductivity	µS/cm	Every 3 Months	1	22/8/2016	28/8/2016	1200	1200	1200	1200
	Nitrate	mg/L	Every 3 Months	1	22/8/2016	28/8/2016	2.86	2.86	2.86	2.86
	Nitrogen (Total)	mg/L	Every 3 Months	1	22/8/2016	28/8/2016	3.5	3.5	3.5	3.5
	Oil and Grease	mg/L	Every 3 Months	1	22/8/2016	28/8/2016	<5	<5	<5	<5
	pH	pH	Every 3 Months	1	22/8/2016	28/8/2016	8.19	8.19	8.19	8.19
	Phosphorus (Total)	mg/L	Every 3 Months	1	22/8/2016	28/8/2016	0.08	0.08	0.08	0.08
	Reactive Phosphorus	mg/L	Every 3 Months	1	22/8/2016	28/8/2016	<0.01	<0.01	<0.01	<0.01
	Total Suspended Solids	mg/L	Every 3 Months	1	22/8/2016	28/8/2016	<5	<5	<5	<5
27	Conductivity	µS/cm	Every 3 Months	1	22/8/2016	28/8/2016	1110	1110	1110	1110
	Nitrate	mg/L	Every 3 Months	1	22/8/2016	28/8/2016	4.29	4.29	4.29	4.29
	Nitrogen (Total)	mg/L	Every 3 Months	1	22/8/2016	28/8/2016	6.0	6.0	6.0	6.0
	Oil and Grease	mg/L	Every 3 Months	1	22/8/2016	28/8/2016	<5	<5	<5	<5
	pH	pH	Every 3 Months	1	22/8/2016	28/8/2016	8.09	8.09	8.09	8.09
	Phosphorus (Total)	mg/L	Every 3 Months	1	22/8/2016	28/8/2016	<0.01	<0.01	<0.01	<0.01
	Reactive Phosphorus	mg/L	Every 3 Months	1	22/8/2016	28/8/2016	<0.01	<0.01	<0.01	<0.01
	Total Suspended Solids	mg/L	Every 3 Months	1	22/8/2016	28/8/2016	<5	<5	<5	<5
17	Conductivity	µS/cm	Every 6 Months	0	-	-	-	-	-	-
	Nitrate	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	pH	pH	Every 6 Months	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Standing Water Level	Metres	Every 6 Months	0	-	-	-	-	-	-
18	Conductivity	µS/cm	Every 6 Months	0	-	-	-	-	-	-
	Nitrate	mg/L	Every 6 Months	0	-	-	-	-	-	-

WERRIS CREEK COAL EPL – MONTHLY SUMMARY

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Measurements for the Period	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max Value
	Nitrogen (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	pH	pH	Every 6 Months	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Standing Water Level	Metres	Every 6 Months	0	-	-	-	-	-	-
19	Conductivity	µS/cm	Every 6 Months	0	-	-	-	-	-	-
	Nitrate	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	pH	pH	Every 6 Months	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Standing Water Level	Metres	Every 6 Months	0	-	-	-	-	-	-
20	Conductivity	µS/cm	Every 6 Months	0	-	-	-	-	-	-
	Nitrate	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	pH	pH	Every 6 Months	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Standing Water Level	Metres	Every 6 Months	0	-	-	-	-	-	-
21	Conductivity	µS/cm	Every 6 Months	0	-	-	-	-	-	-
	Nitrate	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	pH	pH	Every 6 Months	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Standing Water Level	Metres	Every 6 Months	0	-	-	-	-	-	-
22	Conductivity	µS/cm	Every 6 Months	0	-	-	-	-	-	-
	Nitrate	mg/L	Every 6 Months	0	-	-	-	-	-	-

WERRIS CREEK COAL EPL – MONTHLY SUMMARY

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Measurements for the Period	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max Value
	Nitrogen (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	pH	pH	Every 6 Months	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Standing Water Level	Metres	Every 6 Months	0	-	-	-	-	-	-

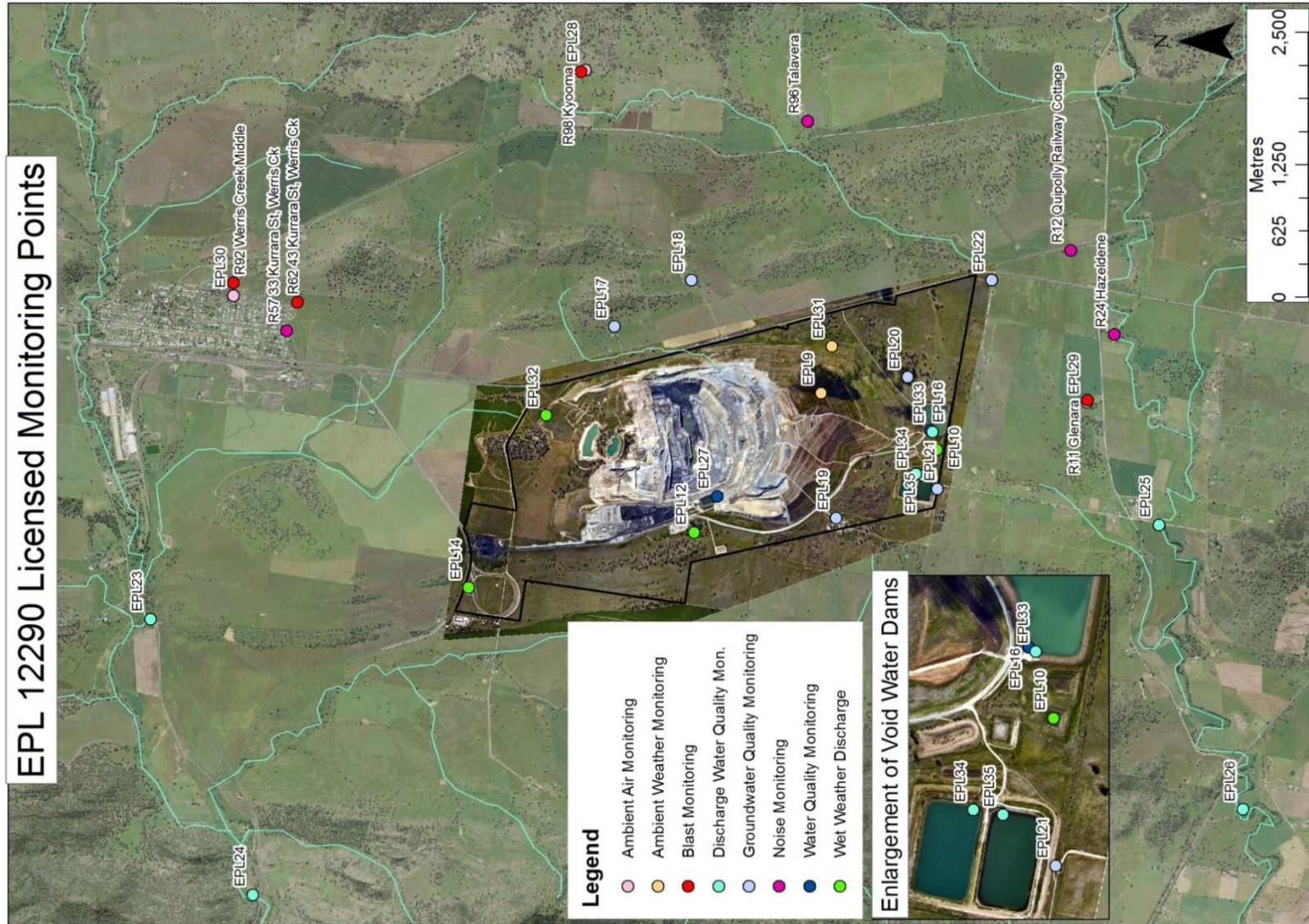
Table 4 – Monitoring (Noise – Limits Apply)

Location	Date	Measurement Period	Start Time	Measured levels – dB(A)		Limit(s)	Weather (inversion oC/100m, wind m/s & °)	Observations	(Potential) Non-compliance /breach	Date Obtained
				LA1, 1 Minute	LAeq, 15 Minute					
R24	30/08/2016	60 minutes	3:02 pm	N/A	34	Day 37	n/a 2.5,324	Birds (32), traffic (30), WCC inaudible (<20)	No	5/9/2016
R12	30/08/2016	60 minutes	4:31 pm	N/A	51	Day 38	n/a 1.4,323	Traffic (51), birds (28), WCC inaudible (<20)	No	5/9/2016
R96	30/08/2016	60 minutes	4:25 pm	N/A	37	Day 38	n/a 1.4,323	Birds (36), WCC (26) , traffic (25)	No	5/9/2016
R24	30/08/2016	60 minutes	9:04 pm	35	42	Night 37	+6.4 1.6,340	Traffic (42), WCC (29) , frogs (25)	No	5/9/2016
R12	30/08/2016	60 minutes	10:14 pm	28	45	Night 38	+7.2 2.4,350	Traffic (45), WCC (25) , frogs (23)	No	5/9/2016
R96	30/08/2016	60 minutes	9:50 pm	<20	28	Night 37	+6.7 2.1,336	Frogs (26), traffic (28), WCC inaudible (<20)	No	5/9/2016

WERRIS CREEK COAL EPL – MONTHLY SUMMARY
Table 5 – 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 Obtained
R11	Blast Noise	dB (Lin Peak)	Every Blast	9	106.9	111.3	120.0	No	1/9/2016
	Blast Vibration	mm/s	Every Blast	9	0.17	0.49	10.00	No	1/9/2016
R98	Blast Noise	dB (Lin Peak)	Every Blast	9	104.3	109.0	120.0	No	1/9/2016
	Blast Vibration	mm/s	Every Blast	9	0.79	1.86	10.00	No	1/9/2016
R62	Blast Noise	dB (Lin Peak)	Every Blast	9	101.3	107.9	120.0	No	1/9/2016
	Blast Vibration	mm/s	Every Blast	9	0.34	0.60	10.00	No	1/9/2016
R92	Blast Noise	dB (Lin Peak)	Every Blast	9	99.9	104.5	120.0	No	1/9/2016
	Blast Vibration	mm/s	Every Blast	9	0.22	0.37	10.00	No	1/9/2016

WERRIS CREEK COAL EPL – MONTHLY SUMMARY



WERRIS CREEK COAL EPL – MONTHLY SUMMARY

Site Information

EPL No.: 12290

EPA Website Link: <http://www.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=31280&SYSUID=1&LICID=12290>

Licensee: Werris Creek Coal Pty Limited

Premises: Werris Creek Coal, 1435 Werris Creek Road, WERRIS CREEK NSW 2341

EPL Monitoring Points: See figure at end of document

Sampling Period: September 2016

Obtained Date: 10/10/2016

Publication Date: 24/10/2016

Table 1 - No Pollutant Limits Apply

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Measurements for the Month	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max Value
28	PM10	µg/m ³	Every 6 days	5	20/9/2016	4/10/2016	4.8	6.3	5.7	8.5
	Solid Particles	g/m ² /month	Continuous	1	20/9/2016	27/9/2016	0.4	0.4	0.4	0.4
29	PM10	µg/m ³	Every 6 days	5	20/9/2016	4/10/2016	3.5	9.9	6.9	25.5
	Solid Particles	g/m ² /month	Continuous	1	20/9/2016	27/9/2016	1.2	1.2	1.2	1.2
30	PM10	µg/m ³	Every 6 days	Continuous	30/9/2016	1/10/2016	3.1	8.9	8.7	16.2
	Solid Particles	g/m ² /month	Continuous	1	20/9/2016	27/9/2016	0.5	0.5	0.5	0.5
10	Conductivity	µS/cm	Special Frequency 1	3	19/9/2016	30/9/2016	520	610	580	730
	Nitrate	mg/L	Special Frequency 1	3	19/9/2016	30/9/2016	<0.1	0.2	<0.1	0.2
	Nitrogen (Total)	mg/L	Special Frequency 1	3	19/9/2016	30/9/2016	0.9	1.2	1.0	1.6
	Phosphorus (Total)	mg/L	Special Frequency 1	3	19/9/2016	30/9/2016	0.13	0.21	0.16	0.35
	Reactive Phosphorus	mg/L	Special Frequency 1	3	19/9/2016	30/9/2016	0.11	0.17	0.18	0.23
12	Conductivity	µS/cm	Special Frequency 1	4	19/9/2016	30/9/2016	410	463	460	520
	Nitrate	mg/L	Special Frequency 1	4	19/9/2016	30/9/2016	2.1	2.5	2.5	3.0
	Nitrogen (Total)	mg/L	Special Frequency 1	4	19/9/2016	30/9/2016	3.4	3.7	3.8	4.0
	Phosphorus (Total)	mg/L	Special Frequency 1	4	19/9/2016	30/9/2016	0.05	0.09	0.09	0.15
	Reactive Phosphorus	mg/L	Special Frequency 1	4	19/9/2016	30/9/2016	0.03	0.04	0.04	0.06
14	Conductivity	µS/cm	Special Frequency 1	3	19/9/2016	30/9/2016	130	140	140	150
	Nitrate	mg/L	Special Frequency 1	3	19/9/2016	30/9/2016	0.1	0.2	0.2	0.4

WERRIS CREEK COAL EPL – MONTHLY SUMMARY

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Measurements for the Month	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max Value
	Nitrogen (Total)	mg/L	Special Frequency 1	3	19/9/2016	30/9/2016	1.4	1.4	1.4	1.4
	Phosphorus (Total)	mg/L	Special Frequency 1	3	19/9/2016	30/9/2016	0.39	0.45	0.48	0.49
	Reactive Phosphorus	mg/L	Special Frequency 1	3	19/9/2016	30/9/2016	0.23	0.31	0.32	0.37
23	Conductivity	µS/cm	Special Frequency 2	2	26/9/2016	5/10/2016	120	250	250	380
	Nitrate	mg/L	Special Frequency 2	2	26/9/2016	5/10/2016	0.2	0.2	0.2	0.2
	Nitrogen (Total)	mg/L	Special Frequency 2	2	26/9/2016	5/10/2016	0.6	1.4	1.4	2.2
	Oil and Grease	mg/L	Special Frequency 2	2	26/9/2016	5/10/2016	<5	<5	<5	<5
	pH	pH	Special Frequency 2	2	26/9/2016	5/10/2016	7.8	8.2	8.2	8.5
	Phosphorus (Total)	mg/L	Special Frequency 2	2	26/9/2016	5/10/2016	0.12	0.45	0.45	0.77
	Reactive Phosphorus	mg/L	Special Frequency 2	2	26/9/2016	5/10/2016	0.12	0.27	0.27	0.42
24	Total Suspended Solids	mg/L	Special Frequency 2	2	26/9/2016	5/10/2016	3	261	261	519
	Conductivity	µS/cm	Special Frequency 2	2	26/9/2016	5/10/2016	130	335	355	540
	Nitrate	mg/L	Special Frequency 2	2	26/9/2016	5/10/2016	0.3	1.1	1.1	1.9
	Nitrogen (Total)	mg/L	Special Frequency 2	2	26/9/2016	5/10/2016	0.8	2.2	2.2	3.6
	Oil and Grease	mg/L	Special Frequency 2	2	26/9/2016	5/10/2016	<5	<5	<5	<5
	pH	pH	Special Frequency 2	2	26/9/2016	5/10/2016	7.8	8.0	8.0	8.2
	Phosphorus (Total)	mg/L	Special Frequency 2	2	26/9/2016	5/10/2016	0.17	0.72	0.72	1.27
25	Reactive Phosphorus	mg/L	Special Frequency 2	2	26/9/2016	5/10/2016	0.18	0.56	0.56	0.94
	Total Suspended Solids	mg/L	Special Frequency 2	2	26/9/2016	5/10/2016	13	337	337	660
	Conductivity	µS/cm	Special Frequency 2	4	20/9/2016	29/9/2016	100	220	260	300
	Nitrate	mg/L	Special Frequency 2	4	20/9/2016	29/9/2016	0.1	0.2	0.2	0.2
	Nitrogen (Total)	mg/L	Special Frequency 2	4	20/9/2016	29/9/2016	1.2	1.7	1.5	2.4
	Oil and Grease	mg/L	Special Frequency 2	4	20/9/2016	29/9/2016	<5	<5	<5	<5
	pH	pH	Special Frequency 2	4	20/9/2016	29/9/2016	7.4	7.8	7.9	8.0
	Phosphorus (Total)	mg/L	Special Frequency 2	4	20/9/2016	29/9/2016	0.22	0.37	0.26	0.64
	Reactive Phosphorus	mg/L	Special Frequency 2	4	20/9/2016	29/9/2016	0.15	0.23	0.21	0.32

WERRIS CREEK COAL EPL – MONTHLY SUMMARY

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Measurements for the Month	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max Value
	Total Suspended Solids	mg/L	Special Frequency 2	4	20/9/2016	29/9/2016	16	206	269	333
26	Conductivity	µS/cm	Special Frequency 2	4	20/9/2016	29/9/2016	250	421	320	794
	Nitrate	mg/L	Special Frequency 2	4	20/9/2016	29/9/2016	0.03	0.1	0.1	0.2
	Nitrogen (Total)	mg/L	Special Frequency 2	4	20/9/2016	29/9/2016	0.5	2.3	1.2	6.3
	Oil and Grease	mg/L	Special Frequency 2	4	20/9/2016	29/9/2016	<5	7	7	7
	pH	pH	Special Frequency 2	4	20/9/2016	29/9/2016	7.5	7.7	7.7	7.9
	Phosphorus (Total)	mg/L	Special Frequency 2	4	20/9/2016	29/9/2016	0.18	0.51	0.19	1.48
	Reactive Phosphorus	mg/L	Special Frequency 2	4	20/9/2016	29/9/2016	0.13	0.17	0.15	0.23
	Total Suspended Solids	mg/L	Special Frequency 2	4	20/9/2016	29/9/2016	10	193	28	706

Table 2 - Pollutant Limits Apply

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of samples for the Month	Date Sampled	Date Obtained	Min Value	Max Value	100%ile Limit	Exceedance (Yes/No)
10	Total Suspended Solids	mg/L	Special Frequency 1	3	19/9/2016	30/9/2016	7	50	50*	No
	Oil and Grease	mg/L	Special Frequency 1	3	19/9/2016	30/9/2016	<5	<5	10	No
	pH	pH	Special Frequency 1	3	19/9/2016	30/9/2016	7.8	7.9	6.5-8.5	No
12	Total Suspended Solids	mg/L	Special Frequency 1	4	19/9/2016	30/9/2016	7	83	50*	No
	Oil and Grease	mg/L	Special Frequency 1	4	19/9/2016	30/9/2016	<5	<5	10	No
	pH	pH	Special Frequency 1	4	19/9/2016	30/9/2016	7.6	7.8	6.5-8.5	No
14	Total Suspended Solids	mg/L	Special Frequency 1	3	19/9/2016	30/9/2016	77	112	50*	No
	Oil and Grease	mg/L	Special Frequency 1	3	19/9/2016	30/9/2016	<5	<5	10	No
	pH	pH	Special Frequency 1	3	19/9/2016	30/9/2016	7.4	7.6	6.5-8.5	No

* Total Suspended Solids permitted to exceed 50mg/L if 5 day rainfall is greater than 39.2mm prior to discharge

WERRIS CREEK COAL EPL – MONTHLY SUMMARY
Table 3 – Monitoring (Quarterly & 6 monthly – no limits apply)

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Measurements for the Period	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max Value
16	Conductivity	µS/cm	Every 3 Months	0	-	-	-	-	-	-
	Nitrate	mg/L	Every 3 Months	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Every 3 Months	0	-	-	-	-	-	-
	Oil and Grease	mg/L	Every 3 Months	0	-	-	-	-	-	-
	pH	pH	Every 3 Months	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Every 3 Months	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Every 3 Months	0	-	-	-	-	-	-
	Total Suspended Solids	mg/L	Every 3 Months	0	-	-	-	-	-	-
27	Conductivity	µS/cm	Every 3 Months	0	-	-	-	-	-	-
	Nitrate	mg/L	Every 3 Months	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Every 3 Months	0	-	-	-	-	-	-
	Oil and Grease	mg/L	Every 3 Months	0	-	-	-	-	-	-
	pH	pH	Every 3 Months	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Every 3 Months	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Every 3 Months	0	-	-	-	-	-	-
	Total Suspended Solids	mg/L	Every 3 Months	0	-	-	-	-	-	-
17	Conductivity	µS/cm	Every 6 Months	1	13/9/2016	20/9/2016	Dry	Dry	Dry	Dry
	Nitrate	mg/L	Every 6 Months	1	13/9/2016	20/9/2016	Dry	Dry	Dry	Dry
	Nitrogen (Total)	mg/L	Every 6 Months	1	13/9/2016	20/9/2016	Dry	Dry	Dry	Dry
	pH	pH	Every 6 Months	1	13/9/2016	20/9/2016	Dry	Dry	Dry	Dry
	Phosphorus (Total)	mg/L	Every 6 Months	1	13/9/2016	20/9/2016	Dry	Dry	Dry	Dry
	Reactive Phosphorus	mg/L	Every 6 Months	1	13/9/2016	20/9/2016	Dry	Dry	Dry	Dry
	Standing Water Level	Metres	Every 6 Months	1	13/9/2016	20/9/2016	Dry	Dry	Dry	Dry
18	Conductivity	µS/cm	Every 6 Months	1	13/9/2016	20/9/2016	948	948	948	948
	Nitrate	mg/L	Every 6 Months	1	13/9/2016	20/9/2016	5.14	5.14	5.14	5.14

WERRIS CREEK COAL EPL – MONTHLY SUMMARY

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Measurements for the Period	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max Value
	Nitrogen (Total)	mg/L	Every 6 Months	1	13/9/2016	20/9/2016	5.6	5.6	5.6	5.6
	pH	pH	Every 6 Months	1	13/9/2016	20/9/2016	7.75	7.75	7.75	7.75
	Phosphorus (Total)	mg/L	Every 6 Months	1	13/9/2016	20/9/2016	0.08	0.08	0.08	0.08
	Reactive Phosphorus	mg/L	Every 6 Months	1	13/9/2016	20/9/2016	<0.01	<0.01	<0.01	<0.01
	Standing Water Level	Metres	Every 6 Months	1	13/9/2016	20/9/2016	40.8	40.8	40.8	40.8
19	Conductivity	µS/cm	Every 6 Months	1	13/9/2016	20/9/2016	2610	2610	2610	2610
	Nitrate	mg/L	Every 6 Months	1	13/9/2016	20/9/2016	15.8	15.8	15.8	15.8
	Nitrogen (Total)	mg/L	Every 6 Months	1	13/9/2016	20/9/2016	16.7	16.7	16.7	16.7
	pH	pH	Every 6 Months	1	13/9/2016	20/9/2016	7.27	7.27	7.27	7.27
	Phosphorus (Total)	mg/L	Every 6 Months	1	13/9/2016	20/9/2016	0.15	0.15	0.15	0.15
	Reactive Phosphorus	mg/L	Every 6 Months	1	13/9/2016	20/9/2016	0.14	0.14	0.14	0.14
	Standing Water Level	Metres	Every 6 Months	1	13/9/2016	20/9/2016	19.7	19.7	19.7	19.7
20	Conductivity	µS/cm	Every 6 Months	1	13/9/2016	20/9/2016	1010	1010	1010	1010
	Nitrate	mg/L	Every 6 Months	1	13/9/2016	20/9/2016	1.98	1.98	1.98	1.98
	Nitrogen (Total)	mg/L	Every 6 Months	1	13/9/2016	20/9/2016	2.4	2.4	2.4	2.4
	pH	pH	Every 6 Months	1	13/9/2016	20/9/2016	7.9	7.9	7.9	7.9
	Phosphorus (Total)	mg/L	Every 6 Months	1	13/9/2016	20/9/2016	0.07	0.07	0.07	0.07
	Reactive Phosphorus	mg/L	Every 6 Months	1	13/9/2016	20/9/2016	0.07	0.07	0.07	0.07
	Standing Water Level	Metres	Every 6 Months	1	13/9/2016	20/9/2016	15.6	15.6	15.6	15.6
21	Conductivity	µS/cm	Every 6 Months	1	13/9/2016	20/9/2016	2100	2100	2100	2100
	Nitrate	mg/L	Every 6 Months	1	13/9/2016	20/9/2016	1.08	1.08	1.08	1.08
	Nitrogen (Total)	mg/L	Every 6 Months	1	13/9/2016	20/9/2016	1.1	1.1	1.1	1.1
	pH	pH	Every 6 Months	1	13/9/2016	20/9/2016	7.45	7.45	7.45	7.45
	Phosphorus (Total)	mg/L	Every 6 Months	1	13/9/2016	20/9/2016	0.02	0.02	0.02	0.02
	Reactive Phosphorus	mg/L	Every 6 Months	1	13/9/2016	20/9/2016	<0.01	<0.01	<0.01	<0.01
	Standing Water Level	Metres	Every 6 Months	1	13/9/2016	20/9/2016	12.6	12.6	12.6	12.6
22	Conductivity	µS/cm	Every 6 Months	1	13/9/2016	20/9/2016	1910	1910	1910	1910
	Nitrate	mg/L	Every 6 Months	1	13/9/2016	20/9/2016	0.36	0.36	0.36	0.36

WERRIS CREEK COAL EPL – MONTHLY SUMMARY

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Measurements for the Period	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max Value
	Nitrogen (Total)	mg/L	Every 6 Months	1	13/9/2016	20/9/2016	6.1	6.1	6.1	6.1
	pH	pH	Every 6 Months	1	13/9/2016	20/9/2016	7.69	7.69	7.69	7.69
	Phosphorus (Total)	mg/L	Every 6 Months	1	13/9/2016	20/9/2016	6.58	6.58	6.58	6.58
	Reactive Phosphorus	mg/L	Every 6 Months	1	13/9/2016	20/9/2016	<0.01	<0.01	<0.01	<0.01
	Standing Water Level	Metres	Every 6 Months	1	13/9/2016	20/9/2016	15.9	15.9	15.9	15.9

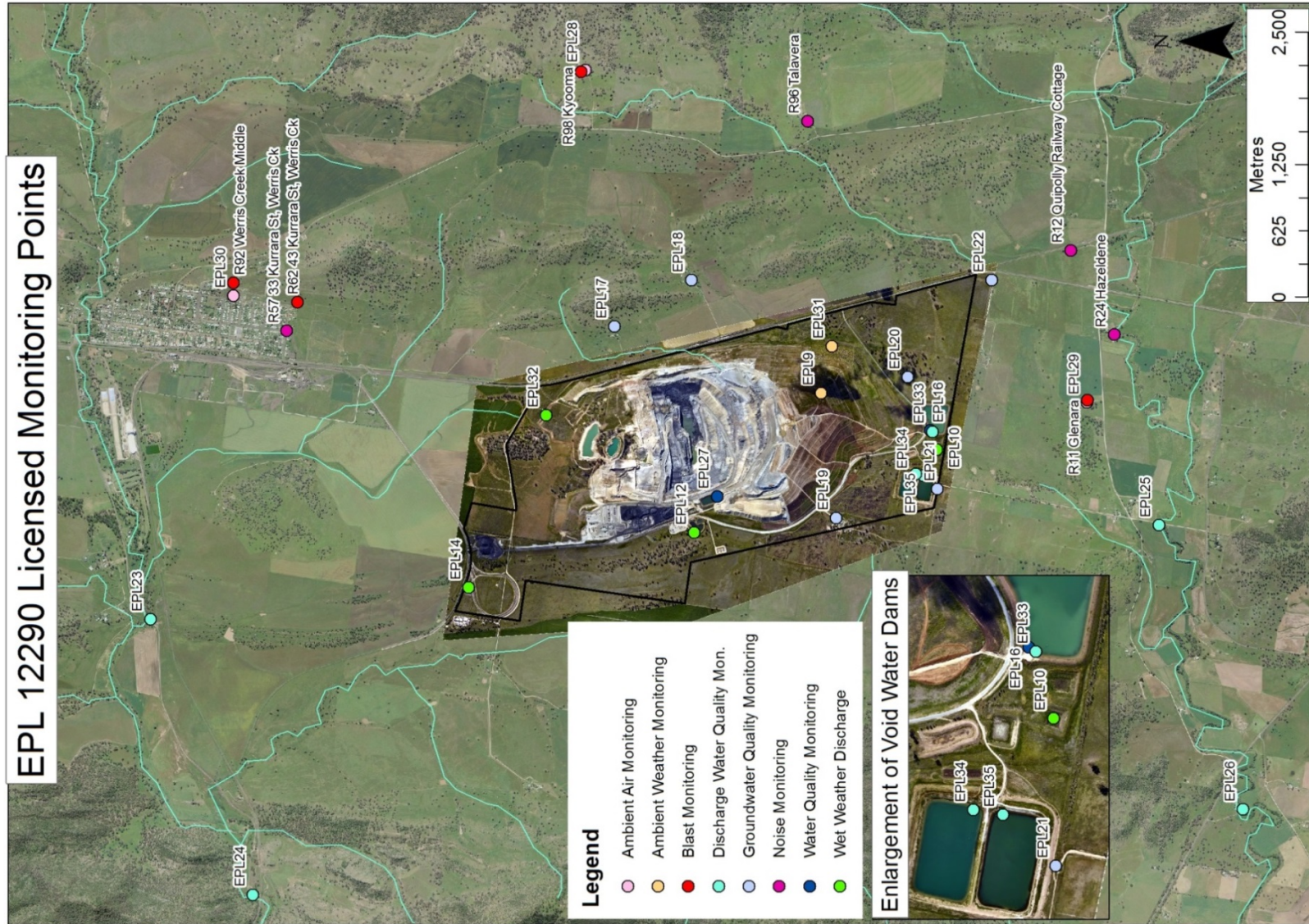
Table 4 – Monitoring (Noise – Limits Apply)

Location	Date	Measurement Period	Start Time	Measured levels – dB(A)		Limit(s)	Weather (inversion oC/100m, wind m/s & °)	Observations	(Potential) Non-compliance /breach	Date Obtained
				LA1, 1 Minute	LAeq, 15 Minute					
R24	28/9/2016	60 minutes	8:33 am	33	37	Day 37	n/a 0.9, 267	Birds (31), traffic (28), WCC inaudible (<20)	No	10/10/2016
R12	27/9/2016	60 minutes	2:35 pm	50	38	Day 38	n/a 9.1, 281	Wind (49), traffic (40), birds (32), WCC inaudible (<20)	No	10/10/2016
R96	28/9/2016	60 minutes	9:43 am	30	38	Day 38	n/a 0.9, 236	Birds (29), WCC (22) , traffic (22)	No	10/10/2016
R98	30/08/2016	60 minutes	8:36 am	35	38	Day 38	0.9 267	Birds (35), WCC (25)	No	10/10/2016
R24	27/9/2016	60 minutes	8:45 pm	<20	29	Night 37	+4.3 2.0,194	Traffic (29), WCC inaudible (<20)	No	10/10/2016
R12	27/9/2016	60 minutes	9:57 pm	<20	42	Night 38	+6.4 1.4,148	Traffic (42), WCC inaudible (<20)	No	10/10/2016
R96	27/9/2016	60 minutes	10:07 pm	22	26	Night 37	+6.8 1.3,154	Traffic (25), WCC (20)	No	10/10/2016
R98	30/08/2016	60 minutes	9:02 pm	44	39	Night 38	+4.9, 1.9, 183	WCC (39) , frogs (25)	Yes	10/10/2016

WERRIS CREEK COAL EPL – MONTHLY SUMMARY
Table 5 – 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 Obtained
R11	Blast Noise	dB (Lin Peak)	Every Blast	10	103.0	107.5	120.0	No	1/10/2016
	Blast Vibration	mm/s	Every Blast	10	0.11	0.23	10.00	No	1/10/2016
R98	Blast Noise	dB (Lin Peak)	Every Blast	10	102.1	108.5	120.0	No	1/10/2016
	Blast Vibration	mm/s	Every Blast	10	0.52	0.95	10.00	No	1/10/2016
R62	Blast Noise	dB (Lin Peak)	Every Blast	10	98.9	106.6	120.0	No	1/10/2016
	Blast Vibration	mm/s	Every Blast	10	0.32	1.01	10.00	No	1/10/2016
R92	Blast Noise	dB (Lin Peak)	Every Blast	10	99.3	105.1	120.0	No	1/10/2016
	Blast Vibration	mm/s	Every Blast	10	0.23	0.39	10.00	No	1/10/2016

WERRIS CREEK COAL EPL – MONTHLY SUMMARY



WERRIS CREEK COAL EPL – MONTHLY SUMMARY

Site Information

EPL No.: 12290

EPA Website Link: <http://www.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=31280&SYSUID=1&LICID=12290>

Licensee: Werris Creek Coal Pty Limited

Premises: Werris Creek Coal, 1435 Werris Creek Road, WERRIS CREEK NSW 2341

EPL Monitoring Points: See figure at end of document

Sampling Period: October 2016

Obtained Date: 11/11/2016

Publication Date: 30/11/2016

Table 1 - No Pollutant Limits Apply

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Measurements for the Month	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max Value
28	PM10	µg/m ³	Every 6 days	5	20/10/2016	27/10/2016	2.1	6.38	6.9	8.6
	Solid Particles	g/m ² /month	Continuous	1	21/10/2016	3/11/2016	0.5	0.5	0.5	0.5
29	PM10	µg/m ³	Every 6 days	5	20/10/2016	7/11/2016	4.2	9.7	7.9	15.1
	Solid Particles	g/m ² /month	Continuous	1	21/10/2016	3/11/2016	1.6	1.6	1.6	1.6
30	PM10	µg/m ³	Every 6 days	Continuous	31/10/2016	1/11/2016	4.3	8.9	8.6	14.9
	Solid Particles	g/m ² /month	Continuous	1	21/10/2016	3/11/2016	0.5	0.5	0.5	0.5
10	Conductivity	µS/cm	Special Frequency 1	0	-	-	-	-	-	-
	Nitrate	mg/L	Special Frequency 1	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Special Frequency 1	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Special Frequency 1	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Special Frequency 1	0	-	-	-	-	-	-
12	Conductivity	µS/cm	Special Frequency 1	0	-	-	-	-	-	-
	Nitrate	mg/L	Special Frequency 1	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Special Frequency 1	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Special Frequency 1	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Special Frequency 1	0	-	-	-	-	-	-
14	Conductivity	µS/cm	Special Frequency 1	0	-	-	-	-	-	-
	Nitrate	mg/L	Special Frequency 1	0	-	-	-	-	-	-

WERRIS CREEK COAL EPL – MONTHLY SUMMARY

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Measurements for the Month	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max Value
	Nitrogen (Total)	mg/L	Special Frequency 1	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Special Frequency 1	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Special Frequency 1	0	-	-	-	-	-	-
32	Conductivity	µS/cm	Special Frequency 1	0	-	-	-	-	-	-
	Nitrate	mg/L	Special Frequency 1	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Special Frequency 1	0	-	-	-	-	-	-
	Oil and Grease	mg/L	Special Frequency 1	0	-	-	-	-	-	-
	pH	pH	Special Frequency 1	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Special Frequency 1	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Special Frequency 1	0	-	-	-	-	-	-
23	Total Suspended Solids	mg/L	Special Frequency 1	0	-	-	-	-	-	-
	Conductivity	µS/cm	Special Frequency 2	0	-	-	-	-	-	-
	Nitrate	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Oil and Grease	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	pH	pH	Special Frequency 2	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Special Frequency 2	0	-	-	-	-	-	-
24	Total Suspended Solids	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Conductivity	µS/cm	Special Frequency 2	0	-	-	-	-	-	-
	Nitrate	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Oil and Grease	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	pH	pH	Special Frequency 2	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Special Frequency 2	0	-	-	-	-	-	-

WERRIS CREEK COAL EPL – MONTHLY SUMMARY

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Measurements for the Month	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max Value
	Total Suspended Solids	mg/L	Special Frequency 2	0	-	-	-	-	-	-
25	Conductivity	µS/cm	Special Frequency 2	0	-	-	-	-	-	-
	Nitrate	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Oil and Grease	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	pH	pH	Special Frequency 2	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Special Frequency 2	0	-	-	-	-	-	-
26	Total Suspended Solids	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Conductivity	µS/cm	Special Frequency 2	0	-	-	-	-	-	-
	Nitrate	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Oil and Grease	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	pH	pH	Special Frequency 2	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Total Suspended Solids	mg/L	Special Frequency 2	0	-	-	-	-	-	-

Table 2 - Pollutant Limits Apply

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of samples for the Month	Date Sampled	Date Obtained	Min Value	Max Value	100%ile Limit	Exceedance (Yes/No)
10	Total Suspended Solids	mg/L	Special Frequency 1	0	-	-	-	-	50*	No
	Oil and Grease	mg/L	Special Frequency 1	0	-	-	-	-	10	No

WERRIS CREEK COAL EPL – MONTHLY SUMMARY

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of samples for the Month	Date Sampled	Date Obtained	Min Value	Max Value	100%ile Limit	Exceedance (Yes/No)
	pH	pH	Special Frequency 1	0	-	-	-	-	6.5-8.5	No
12	Total Suspended Solids	mg/L	Special Frequency 1	0	-	-	-	-	50*	No
	Oil and Grease	mg/L	Special Frequency 1	0	-	-	-	-	10	No
	pH	pH	Special Frequency 1	0	-	-	-	-	6.5-8.5	No
14	Total Suspended Solids	mg/L	Special Frequency 1	0	-	-	-	-	50*	No
	Oil and Grease	mg/L	Special Frequency 1	0	-	-	-	-	10	No
	pH	pH	Special Frequency 1	0	-	-	-	-	6.5-8.5	No
32	Total Suspended Solids	mg/L	Special Frequency 1	0	-	-	-	-	50*	No
	Oil and Grease	mg/L	Special Frequency 1	0	-	-	-	-	10	No
	pH	pH	Special Frequency 1	0	-	-	-	-	6.5-8.5	No

* Total Suspended Solids permitted to exceed 50mg/L if 5 day rainfall is greater than 39.2mm prior to discharge

Table 3 – Monitoring (Quarterly & 6 monthly – no limits apply)

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Measurements for the Period	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max Value
16	Conductivity	µS/cm	Every 3 Months	0	-	-	-	-	-	-
	Nitrate	mg/L	Every 3 Months	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Every 3 Months	0	-	-	-	-	-	-
	Oil and Grease	mg/L	Every 3 Months	0	-	-	-	-	-	-
	pH	pH	Every 3 Months	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Every 3 Months	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Every 3 Months	0	-	-	-	-	-	-
	Total Suspended Solids	mg/L	Every 3 Months	0	-	-	-	-	-	-

WERRIS CREEK COAL EPL – MONTHLY SUMMARY

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Measurements for the Period	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max Value
27	Conductivity	µS/cm	Every 3 Months	0	-	-	-	-	-	-
	Nitrate	mg/L	Every 3 Months	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Every 3 Months	0	-	-	-	-	-	-
	Oil and Grease	mg/L	Every 3 Months	0	-	-	-	-	-	-
	pH	pH	Every 3 Months	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Every 3 Months	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Every 3 Months	0	-	-	-	-	-	-
	Total Suspended Solids	mg/L	Every 3 Months	0	-	-	-	-	-	-
17	Conductivity	µS/cm	Every 6 Months	0	-	-	-	-	-	-
	Nitrate	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	pH	pH	Every 6 Months	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Standing Water Level	Metres	Every 6 Months	0	-	-	-	-	-	-
18	Conductivity	µS/cm	Every 6 Months	0	-	-	-	-	-	-
	Nitrate	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	pH	pH	Every 6 Months	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Standing Water Level	Metres	Every 6 Months	0	-	-	-	-	-	-
19	Conductivity	µS/cm	Every 6 Months	0	-	-	-	-	-	-
	Nitrate	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	pH	pH	Every 6 Months	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-

WERRIS CREEK COAL EPL – MONTHLY SUMMARY

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Measurements for the Period	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max Value
	Reactive Phosphorus	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Standing Water Level	Metres	Every 6 Months	0	-	-	-	-	-	-
20	Conductivity	µS/cm	Every 6 Months	0	-	-	-	-	-	-
	Nitrate	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	pH	pH	Every 6 Months	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Standing Water Level	Metres	Every 6 Months	0	-	-	-	-	-	-
21	Conductivity	µS/cm	Every 6 Months	0	-	-	-	-	-	-
	Nitrate	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	pH	pH	Every 6 Months	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Standing Water Level	Metres	Every 6 Months	0	-	-	-	-	-	-
22	Conductivity	µS/cm	Every 6 Months	0	-	-	-	-	-	-
	Nitrate	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	pH	pH	Every 6 Months	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Standing Water Level	Metres	Every 6 Months	0	-	-	-	-	-	-

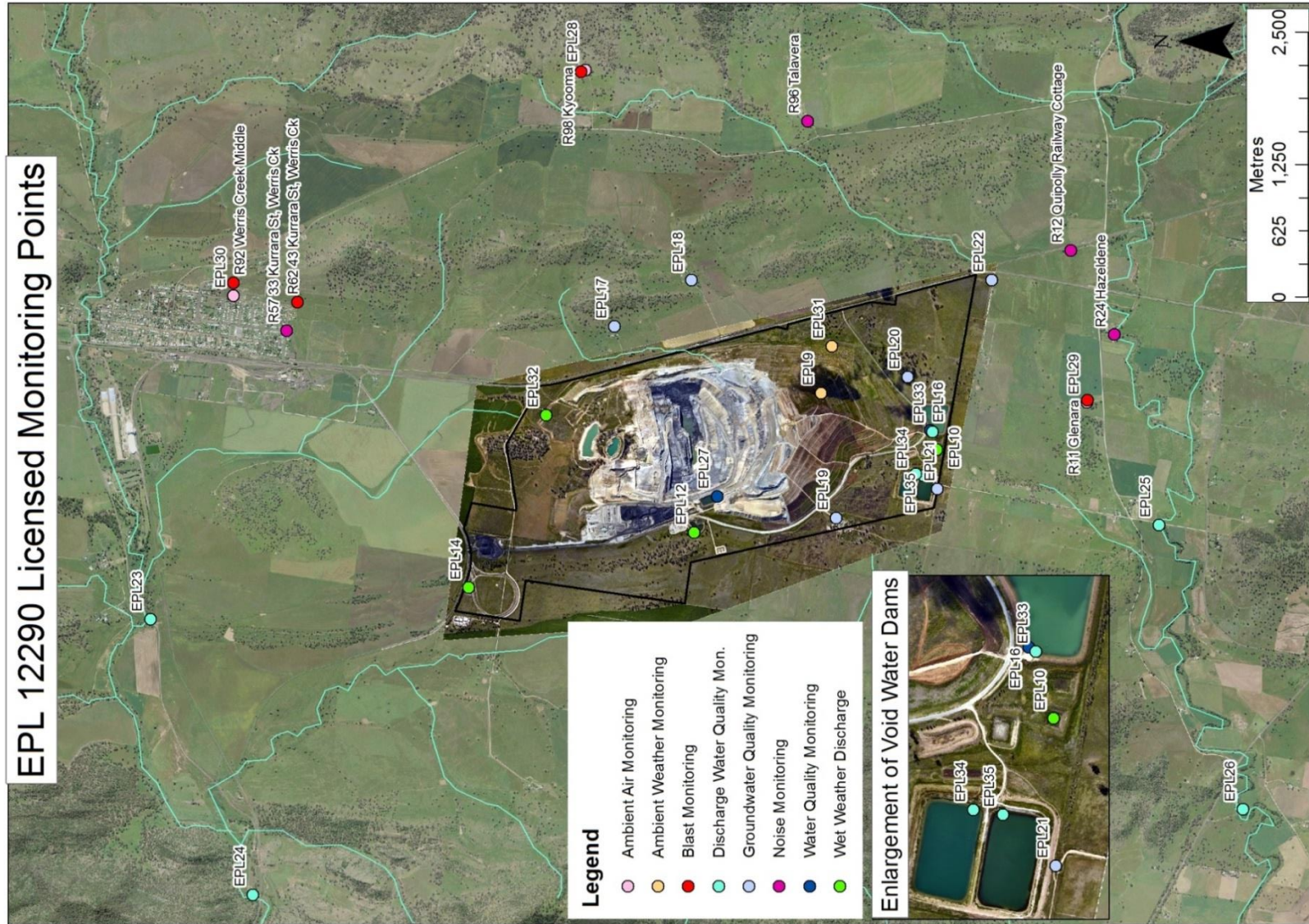
WERRIS CREEK COAL EPL – MONTHLY SUMMARY
Table 4 – Monitoring (Noise – Limits Apply)

Location	Date	Measurement Period	Start Time	Measured levels – dB(A)		Limit(s)	Weather (inversion oC/100m, wind m/s & °)	Observations	(Potential) Non-compliance /breach	Date Obtained
				LA1, 1 Minute	LAeq, 15 Minute					
R24	14/10/2016	60 minutes	9:43 am	N/A	40	Day 37	n/a 2.2,165	Birds & insects (38), traffic (35), WCC inaudible (<20)	No	11/11/2016
R12	14/10/2016	60 minutes	10:47 am	N/A	35	Day 38	n/a 2.7,156	Traffic (34), birds (28), WCC inaudible (<20)	No	11/11/2016
R96	14/10/2016	60 minutes	9:38 am	N/A	37	Day 38	n/a 2.2,155	Birds (36), traffic (30), WCC (25)	No	11/11/2016
R98	14/10/2016	60 minutes	8:32 am	N/A	48	Day 40	n/a 2.0,177	Birds (45), traffic (45), WCC inaudible (<20)	No	11/11/2016
R24	13/10/2016	60 minutes	7:40 pm	<20	39	Night 37	+0.6 5.6,136	Traffic (39), birds (28), WCC inaudible (<20)	No	11/11/2016
R12	13/10/2016	60 minutes	11:00 pm	<20	41	Night 38	+6.0 2.6,163	Traffic (41), cattle (30), WCC inaudible (<20)	No	11/11/2016
R96	13/10/2016	60 minutes	9:32 pm	<20	24	Night 37	+3.3 3.0,159	Frogs (22), traffic (20), WCC inaudible (<20)	No	11/11/2016
R98	13/10/2016	60 minutes	8:25 pm	<20	32	Night 40	+0.6 4.9,137	Traffic (30), frogs (28), WCC inaudible (<20)	No	11/11/2016

WERRIS CREEK COAL EPL – MONTHLY SUMMARY
Table 5 – 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 Obtained
R11	Blast Noise	dB (Lin Peak)	Every Blast	8	100.6	105.3	120.0	No	1/11/2016
	Blast Vibration	mm/s	Every Blast	8	0.14	0.22	10.0	No	1/11/2016
R98	Blast Noise	dB (Lin Peak)	Every Blast	8	104.7	112.2	120.0	No	1/11/2016
	Blast Vibration	mm/s	Every Blast	8	0.65	1.45	10.0	No	1/11/2016
R62	Blast Noise	dB (Lin Peak)	Every Blast	8	103.4	110.5	120.0	No	1/11/2016
	Blast Vibration	mm/s	Every Blast	8	0.41	0.92	10.0	No	1/11/2016
R92	Blast Noise	dB (Lin Peak)	Every Blast	8	101.4	109.5	120.0	No	1/11/2016
	Blast Vibration	mm/s	Every Blast	8	0.29	0.78	10.0	No	1/11/2016

WERRIS CREEK COAL EPL – MONTHLY SUMMARY



WERRIS CREEK COAL EPL – MONTHLY SUMMARY

Site Information

EPL No.: 12290

EPA Website Link: <http://www.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=31280&SYSUID=1&LICID=12290>

Licensee: Werris Creek Coal Pty Limited

Premises: Werris Creek Coal, 1435 Werris Creek Road, WERRIS CREEK NSW 2341

EPL Monitoring Points: See figure at end of document

Sampling Period: November 2016

Obtained Date: 9/12/2016

Publication Date: 16/12/2016

Table 1 - No Pollutant Limits Apply

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Measurements for the Month	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max Value
28	PM10	µg/m ³	Every 6 days	5	19/11/2016	30/11/2016	9.6	12.7	11.6	17.6
	Solid Particles	g/m ² /month	Continuous	1	22/11/2016	29/11/2016	0.8	0.8	0.8	0.8
29	PM10	µg/m ³	Every 6 days	5	19/11/2016	30/11/2016	12.8	22.8	19.5	41.1
	Solid Particles	g/m ² /month	Continuous	1	22/11/2016	29/11/2016	1.2	1.2	1.2	1.2
30	PM10	µg/m ³	Continuous	Continuous	30/11/2016	1/12/2016	6.8	13.9	12.9	23.8
	Solid Particles	g/m ² /month	Continuous	1	22/11/2016	29/11/2016	0.7	0.7	0.7	0.7
10	Conductivity	µS/cm	Special Frequency 1	0	-	-	-	-	-	-
	Nitrate	mg/L	Special Frequency 1	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Special Frequency 1	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Special Frequency 1	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Special Frequency 1	0	-	-	-	-	-	-
12	Conductivity	µS/cm	Special Frequency 1	0	-	-	-	-	-	-
	Nitrate	mg/L	Special Frequency 1	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Special Frequency 1	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Special Frequency 1	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Special Frequency 1	0	-	-	-	-	-	-
14	Conductivity	µS/cm	Special Frequency 1	0	-	-	-	-	-	-
	Nitrate	mg/L	Special Frequency 1	0	-	-	-	-	-	-

WERRIS CREEK COAL EPL – MONTHLY SUMMARY

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Measurements for the Month	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max Value
	Nitrogen (Total)	mg/L	Special Frequency 1	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Special Frequency 1	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Special Frequency 1	0	-	-	-	-	-	-
32	Conductivity	µS/cm	Special Frequency 1	0	-	-	-	-	-	-
	Nitrate	mg/L	Special Frequency 1	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Special Frequency 1	0	-	-	-	-	-	-
	Oil and Grease	mg/L	Special Frequency 1	0	-	-	-	-	-	-
	pH	pH	Special Frequency 1	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Special Frequency 1	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Special Frequency 1	0	-	-	-	-	-	-
23	Total Suspended Solids	mg/L	Special Frequency 1	0	-	-	-	-	-	-
	Conductivity	µS/cm	Special Frequency 2	0	-	-	-	-	-	-
	Nitrate	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Oil and Grease	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	pH	pH	Special Frequency 2	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Special Frequency 2	0	-	-	-	-	-	-
24	Total Suspended Solids	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Conductivity	µS/cm	Special Frequency 2	0	-	-	-	-	-	-
	Nitrate	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Oil and Grease	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	pH	pH	Special Frequency 2	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Special Frequency 2	0	-	-	-	-	-	-

WERRIS CREEK COAL EPL – MONTHLY SUMMARY

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Measurements for the Month	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max Value
	Total Suspended Solids	mg/L	Special Frequency 2	0	-	-	-	-	-	-
25	Conductivity	µS/cm	Special Frequency 2	0	-	-	-	-	-	-
	Nitrate	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Oil and Grease	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	pH	pH	Special Frequency 2	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Special Frequency 2	0	-	-	-	-	-	-
26	Total Suspended Solids	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Conductivity	µS/cm	Special Frequency 2	0	-	-	-	-	-	-
	Nitrate	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Oil and Grease	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	pH	pH	Special Frequency 2	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Special Frequency 2	0	-	-	-	-	-	-
26	Total Suspended Solids	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Conductivity	µS/cm	Special Frequency 2	0	-	-	-	-	-	-
	Nitrate	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Oil and Grease	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	pH	pH	Special Frequency 2	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Special Frequency 2	0	-	-	-	-	-	-

Table 2 - Pollutant Limits Apply

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of samples for the Month	Date Sampled	Date Obtained	Min Value	Max Value	100%ile Limit	Exceedance (Yes/No)
10	Total Suspended Solids	mg/L	Special Frequency 1	0	-	-	-	-	50*	No
	Oil and Grease	mg/L	Special Frequency 1	0	-	-	-	-	10	No

WERRIS CREEK COAL EPL – MONTHLY SUMMARY

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of samples for the Month	Date Sampled	Date Obtained	Min Value	Max Value	100%ile Limit	Exceedance (Yes/No)
	pH	pH	Special Frequency 1	0	-	-	-	-	6.5-8.5	No
12	Total Suspended Solids	mg/L	Special Frequency 1	0	-	-	-	-	50*	No
	Oil and Grease	mg/L	Special Frequency 1	0	-	-	-	-	10	No
	pH	pH	Special Frequency 1	0	-	-	-	-	6.5-8.5	No
14	Total Suspended Solids	mg/L	Special Frequency 1	0	-	-	-	-	50*	No
	Oil and Grease	mg/L	Special Frequency 1	0	-	-	-	-	10	No
	pH	pH	Special Frequency 1	0	-	-	-	-	6.5-8.5	No
32	Total Suspended Solids	mg/L	Special Frequency 1	0	-	-	-	-	50*	No
	Oil and Grease	mg/L	Special Frequency 1	0	-	-	-	-	10	No
	pH	pH	Special Frequency 1	0	-	-	-	-	6.5-8.5	No

* Total Suspended Solids permitted to exceed 50mg/L if 5 day rainfall is greater than 39.2mm prior to discharge

Table 3 – Monitoring (Quarterly & 6 monthly – no limits apply)

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Measurements for the Period	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max Value
16	Conductivity	µS/cm	Every 3 Months	1	3/11/2016	11/11/2016	1130	1130	1130	1130
	Nitrate	mg/L	Every 3 Months	1	3/11/2016	11/11/2016	2.01	2.01	2.01	2.01
	Nitrogen (Total)	mg/L	Every 3 Months	1	3/11/2016	11/11/2016	2.5	2.5	2.5	2.5
	Oil and Grease	mg/L	Every 3 Months	1	3/11/2016	11/11/2016	<5	<5	<5	<5
	pH	pH	Every 3 Months	1	3/11/2016	11/11/2016	8.32	8.32	8.32	8.32
	Phosphorus (Total)	mg/L	Every 3 Months	1	3/11/2016	11/11/2016	0.02	0.02	0.02	0.02
	Reactive Phosphorus	mg/L	Every 3 Months	1	3/11/2016	11/11/2016	<0.01	<0.01	<0.01	<0.01
	Total Suspended Solids	mg/L	Every 3 Months	1	3/11/2016	11/11/2016	<5	<5	<5	<5

WERRIS CREEK COAL EPL – MONTHLY SUMMARY

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Measurements for the Period	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max Value
27	Conductivity	µS/cm	Every 3 Months	1	3/11/2016	11/11/2016	950	950	950	950
	Nitrate	mg/L	Every 3 Months	1	3/11/2016	11/11/2016	2.85	2.85	2.85	2.85
	Nitrogen (Total)	mg/L	Every 3 Months	1	3/11/2016	11/11/2016	3.5	3.5	3.5	3.5
	Oil and Grease	mg/L	Every 3 Months	1	3/11/2016	11/11/2016	<5	<5	<5	<5
	pH	pH	Every 3 Months	1	3/11/2016	11/11/2016	8.24	8.24	8.24	8.24
	Phosphorus (Total)	mg/L	Every 3 Months	1	3/11/2016	11/11/2016	<0.01	<0.01	<0.01	<0.01
	Reactive Phosphorus	mg/L	Every 3 Months	1	3/11/2016	11/11/2016	<0.01	<0.01	<0.01	<0.01
	Total Suspended Solids	mg/L	Every 3 Months	1	3/11/2016	11/11/2016	<5	<5	<5	<5
17	Conductivity	µS/cm	Every 6 Months	0	-	-	-	-	-	-
	Nitrate	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	pH	pH	Every 6 Months	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Standing Water Level	Metres	Every 6 Months	0	-	-	-	-	-	-
18	Conductivity	µS/cm	Every 6 Months	0	-	-	-	-	-	-
	Nitrate	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	pH	pH	Every 6 Months	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Standing Water Level	Metres	Every 6 Months	0	-	-	-	-	-	-
19	Conductivity	µS/cm	Every 6 Months	0	-	-	-	-	-	-
	Nitrate	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	pH	pH	Every 6 Months	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-

WERRIS CREEK COAL EPL – MONTHLY SUMMARY

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Measurements for the Period	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max Value
	Reactive Phosphorus	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Standing Water Level	Metres	Every 6 Months	0	-	-	-	-	-	-
20	Conductivity	µS/cm	Every 6 Months	0	-	-	-	-	-	-
	Nitrate	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	pH	pH	Every 6 Months	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Standing Water Level	Metres	Every 6 Months	0	-	-	-	-	-	-
21	Conductivity	µS/cm	Every 6 Months	0	-	-	-	-	-	-
	Nitrate	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	pH	pH	Every 6 Months	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Standing Water Level	Metres	Every 6 Months	0	-	-	-	-	-	-
22	Conductivity	µS/cm	Every 6 Months	0	-	-	-	-	-	-
	Nitrate	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	pH	pH	Every 6 Months	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Standing Water Level	Metres	Every 6 Months	0	-	-	-	-	-	-

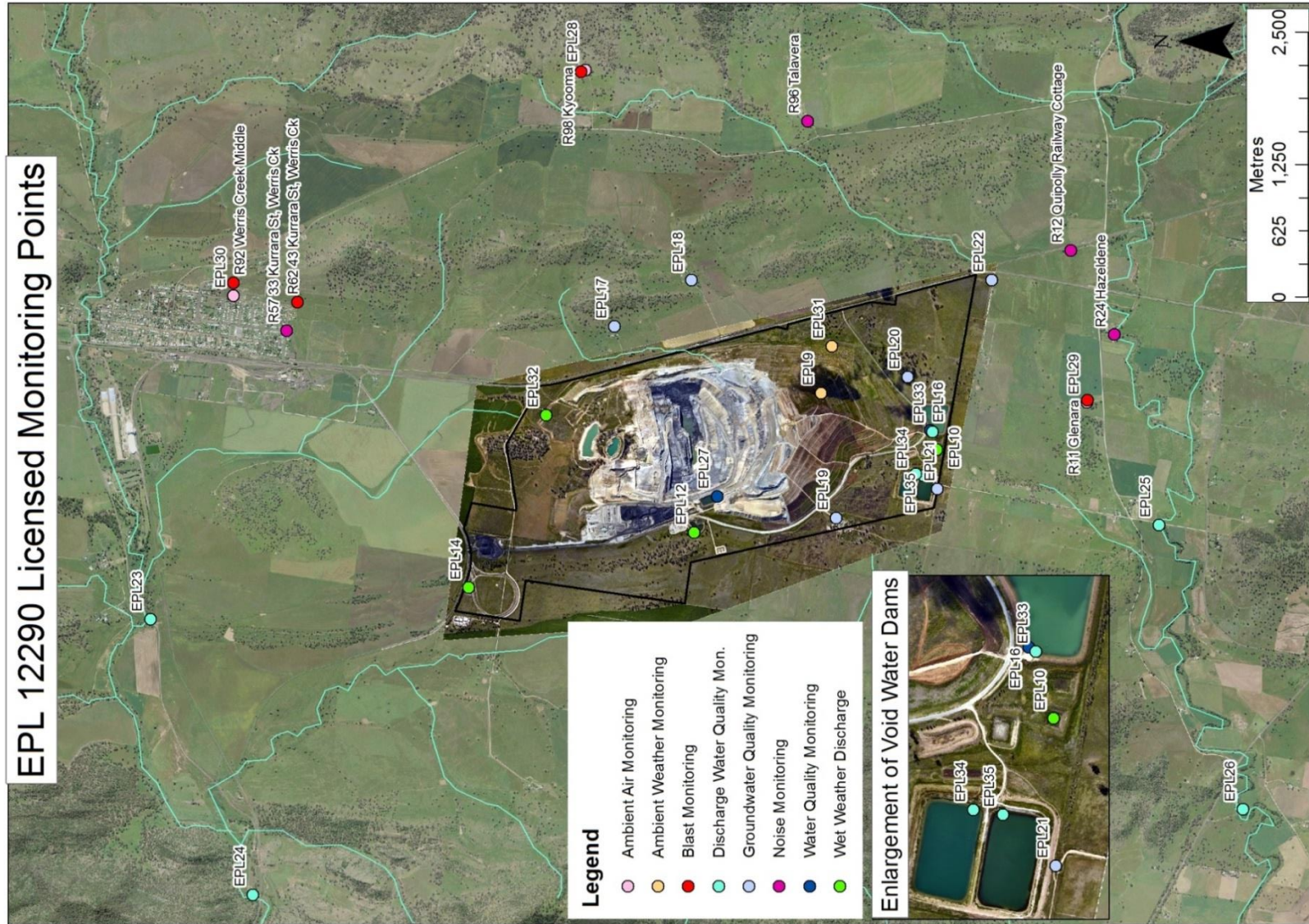
WERRIS CREEK COAL EPL – MONTHLY SUMMARY
Table 4 – Monitoring (Noise – Limits Apply)

Location	Date	Measurement Period	Start Time	Measured levels – dB(A)		Limit(s)	Weather (inversion oC/100m, wind m/s & °)	Observations	(Potential) Non-compliance /breach	Date Obtained
				LA1, 1 Minute	LAeq, 15 Minute					
R24	21/11/2016	60 minutes	3:15 pm	N/A	46	Day 37	n/a 2.7,144	Birds (46), traffic (33), WCC inaudible (<20)	No	09/12/2016
R12	21/11/2016	60 minutes	4:24 pm	N/A	45	Day 38	n/a 2.7,140	Rail work (45), traffic (33), birds (25), WCC inaudible (<20)	No	09/12/2016
R96	21/11/2016	60 minutes	4:06 pm	N/A	37	Day 38	n/a 2.2,159	Birds (37), WCC inaudible (<20)	No	09/12/2016
R98	21/11/2016	60 minutes	2:58 pm	N/A	40	Day 40	n/a 3.2,139	Birds (40), wind (28), WCC inaudible (<20)	No	09/12/2016
R24	21/11/2016	60 minutes	8:49 pm	27	40	Night 37	+4.0 1.6,73	Traffic (39), insects (30), WCC (25)	No	09/12/2016
R12	21/11/2016	60 minutes	9:56 pm	<20	41	Night 38	+7.1 1.4,39	Insects (40), traffic (35), WCC inaudible (<20)	No	09/12/2016
R96	21/11/2016	60 minutes	9:41 pm	<20	41	Night 37	+6.8 1.0,53	Frogs & insects (41), WCC inaudible (<20)	No	09/12/2016
R98	21/11/2016	60 minutes	8:29 pm	<20	49	Night 40	+2.8 2.0,86	Frogs & insects (49), WCC inaudible (<20)	No	09/12/2016

WERRIS CREEK COAL EPL – MONTHLY SUMMARY
Table 5 – 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 Obtained
R11	Blast Noise	dB (Lin Peak)	Every Blast	13	101.0	118.2	120.0	No	1/12/2016
	Blast Vibration	mm/s	Every Blast	13	0.14	0.31	10.0	No	1/12/2016
R98	Blast Noise	dB (Lin Peak)	Every Blast	13	103.1	109.3	120.0	No	1/12/2016
	Blast Vibration	mm/s	Every Blast	13	0.59	1.14	10.0	No	1/12/2016
R62	Blast Noise	dB (Lin Peak)	Every Blast	13	100.5	106.0	120.0	No	1/12/2016
	Blast Vibration	mm/s	Every Blast	13	0.25	0.45	10.0	No	1/12/2016
R92	Blast Noise	dB (Lin Peak)	Every Blast	13	98.5	104.5	120.0	No	1/12/2016
	Blast Vibration	mm/s	Every Blast	13	0.22	0.46	10.0	No	1/12/2016

WERRIS CREEK COAL EPL – MONTHLY SUMMARY



WERRIS CREEK COAL EPL – MONTHLY SUMMARY

Site Information

EPL No.: 12290

EPA Website Link: <http://www.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=31280&SYSUID=1&LICID=12290>

Licensee: Werris Creek Coal Pty Limited

Premises: Werris Creek Coal, 1435 Werris Creek Road, WERRIS CREEK NSW 2341

EPL Monitoring Points: See figure at end of document

Sampling Period: December 2016

Obtained Date: 11/01/2017

Publication Date: 25/01/2017

Table 1 - No Pollutant Limits Apply

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Measurements for the Month	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max Value
28	PM10	µg/m ³	Every 6 days	5	25/12/2016	10/1/2017	3.6	11.6	12.2	16.7
	Solid Particles	g/m ² /month	Continuous	1	22/12/2016	6/1/2017	0.8	0.8	0.8	0.8
29	PM10	µg/m ³	Every 6 days	5	25/12/2016	10/1/2017	7.5	20.5	20.9	35.6
	Solid Particles	g/m ² /month	Continuous	1	22/12/2016	6/1/2017	1.6	1.6	1.6	1.6
30	PM10	µg/m ³	Continuous	Continuous	31/12/2016	1/1/2017	8.8	14.9	14.5	22.8
	Solid Particles	g/m ² /month	Continuous	1	22/12/2016	6/1/2017	0.6	0.6	0.6	0.6
10	Conductivity	µS/cm	Special Frequency 1	0	-	-	-	-	-	-
	Nitrate	mg/L	Special Frequency 1	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Special Frequency 1	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Special Frequency 1	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Special Frequency 1	0	-	-	-	-	-	-
12	Conductivity	µS/cm	Special Frequency 1	0	-	-	-	-	-	-
	Nitrate	mg/L	Special Frequency 1	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Special Frequency 1	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Special Frequency 1	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Special Frequency 1	0	-	-	-	-	-	-
14	Conductivity	µS/cm	Special Frequency 1	0	-	-	-	-	-	-
	Nitrate	mg/L	Special Frequency 1	0	-	-	-	-	-	-

WERRIS CREEK COAL EPL – MONTHLY SUMMARY

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Measurements for the Month	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max Value
	Nitrogen (Total)	mg/L	Special Frequency 1	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Special Frequency 1	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Special Frequency 1	0	-	-	-	-	-	-
32	Conductivity	µS/cm	Special Frequency 1	0	-	-	-	-	-	-
	Nitrate	mg/L	Special Frequency 1	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Special Frequency 1	0	-	-	-	-	-	-
	Oil and Grease	mg/L	Special Frequency 1	0	-	-	-	-	-	-
	pH	pH	Special Frequency 1	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Special Frequency 1	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Special Frequency 1	0	-	-	-	-	-	-
23	Total Suspended Solids	mg/L	Special Frequency 1	0	-	-	-	-	-	-
	Conductivity	µS/cm	Special Frequency 2	0	-	-	-	-	-	-
	Nitrate	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Oil and Grease	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	pH	pH	Special Frequency 2	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Special Frequency 2	0	-	-	-	-	-	-
24	Total Suspended Solids	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Conductivity	µS/cm	Special Frequency 2	0	-	-	-	-	-	-
	Nitrate	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Oil and Grease	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	pH	pH	Special Frequency 2	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Special Frequency 2	0	-	-	-	-	-	-
24	Reactive Phosphorus	mg/L	Special Frequency 2	0	-	-	-	-	-	-

WERRIS CREEK COAL EPL – MONTHLY SUMMARY

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Measurements for the Month	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max Value
	Total Suspended Solids	mg/L	Special Frequency 2	0	-	-	-	-	-	-
25	Conductivity	µS/cm	Special Frequency 2	0	-	-	-	-	-	-
	Nitrate	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Oil and Grease	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	pH	pH	Special Frequency 2	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Special Frequency 2	0	-	-	-	-	-	-
26	Total Suspended Solids	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Conductivity	µS/cm	Special Frequency 2	0	-	-	-	-	-	-
	Nitrate	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Oil and Grease	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	pH	pH	Special Frequency 2	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Special Frequency 2	0	-	-	-	-	-	-
	Total Suspended Solids	mg/L	Special Frequency 2	0	-	-	-	-	-	-

Table 2 - Pollutant Limits Apply

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of samples for the Month	Date Sampled	Date Obtained	Min Value	Max Value	100%ile Limit	Exceedance (Yes/No)
10	Total Suspended Solids	mg/L	Special Frequency 1	0	-	-	-	-	50*	No
	Oil and Grease	mg/L	Special Frequency 1	0	-	-	-	-	10	No

WERRIS CREEK COAL EPL – MONTHLY SUMMARY

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of samples for the Month	Date Sampled	Date Obtained	Min Value	Max Value	100%ile Limit	Exceedance (Yes/No)
	pH	pH	Special Frequency 1	0	-	-	-	-	6.5-8.5	No
12	Total Suspended Solids	mg/L	Special Frequency 1	0	-	-	-	-	50*	No
	Oil and Grease	mg/L	Special Frequency 1	0	-	-	-	-	10	No
	pH	pH	Special Frequency 1	0	-	-	-	-	6.5-8.5	No
14	Total Suspended Solids	mg/L	Special Frequency 1	0	-	-	-	-	50*	No
	Oil and Grease	mg/L	Special Frequency 1	0	-	-	-	-	10	No
	pH	pH	Special Frequency 1	0	-	-	-	-	6.5-8.5	No
32	Total Suspended Solids	mg/L	Special Frequency 1	0	-	-	-	-	50*	No
	Oil and Grease	mg/L	Special Frequency 1	0	-	-	-	-	10	No
	pH	pH	Special Frequency 1	0	-	-	-	-	6.5-8.5	No

* Total Suspended Solids permitted to exceed 50mg/L if 5 day rainfall is greater than 39.2mm prior to discharge

Table 3 – Monitoring (Quarterly & 6 monthly – no limits apply)

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Measurements for the Period	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max Value
16	Conductivity	µS/cm	Every 3 Months	0	-	-	-	-	-	-
	Nitrate	mg/L	Every 3 Months	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Every 3 Months	0	-	-	-	-	-	-
	Oil and Grease	mg/L	Every 3 Months	0	-	-	-	-	-	-
	pH	pH	Every 3 Months	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Every 3 Months	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Every 3 Months	0	-	-	-	-	-	-
27	Total Suspended Solids	mg/L	Every 3 Months	0	-	-	-	-	-	-
	Conductivity	µS/cm	Every 3 Months	0	-	-	-	-	-	-
	Nitrate	mg/L	Every 3 Months	0	-	-	-	-	-	-

WERRIS CREEK COAL EPL – MONTHLY SUMMARY

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Measurements for the Period	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max Value
	Nitrogen (Total)	mg/L	Every 3 Months	0	-	-	-	-	-	-
	Oil and Grease	mg/L	Every 3 Months	0	-	-	-	-	-	-
	pH	pH	Every 3 Months	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Every 3 Months	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Every 3 Months	0	-	-	-	-	-	-
	Total Suspended Solids	mg/L	Every 3 Months	0	-	-	-	-	-	-
17	Conductivity	µS/cm	Every 6 Months	0	-	-	-	-	-	-
	Nitrate	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	pH	pH	Every 6 Months	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Standing Water Level	Metres	Every 6 Months	0	-	-	-	-	-	-
18	Conductivity	µS/cm	Every 6 Months	0	-	-	-	-	-	-
	Nitrate	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	pH	pH	Every 6 Months	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Standing Water Level	Metres	Every 6 Months	0	-	-	-	-	-	-
19	Conductivity	µS/cm	Every 6 Months	0	-	-	-	-	-	-
	Nitrate	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	pH	pH	Every 6 Months	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Standing Water Level	Metres	Every 6 Months	0	-	-	-	-	-	-

WERRIS CREEK COAL EPL – MONTHLY SUMMARY

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Measurements for the Period	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max Value
20	Conductivity	µS/cm	Every 6 Months	0	-	-	-	-	-	-
	Nitrate	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	pH	pH	Every 6 Months	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Standing Water Level	Metres	Every 6 Months	0	-	-	-	-	-	-
21	Conductivity	µS/cm	Every 6 Months	0	-	-	-	-	-	-
	Nitrate	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	pH	pH	Every 6 Months	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Standing Water Level	Metres	Every 6 Months	0	-	-	-	-	-	-
22	Conductivity	µS/cm	Every 6 Months	0	-	-	-	-	-	-
	Nitrate	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	pH	pH	Every 6 Months	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Reactive Phosphorus	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Standing Water Level	Metres	Every 6 Months	0	-	-	-	-	-	-

WERRIS CREEK COAL EPL – MONTHLY SUMMARY
Table 4 – Monitoring (Noise – Limits Apply)

Location	Date	Measurement Period	Start Time	Measured levels – dB(A)		Limit(s)	Weather (inversion oC/100m, wind m/s & °)	Observations	(Potential) Non-compliance /breach	Date Obtained
				LA1, 1 Minute	LAeq, 15 Minute					
R24	19/12/2016	60 minutes	2:40 pm	N/A	35	Day 37	n/a 1.9,205	Birds & insects (34), traffic (29), WCC inaudible (<20)	No	11/1/2017
R12	19/12/2016	60 minutes	3:46 pm	N/A	37	Day 38	n/a 2.3,193	Traffic (37), birds & insects (25), WCC inaudible (<20)	No	11/1/2017
R96	19/12/2016	60 minutes	4:47 pm	N/A	38	Day 38	n/a 3.5,227	Birds & insects (38), WCC inaudible (<20)	No	11/1/2017
R98	19/12/2016	60 minutes	3:40 pm	N/A	35	Day 40	n/a 2.3,193	Birds & insects (35), WCC inaudible (<20)	No	11/1/2017
R24	19/12/2016	60 minutes	8:03 pm	<20	39	Night 37	+1.8 3.1,130	Traffic (38), birds & insects (33), WCC inaudible (<20)	No	11/1/2017
R12	19/12/2016	60 minutes	9:09 pm	<20	33	Night 38	+1.6 2.1,101	Birds & insects (31), traffic (28), WCC inaudible (<20)	No	11/1/2017
R96	19/12/2016	60 minutes	11:07 pm	<20	50	Night 37	+2.1 2.0,53	Insects (50), WCC inaudible (<20)	No	11/1/2017
R98	19/12/2016	60 minutes	9:59 pm	<20	52	Night 40	+0.8 1.2,40	Insects (52), WCC inaudible (<20)	No	11/1/2017

WERRIS CREEK COAL EPL – MONTHLY SUMMARY
Table 5 – 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 Obtained
R11	Blast Noise	dB (Lin Peak)	Every Blast	11	100.6	110.3	120.0	No	1/1/2017
	Blast Vibration	mm/s	Every Blast	11	0.17	0.34	10.0	No	1/1/2017
R98	Blast Noise	dB (Lin Peak)	Every Blast	11	101.6	109.6	120.0	No	1/1/2017
	Blast Vibration	mm/s	Every Blast	11	0.68	1.39	10.0	No	1/1/2017
R62	Blast Noise	dB (Lin Peak)	Every Blast	11	99.9	108.4	120.0	No	1/1/2017
	Blast Vibration	mm/s	Every Blast	11	0.33	0.67	10.0	No	1/1/2017
R92	Blast Noise	dB (Lin Peak)	Every Blast	11	98.6	106.4	120.0	No	1/1/2017
	Blast Vibration	mm/s	Every Blast	11	0.19	0.37	10.0	No	1/1/2017

WERRIS CREEK COAL EPL – MONTHLY SUMMARY

