

**WERRIS CREEK COAL EPL – MONTHLY SUMMARY**
**Site Information**
**EPL No.:** 12290

**EPA Website Link:** <http://www.environment.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 2012

**Publication Date:** 21<sup>st</sup> June 2012

**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
1	PM <sub>10</sub>	µg/m <sup>3</sup>	Every 6 days	4	27/04/12	1/05/12	7.5	15.3	17.4	19.0
	Solid Particles	g/m <sup>2</sup> /month	Continuous	1	17/04/12	26/04/12	0.6	0.6	0.6	0.6
28	PM <sub>10</sub>	µg/m <sup>3</sup>	Every 6 days	4	27/04/12	1/05/12	12.2	22.6	24.8	28.6
	Solid Particles	g/m <sup>2</sup> /month	Continuous	1	17/04/12	26/04/12	1.1	1.1	1.1	1.1
29	PM <sub>10</sub>	µg/m <sup>3</sup>	Every 6 days	4	27/04/12	1/05/12	8.2	15.1	16.0	20.0
	Solid Particles	g/m <sup>2</sup> /month	Continuous	1	17/04/12	26/04/12	1.5	1.5	1.5	1.5
30	PM <sub>10</sub>	µg/m <sup>3</sup>	Every 6 days	4	27/04/12	1/05/12	6.2	15.9	17.2	23.0
	Solid Particles	g/m <sup>2</sup> /month	Continuous	1	17/04/12	26/04/12	2.5	2.5	2.5	2.5
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	-	-	-	-	-	-



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	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	-	-	-	-	-	-

**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

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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
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

**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	-	-	-	-	-	-
	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	-	-	-	-	-	-
17	Reactive Phosphorus	mg/L	Every 3 Months	0	-	-	-	-	-	-
	Total Suspended Solids	mg/L	Every 3 Months	0	-	-	-	-	-	-
	Conductivity	µS/cm	Every 6 Months	0	-	-	-	-	-	-
	Nitrate	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
17	pH	pH	Every 6 Months	0	-	-	-	-	-	-
	Phosphorus (Total)	mg/L	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
	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	-	-	-	-	-	-
	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	-	-	-	-	-	-

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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
	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	Start Time	Measurement Period	Measured levels – dB(A)		Limit(s)	Weather (inversion oC/100m, wind m/s & °)	Observations	(Potential) Non-compliance /breach
				LA1, 1 Minute	LAeq, 15 Minute				
R96	26 <sup>th</sup> April 2012	4:58 pm	60 minutes	n/a	36	Day 38	n/a/1.6/105	Birds (34), traffic (30), WCC (28)	No
	26 <sup>th</sup> April 2012	9:25 pm	60 minutes	32	27	Night 37	+7.5/0.3/189	WCC (25), traffic (22)	No
R12	26 <sup>th</sup> April 2012	5:00 pm	60 minutes	n/a	45	Day 38	n/a/1.6/105	Traffic (45), birds (32), WCC inaudible	No
	26 <sup>th</sup> April 2012	11:33 pm	60 minutes	36	42	Night 38	+6.0/1.3/101	Traffic (42), WCC (30), insects (25)	No
R7	26 <sup>th</sup> April 2012	2:12 pm	60 minutes	n/a	39	Day 37	n/a/3.3/127	Birds (35), traffic (34), domestic noise (32), WCC inaudible	No
	26 <sup>th</sup> April 2012	8:14 pm	60 minutes	38	35	Night 37	+7.0/0.2/166	WCC (33), domestic noise (30), traffic (25)	No
R9	26 <sup>th</sup> April 2012	2:12 pm	60 minutes	n/a	37	Day 37	n/a/3.3/127	Birds (35), traffic (31), WCC (<25)	No
	26 <sup>th</sup> April 2012	8:18 pm	60 minutes	37	32	Night 37	+7.0/0.2/166	WCC (31), insects (24)	No
R24	26 <sup>th</sup> April 2012	3:25 pm	60 minutes	n/a	38	Day 37	n/a/2.2/125	Traffic (37), birds (32), WCC inaudible	No
	26 <sup>th</sup> April 2012	9:25 pm	60 minutes	36	39	Night 37	+7.5/0.3/189	Traffic (38), WCC (32), insects (25)	No
R22	26 <sup>th</sup> April 2012	2:12 pm	60 minutes	n/a	37	Day 36	n/a/3.3/127	Birds (35), traffic (31), WCC (<25)	No
	26 <sup>th</sup> April 2012	8:18 pm	60 minutes	37	32	Night 36	+7.0/0.2/166	WCC (31), insects (24)	No

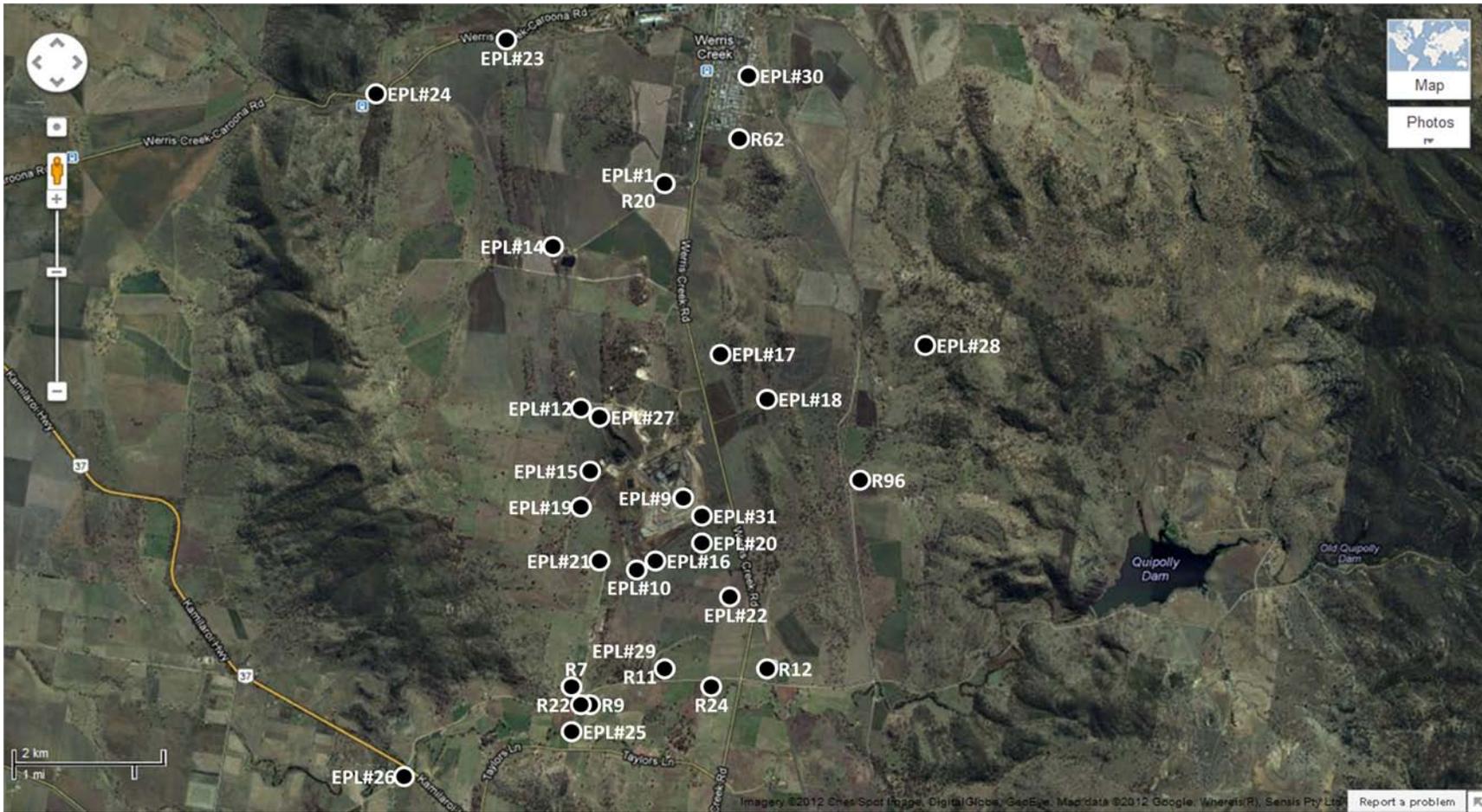


**WERRIS CREEK COAL EPL – MONTHLY SUMMARY**

**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
R20	Blast Noise	dB (Lin Peak)	Every Blast	5	99.8	102.4	120	No
	Blast Vibration	mm/s	Every Blast	5	0.91	1.17	10	No
R96	Blast Noise	dB (Lin Peak)	Every Blast	5	113.4	113.4	120	No
	Blast Vibration	mm/s	Every Blast	5	0.10	0.10	10	No
R11	Blast Noise	dB (Lin Peak)	Every Blast	5	108.9	108.9	120	No
	Blast Vibration	mm/s	Every Blast	5	0.18	0.18	10	No
R62	Blast Noise	dB (Lin Peak)	Every Blast	5	99.0	105.1	120	No
	Blast Vibration	mm/s	Every Blast	5	0.31	0.31	10	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.environment.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 2012

**Publication Date:** 22<sup>nd</sup> June 2012

**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
1	PM10	µg/m <sup>3</sup>	Every 6 days	5	29/05/12	04/06/12	12.6	17.9	17.1	26.7
	Solid Particles	g/m <sup>2</sup> /month	Continuous	1	17/05/12	24/05/12	0.4	0.4	0.4	0.4
28	PM10	µg/m <sup>3</sup>	Every 6 days	5	29/05/12	04/06/12	8.4	19.9	12.8	48.8
	Solid Particles	g/m <sup>2</sup> /month	Continuous	1	17/05/12	24/05/12	1.0	1.0	1.0	1.0
29	PM10	µg/m <sup>3</sup>	Every 6 days	5	29/05/12	04/06/12	11.8	14.2	14.0	17.7
	Solid Particles	g/m <sup>2</sup> /month	Continuous	1	17/05/12	24/05/12	2.1	2.1	2.1	2.1
30	PM10	µg/m <sup>3</sup>	Every 6 days	5	29/05/12	04/06/12	11.4	15.3	12.4	25.8
	Solid Particles	g/m <sup>2</sup> /month	Continuous	1	17/05/12	24/05/12	1.2	1.2	1.2	1.2
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	-	-	-	-	-	-

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	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	-	-	-	-	-	-

**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

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	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

**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	10/05/12	22/05/12	916	916	916	916
	Nitrate	mg/L	Every 3 Months	1	10/05/12	22/05/12	8.12	8.12	8.12	8.12
	Nitrogen (Total)	mg/L	Every 3 Months	1	10/05/12	22/05/12	9.4	9.4	9.4	9.4
	Oil and Grease	mg/L	Every 3 Months	1	10/05/12	22/05/12	<5	<5	<5	<5
	pH	pH	Every 3 Months	1	10/05/12	22/05/12	8.23	8.23	8.23	8.23
	Phosphorus (Total)	mg/L	Every 3 Months	1	10/05/12	22/05/12	0.06	0.06	0.06	0.06
	Reactive Phosphorus	mg/L	Every 3 Months	1	10/05/12	22/05/12	<0.01	<0.01	<0.01	<0.01
	Total Suspended Solids	mg/L	Every 3 Months	1	10/05/12	22/05/12	22	22	22	22
27	Conductivity	µS/cm	Every 3 Months	1	10/05/12	22/05/12	918	918	918	918
	Nitrate	mg/L	Every 3 Months	1	10/05/12	22/05/12	1.59	1.59	1.59	1.59
	Nitrogen (Total)	mg/L	Every 3 Months	1	10/05/12	22/05/12	2.7	2.7	2.7	2.7
	Oil and Grease	mg/L	Every 3 Months	1	10/05/12	22/05/12	<5	<5	<5	<5
	pH	pH	Every 3 Months	1	10/05/12	22/05/12	8.13	8.13	8.13	8.13
	Phosphorus (Total)	mg/L	Every 3 Months	1	10/05/12	22/05/12	0.06	0.06	0.06	0.06
	Reactive Phosphorus	mg/L	Every 3 Months	1	10/05/12	22/05/12	0.05	0.05	0.05	0.05
	Total Suspended Solids	mg/L	Every 3 Months	1	10/05/12	22/05/12	20	20	20	20
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	-	-	-	-	-	-

**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	-	-	-	-	-	-
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	-	-	-	-	-	-
	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	-	-	-	-	-	-

**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
	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	-	-	-	-	-	-

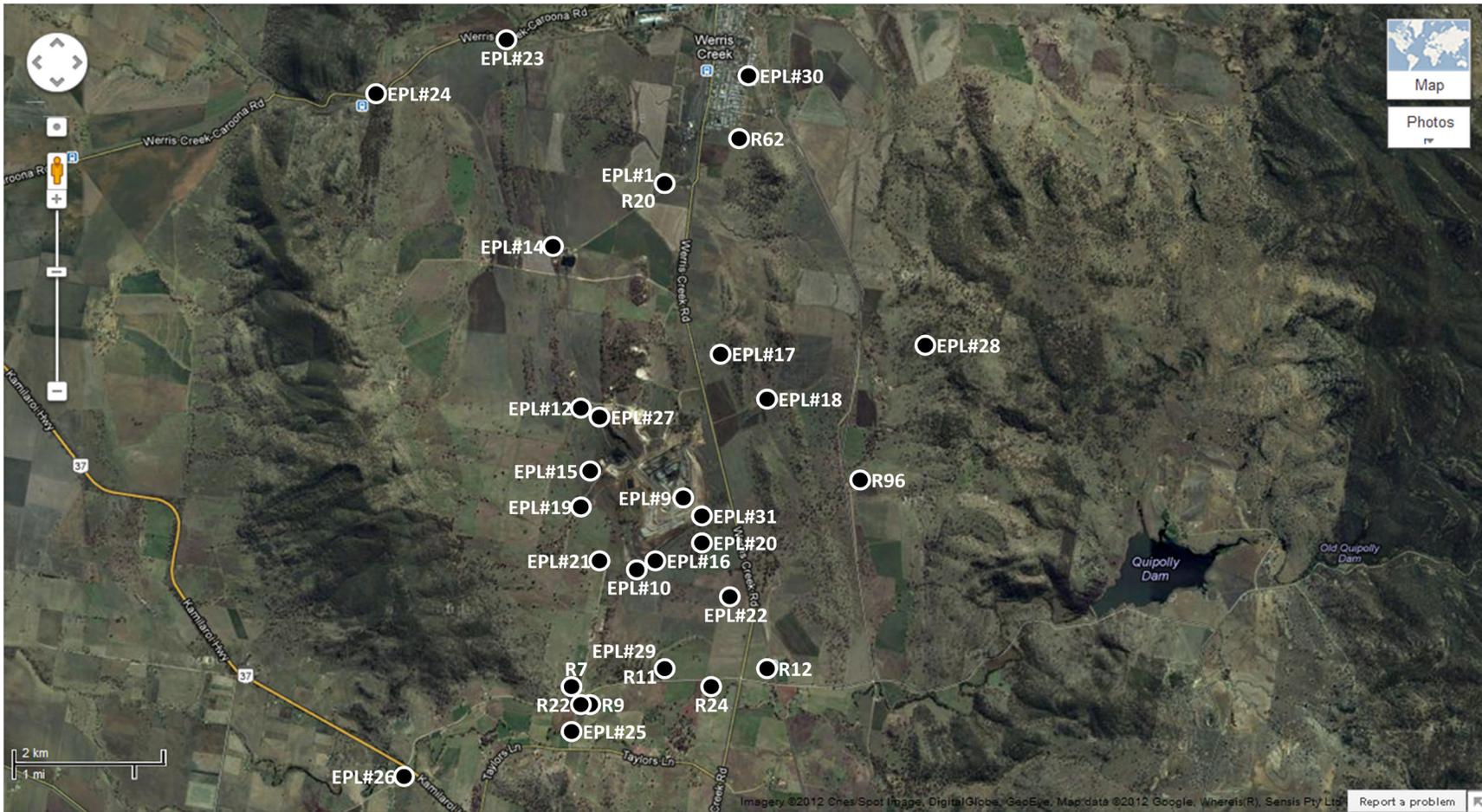
**Table 4 – Monitoring (Noise – Limits Apply)**

Location	Date	Start Time	Measurement Period	Measured levels – dB(A)		Limit(s)	Weather (inversion oC/100m, wind m/s & °)	Observations	(Potential) Non-compliance /breach
				LA1, 1 Minute	LAeq, 15 Minute				
R96	17 <sup>th</sup> May 2012	2:45pm	60 minutes	n/a	31	Day 38	n/a,1.9,184	WCC (29), birds (24), traffic (23)	No
	17 <sup>th</sup> May 2012	8:53pm	60 minutes	20	30	Night 37	+13.9,0.3,213	Traffic (30), WCC (<20)	No
R12	17 <sup>th</sup> May 2012	5:00pm	60 minutes	n/a	46	Day 38	n/a,0.9,241	Traffic (46), rail works (35), birds (32), WCC inaudible	No
	17 <sup>th</sup> May 2012	10:45pm	60 minutes	29	33	Night 38	+12.6,0.7,122	Traffic (32), WCC (26)	No
R7	17 <sup>th</sup> May 2012	1:20pm	60 minutes	n/a	40	Day 37	n/a,1.9,225	Birds (39), traffic (32), WCC (<20)	No
	17 <sup>th</sup> May 2012	7:30pm	60 minutes	43	37	Night 37	+13.7,1.4,85	WCC (36), traffic (26), birds (25)	No
R9	17 <sup>th</sup> May 2012	1:20pm	60 minutes	n/a	39	Day 37	n/a,1.9,225	Insects (38), traffic (30), WCC inaudible	No
	17 <sup>th</sup> May 2012	7:15pm	60 minutes	44	35	Night 37	+13.6,1.3,123	WCC (35)	No
R24	17 <sup>th</sup> May 2012	2:24pm	60 minutes	n/a	38	Day 37	n/a,1.9,184	Birds (37), traffic (30), WCC (27)	No
	17 <sup>th</sup> May 2012	8:18pm	60 minutes	35	43	Night 37	+14.3,0.6,25	Traffic (43), WCC (25)	No
R22	17 <sup>th</sup> May 2012	1:20pm	60 minutes	n/a	39	Day 36	n/a,1.9,225	Insects (38), traffic (30), WCC inaudible	No
	17 <sup>th</sup> May 2012	7:15pm	60 minutes	44	35	Night 36	+13.6,1.3,123	WCC (35)	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
R20	Blast Noise	dB (Lin Peak)	Every Blast	6	88.9	99.0	120	No
	Blast Vibration	mm/s	Every Blast	6	0.61	0.70	10	No
R96	Blast Noise	dB (Lin Peak)	Every Blast	6	96.7	102.9	120	No
	Blast Vibration	mm/s	Every Blast	6	0.16	0.16	10	No
R11	Blast Noise	dB (Lin Peak)	Every Blast	6	<109.9	<109.9	120	No
	Blast Vibration	mm/s	Every Blast	6	<0.20	<0.20	10	No
R62	Blast Noise	dB (Lin Peak)	Every Blast	6	96.2	98.2	120	No
	Blast Vibration	mm/s	Every Blast	6	0.32	0.34	10	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.environment.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 2012

**Publication Date:** 24<sup>th</sup> July 2012

**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
1	PM10	µg/m <sup>3</sup>	Every 6 days	6	3/07/12	10/07/12	4.8	9.4	9.1	15.4
	Solid Particles	g/m <sup>2</sup> /month	Continuous	1	15/06/12	27/06/12	0.3	0.3	0.3	0.3
28	PM10	µg/m <sup>3</sup>	Every 6 days	6	3/07/12	10/07/12	3.3	10.8	6.6	31.2
	Solid Particles	g/m <sup>2</sup> /month	Continuous	1	15/06/12	27/06/12	0.5	0.5	0.5	0.5
29	PM10	µg/m <sup>3</sup>	Every 6 days	6	3/07/12	10/07/12	3.2	7.0	5.2	17.4
	Solid Particles	g/m <sup>2</sup> /month	Continuous	1	15/06/12	27/06/12	2.6	2.6	2.6	2.6
30	PM10	µg/m <sup>3</sup>	Every 6 days	6	3/07/12	10/07/12	3.7	12.1	11.8	18.7
	Solid Particles	g/m <sup>2</sup> /month	Continuous	1	15/06/12	27/06/12	1.0	1.0	1.0	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	-	-	-	-	-	-



**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
	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	-	-	-	-	-	-

**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

**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
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

**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	-	-	-	-	-	-
	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	-	-	-	-	-	-
17	Reactive Phosphorus	mg/L	Every 3 Months	0	-	-	-	-	-	-
	Total Suspended Solids	mg/L	Every 3 Months	0	-	-	-	-	-	-
	Conductivity	µS/cm	Every 6 Months	0	-	-	-	-	-	-
	Nitrate	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
17	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	-	-	-	-	-	-
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	-	-	-	-	-	-
	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	-	-	-	-	-	-

**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
	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	Start Time	Measurement Period	Measured levels – dB(A)		Limit(s)	Weather (inversion oC/100m, wind m/s & °)	Observations	(Potential) Non-compliance /breach
				LA1, 1 Minute	LAeq, 15 Minute				
R96	12 <sup>th</sup> June 2012	3:21pm	60 minutes	n/a	36	Day 38	n/a,6.4,107	Birds (34), traffic (32), WCC barely audible	No
	12 <sup>th</sup> June 2012	8:53pm	60 minutes	28	33	Night 37	+9.2,1.0,91	Traffic (30), insects (28), dog (26), WCC (25)	No
R12	12 <sup>th</sup> June 2012	5:00pm	60 minutes	n/a	46	Day 38	n/a,5.0,108	Traffic (46), birds (30), WCC inaudible	No
	12 <sup>th</sup> June 2012	10:45pm	60 minutes	37	40	Night 38	+8.1,1.3,115	Traffic (39), WCC (30)	No
R7	12 <sup>th</sup> June 2012	1:20pm	60 minutes	n/a	42	Day 37	n/a,7.9,116	Traffic (39), birds (37), wind (32), WCC inaudible	No
	12 <sup>th</sup> June 2012	7:30pm	60 minutes	n/a	35	Night 37	+5.3,3.2,105	Traffic (33), cattle (30), WCC inaudible	No
R9	12 <sup>th</sup> June 2012	1:20pm	60 minutes	n/a	47	Day 37	n/a,8.0,114	Birds (45), wind (40), traffic (36), WCC inaudible	No
	12 <sup>th</sup> June 2012	7:15pm	60 minutes	35	36	Night 37	+9.2,1.0,91	Traffic (33), cattle (32), WCC (28)	No
R24	12 <sup>th</sup> June 2012	2:24pm	60 minutes	n/a	40	Day 37	n/a,7.2,117	Traffic (38), birds (35), WCC inaudible	No
	12 <sup>th</sup> June 2012	8:18pm	60 minutes	32	39	Night 37	+8.1,1.3,115	Traffic (39), WCC (25)	No
R22	12 <sup>th</sup> June 2012	1:20pm	60 minutes	n/a	47	Day 36	n/a,8.0,114	Birds (45), wind (40), traffic (36), WCC inaudible	No

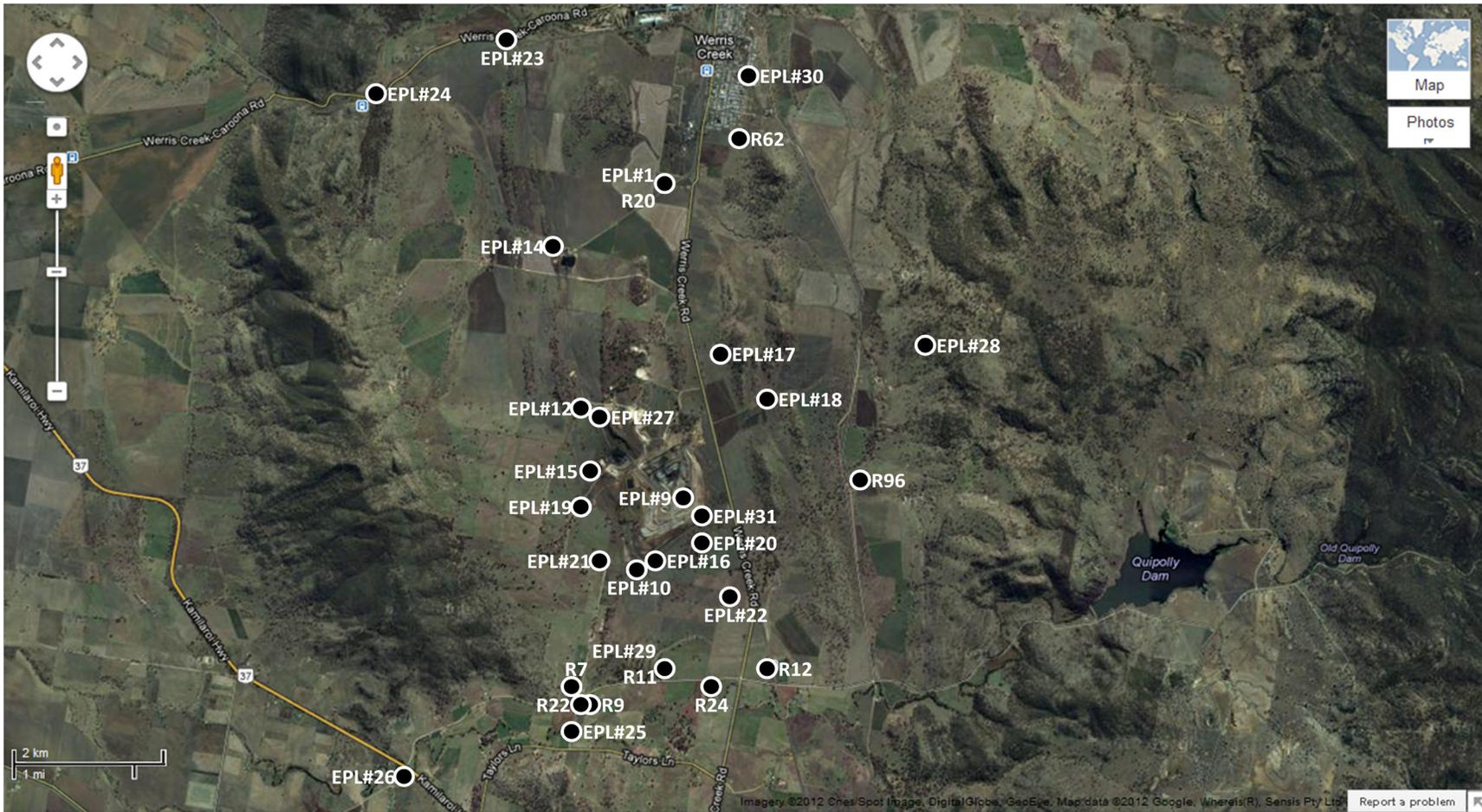
**WERRIS CREEK COAL EPL – MONTHLY SUMMARY**

Location	Date	Start Time	Measurement Period	Measured levels – dB(A)		Limit(s)	Weather (inversion oC/100m, wind m/s & °)	Observations	(Potential) Non-compliance /breach
				LA1, 1 Minute	LAeq, 15 Minute				
	12 <sup>th</sup> June 2012	7:15pm	60 minutes	35	36	Night 36	+9.2,1.0,91	Traffic (33), cattle (32), WCC (28)	No

**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
R20	Blast Noise	dB (Lin Peak)	Every Blast	3	101.3	106.2	120.0	No
	Blast Vibration	mm/s	Every Blast	3	0.86	1.30	10.00	No
R96	Blast Noise	dB (Lin Peak)	Every Blast	3	<109.9	<109.9	120.0	No
	Blast Vibration	mm/s	Every Blast	3	<0.20	<0.20	10.00	No
R11	Blast Noise	dB (Lin Peak)	Every Blast	3	<109.9	<109.9	120.0	No
	Blast Vibration	mm/s	Every Blast	3	<0.20	<0.20	10.00	No
R62	Blast Noise	dB (Lin Peak)	Every Blast	3	100.6	104.9	120.0	No
	Blast Vibration	mm/s	Every Blast	3	0.30	0.34	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.environment.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 2012

**Publication Date:** 16<sup>th</sup> August 2012 (re-published 20<sup>th</sup> November 2012)

**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
1	PM10	µg/m <sup>3</sup>	Every 6 days	5	31/07/12	07/08/12	6.3	8.5	8.3	10.7
	Solid Particles	g/m <sup>2</sup> /month	Continuous	1	18/07/12	24/07/12	0.5	0.5	0.5	0.5
28	PM10	µg/m <sup>3</sup>	Every 6 days	5	31/07/12	07/08/12	3.0	4.5	4.5	5.8
	Solid Particles	g/m <sup>2</sup> /month	Continuous	1	18/07/12	24/07/12	0.7	0.7	0.7	0.7
29	PM10	µg/m <sup>3</sup>	Every 6 days	5	31/07/12	07/08/12	5.2	8.4	7.9	14.2
	Solid Particles	g/m <sup>2</sup> /month	Continuous	1	18/07/12	24/07/12	425*	425*	425*	425*
30	PM10	µg/m <sup>3</sup>	Every 6 days	5	31/07/12	07/08/12	6.3	8.6	8.3	10.7
	Solid Particles	g/m <sup>2</sup> /month	Continuous	1	18/07/12	24/07/12	1.5	1.5	1.5	1.5
10	Conductivity	µS/cm	Special Frequency 1	1	01/08/12	03/08/12	507	507	507	507
	Nitrate	mg/L	Special Frequency 1	1	01/08/12	03/08/12	<0.01	<0.01	<0.01	<0.01
	Nitrogen (Total)	mg/L	Special Frequency 1	1	01/08/12	03/08/12	0.6	0.6	0.6	0.6
	Phosphorus (Total)	mg/L	Special Frequency 1	1	01/08/12	03/08/12	0.1	0.1	0.1	0.1
	Reactive Phosphorus	mg/L	Special Frequency 1	1	01/08/12	03/08/12	0.06	0.06	0.06	0.06
12	Conductivity	µS/cm	Special Frequency 1	1	17/07/12	23/07/12	346	346	346	346
	Nitrate	mg/L	Special Frequency 1	1	17/07/12	23/07/12	6.22	6.22	6.22	6.22
	Nitrogen (Total)	mg/L	Special Frequency 1	1	17/07/12	23/07/12	10.8	10.8	10.8	10.8
	Phosphorus (Total)	mg/L	Special Frequency 1	1	17/07/12	23/07/12	0.14	0.14	0.14	0.14
	Reactive Phosphorus	mg/L	Special Frequency 1	1	17/07/12	23/07/12	0.06	0.06	0.06	0.06
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	2	13/07/12	03/08/12	427	452	452	476
	Nitrate	mg/L	Special Frequency 2	2	13/07/12	03/08/12	0.06	0.15	0.15	0.23
	Nitrogen (Total)	mg/L	Special Frequency 2	2	13/07/12	03/08/12	<0.1	0.6	0.6	0.6
	Oil and Grease	mg/L	Special Frequency 2	2	13/07/12	03/08/12	<5	<5	<5	<5
	pH	pH	Special Frequency 2	2	13/07/12	03/08/12	7.52	7.58	7.58	7.63
26	Phosphorus (Total)	mg/L	Special Frequency 2	2	13/07/12	03/08/12	0.07	0.11	0.11	0.14
	Reactive Phosphorus	mg/L	Special Frequency 2	2	13/07/12	03/08/12	<0.01	0.04	0.04	0.04
	Total Suspended Solids	mg/L	Special Frequency 2	2	13/07/12	03/08/12	16	23	23	29
	Conductivity	µS/cm	Special Frequency 2	2	13/07/12	03/08/12	773	798	798	822
26	Nitrate	mg/L	Special Frequency 2	2	13/07/12	03/08/12	0.17	0.21	0.21	0.24
	Nitrogen (Total)	mg/L	Special Frequency 2	2	13/07/12	03/08/12	0.3	0.45	0.45	0.6
	Oil and Grease	mg/L	Special Frequency 2	2	13/07/12	03/08/12	<5	<5	<5	<5

**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
	pH	pH	Special Frequency 2	2	13/07/12	03/08/12	7.97	8.01	8.01	8.04
	Phosphorus (Total)	mg/L	Special Frequency 2	2	13/07/12	03/08/12	0.06	0.13	0.13	0.20
	Reactive Phosphorus	mg/L	Special Frequency 2	2	13/07/12	03/08/12	0.06	0.06	0.06	0.06
	Total Suspended Solids	mg/L	Special Frequency 2	2	13/07/12	03/08/12	8	12	12	15

\* Result is not a sampling or laboratory error and there is no other obvious source. The anomalous result is believed to be caused by contamination, not operations at the mine.

**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	1	01/08/12	03/08/12	10	10	50	No
	Oil and Grease	mg/L	Special Frequency 1	1	01/08/12	03/08/12	<5	<5	10	No
	pH	pH	Special Frequency 1	1	01/08/12	03/08/12	8.26	8.26	6.5-8.5	No
12	Total Suspended Solids	mg/L	Special Frequency 1	1	17/07/12	23/07/12	100	100	50	No**
	Oil and Grease	mg/L	Special Frequency 1	1	17/07/12	23/07/12	<5	<5	10	No
	pH	pH	Special Frequency 1	1	17/07/12	23/07/12	7.79	7.79	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

\*\*The TSS result of 100mg/L is not an exceedance as the rainfall event exceeded 39.2mm (see EPL 12290, Condition L2.5)

**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	-	-	-	-	-	-

**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
	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	-	-	-	-	-	-
	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	-	-	-	-	-	-

**Table 4 – Monitoring (Noise – Limits Apply)**

Location	Date	Start Time	Measurement Period	Measured levels – dB(A)		Limit(s)	Weather (inversion oC/100m, wind m/s & °)	Observations	(Potential) Non-compliance /breach
				LA1, 1 Minute	LAeq, 15 Minute				
R96	17 <sup>th</sup> July 2012	4.09 pm	60 minutes	n/a	36	Day 38	n/a,1.0,243	Birds & insects (34), traffic (32),	No

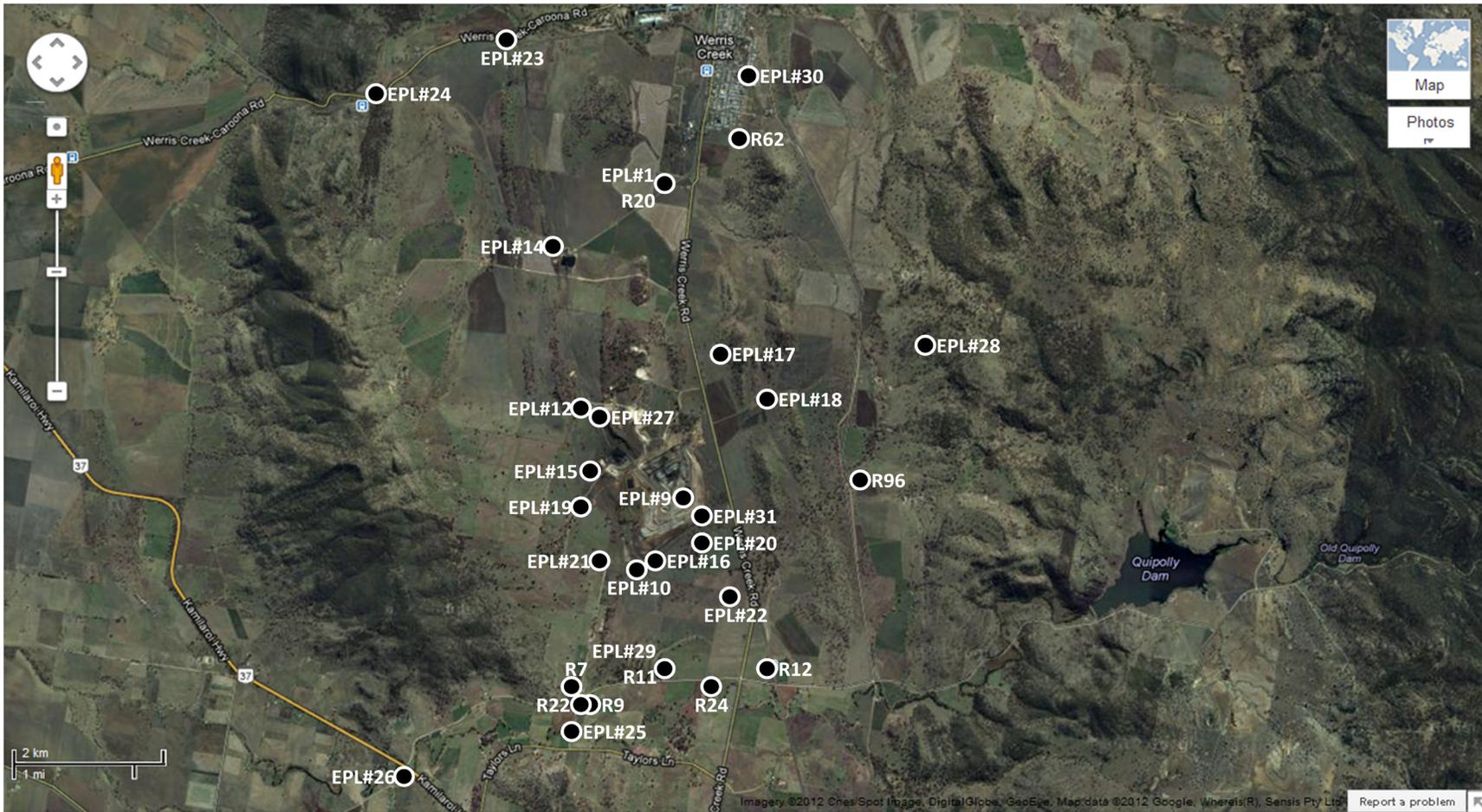
**WERRIS CREEK COAL EPL – MONTHLY SUMMARY**

Location	Date	Start Time	Measurement Period	Measured levels – dB(A)		Limit(s)	Weather (inversion oC/100m, wind m/s & °)	Observations	(Potential) Non-compliance /breach
				LA1, 1 Minute	LAeq, 15 Minute				
								WCC inaudible	
	17 <sup>th</sup> July 2012	7.40 pm	60 minutes	<30	33	Night 37	+4.8,0.7,182	Birds (30), traffic (29), WCC (<25)	No
R12	18 <sup>th</sup> July 2012	7.05 am	60 minutes	n/a	46	Day 38	n/a,2.0,280	Birds (44), traffic (41), WCC (30)	No
	17 <sup>th</sup> July 2012	11.15 pm	60 minutes	36	38	Night 38	+3.8,1.8,230	Traffic (37), WCC (31)	No
R7	17 <sup>th</sup> July 2012	1.23 pm	60 minutes	n/a	38	Day 37	n/a,2.3,246	Birds & insects (37), traffic (29), WCC (24)	No
	17 <sup>th</sup> July 2012	11.13 pm	60 minutes	41	37	Night 37	+3.8,1.8,230	WCC (34), insects (32), house pump (30)	No
R9	17 <sup>th</sup> July 2012	2.33 pm	60 minutes	n/a	48	Day 37	n/a,2.2,238	Birds (48), traffic (35), WCC (<20)	No
	17 <sup>th</sup> July 2012	9.07 pm	60 minutes	39	36	Night 37	+4.5,1.5,240	Traffic (33), WCC (32), frogs (28)	No
R24	18 <sup>th</sup> July 2012	7.02 am	60 minutes	n/a	47	Day 37	n/a,2.0,280	Traffic (46), birds (38), WCC (34)	No
	17 <sup>th</sup> July 2012	10.11 pm	60 minutes	36	43	Night 37	+4.3,2.3,279	Traffic (43), WCC (30)	No
R22	17 <sup>th</sup> July 2012	2.33 pm	60 minutes	n/a	48	Day 36	n/a,2.2,238	Birds (48), traffic (35), WCC (<20)	No
	17 <sup>th</sup> July 2012	9.07 pm	60 minutes	39	36	Night 36	+4.5,1.5,240	Traffic (33), WCC (32), frogs (28)	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
R20	Blast Noise	dB (Lin Peak)	Every Blast	8	11.9	114.9	120.0	No
	Blast Vibration	mm/s	Every Blast	8	1.26	1.85	10.00	No
R96	Blast Noise	dB (Lin Peak)	Every Blast	8	109.9	113.0	120.0	No
	Blast Vibration	mm/s	Every Blast	8	0.39	0.67	10.00	No
R11	Blast Noise	dB (Lin Peak)	Every Blast	8	105.0	106.9	120.0	No
	Blast Vibration	mm/s	Every Blast	8	0.38	0.48	10.00	No
R62	Blast Noise	dB (Lin Peak)	Every Blast	8	104.3	107.3	120.0	No
	Blast Vibration	mm/s	Every Blast	8	0.70	1.05	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.environment.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 2012

**Publication Date:** 12<sup>th</sup> September 2012 (re-published 20<sup>th</sup> November 2012)

**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
1	PM10	µg/m <sup>3</sup>	Every 6 days	5	31/08/12	07/09/12	7.1	10.9	9.8	17.8
	Solid Particles	g/m <sup>2</sup> /month	Continuous	1	17/08/12	23/08/12	0.3	0.3	0.3	0.3
28	PM10	µg/m <sup>3</sup>	Every 6 days	5	31/08/12	07/09/12	5.3	8.9	10.1	10.8
	Solid Particles	g/m <sup>2</sup> /month	Continuous	1	17/08/12	23/08/12	0.3	0.3	0.3	0.3
29	PM10	µg/m <sup>3</sup>	Every 6 days	5	31/08/12	07/09/12	8.8	12.0	10.8	16.3
	Solid Particles	g/m <sup>2</sup> /month	Continuous	1	17/08/12	23/08/12	2.4	2.4	2.4	2.4
30	PM10	µg/m <sup>3</sup>	Every 6 days	5	31/08/12	07/09/12	7.1	10.4	9.0	17.0
	Solid Particles	g/m <sup>2</sup> /month	Continuous	1	17/08/12	23/08/12	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	1	08/08/12	13/08/12	732	732	732	732
	Nitrate	mg/L	Special Frequency 1	1	08/08/12	13/08/12	3.96	3.96	3.96	3.96
	Nitrogen (Total)	mg/L	Special Frequency 1	1	08/08/12	13/08/12	5.8	5.8	5.8	5.8
	Phosphorus (Total)	mg/L	Special Frequency 1	1	08/08/12	13/08/12	0.09	0.09	0.09	0.09
	Reactive Phosphorus	mg/L	Special Frequency 1	1	08/08/12	13/08/12	0.01	0.01	0.01	0.01
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	08/08/12	13/08/12	528	528	528	528
	Nitrate	mg/L	Special Frequency 2	1	08/08/12	13/08/12	<0.01	<0.01	<0.01	<0.01
	Nitrogen (Total)	mg/L	Special Frequency 2	1	08/08/12	13/08/12	0.3	0.3	0.3	0.3
	Oil and Grease	mg/L	Special Frequency 2	1	08/08/12	13/08/12	<5	<5	<5	<5
	pH	pH	Special Frequency 2	1	08/08/12	13/08/12	7.52	7.52	7.52	7.52
26	Phosphorus (Total)	mg/L	Special Frequency 2	1	08/08/12	13/08/12	0.01	0.01	0.01	0.01
	Reactive Phosphorus	mg/L	Special Frequency 2	1	08/08/12	13/08/12	<0.01	<0.01	<0.01	<0.01
	Total Suspended Solids	mg/L	Special Frequency 2	1	08/08/12	13/08/12	95	95	95	95
	Conductivity	µS/cm	Special Frequency 2	1	08/08/12	13/08/12	829	829	829	829
26	Nitrate	mg/L	Special Frequency 2	1	08/08/12	13/08/12	0.11	0.11	0.11	0.11
	Nitrogen (Total)	mg/L	Special Frequency 2	1	08/08/12	13/08/12	0.2	0.2	0.2	0.2
	Oil and Grease	mg/L	Special Frequency 2	1	08/08/12	13/08/12	<5	<5	<5	<5



**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
	pH	pH	Special Frequency 2	1	08/08/12	13/08/12	8.02	8.02	8.02	8.02
	Phosphorus (Total)	mg/L	Special Frequency 2	1	08/08/12	13/08/12	0.05	0.05	0.05	0.05
	Reactive Phosphorus	mg/L	Special Frequency 2	1	08/08/12	13/08/12	0.04	0.04	0.04	0.04
	Total Suspended Solids	mg/L	Special Frequency 2	1	08/08/12	13/08/12	8	8	8	8

**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	08/08/12	13/08/12	33	33	50	No
	Oil and Grease	mg/L	Special Frequency 1	1	08/08/12	13/08/12	<5	<5	10	No
	pH	pH	Special Frequency 1	1	08/08/12	13/08/12	7.97	7.97	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

**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	28/08/12	04/09/12	918	918	918	918
	Nitrate	mg/L	Every 3 Months	1	28/08/12	04/09/12	0.10	0.10	0.10	0.10
	Nitrogen (Total)	mg/L	Every 3 Months	1	28/08/12	04/09/12	0.7	0.7	0.7	0.7
	Oil and Grease	mg/L	Every 3 Months	1	28/08/12	04/09/12	<5	<5	<5	<5
	pH	pH	Every 3 Months	1	28/08/12	04/09/12	8.72	8.72	8.72	8.72
	Phosphorus (Total)	mg/L	Every 3 Months	1	28/08/12	04/09/12	<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
	Reactive Phosphorus	mg/L	Every 3 Months	1	28/08/12	04/09/12	<0.01	<0.01	<0.01	<0.01
	Total Suspended Solids	mg/L	Every 3 Months	1	28/08/12	04/09/12	11	11	11	11
27	Conductivity	µS/cm	Every 3 Months	1	28/08/12	04/09/12	939	939	939	939
	Nitrate	mg/L	Every 3 Months	1	28/08/12	04/09/12	0.58	0.58	0.58	0.58
	Nitrogen (Total)	mg/L	Every 3 Months	1	28/08/12	04/09/12	1.0	1.0	1.0	1.0
	Oil and Grease	mg/L	Every 3 Months	1	28/08/12	04/09/12	<5	<5	<5	<5
	pH	pH	Every 3 Months	1	28/08/12	04/09/12	8.38	8.38	8.38	8.38
	Phosphorus (Total)	mg/L	Every 3 Months	1	28/08/12	04/09/12	0.15	0.15	0.15	0.15
	Reactive Phosphorus	mg/L	Every 3 Months	1	28/08/12	04/09/12	<0.01	<0.01	<0.01	<0.01
	Total Suspended Solids	mg/L	Every 3 Months	1	28/08/12	04/09/12	<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	-	-	-	-	-	-
	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	-	-	-	-	-	-

**Table 4 – Monitoring (Noise – Limits Apply)**

Location	Date	Start Time	Measurement Period	Measured levels – dB(A)		Limit(s)	Weather (inversion oC/100m, wind m/s & °)	Observations	(Potential) Non-compliance /breach
				LA1, 1 Minute	LAeq, 15 Minute				
R96	13 <sup>th</sup> August 2012	3:45 pm	60 minutes	n/a	41	Day 38	n/a,1.3,159	Birds & insects (34), traffic (32), WCC inaudible	No
	13 <sup>th</sup> August 2012	7:30 pm	60 minutes	39	38	Night 37	+11.9,2.0,290	Traffic (36), WCC (33), insects	No

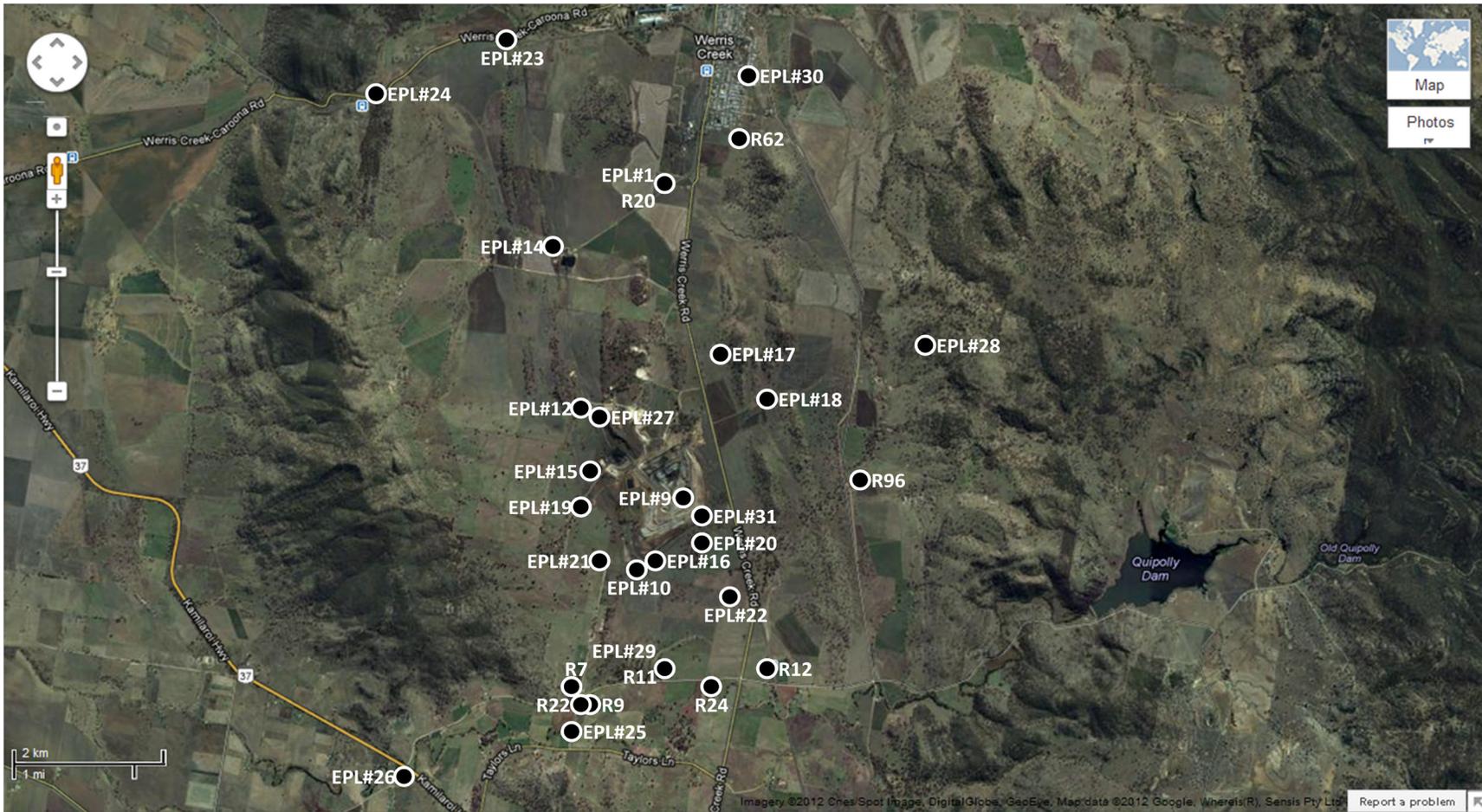
**WERRIS CREEK COAL EPL – MONTHLY SUMMARY**

Location	Date	Start Time	Measurement Period	Measured levels – dB(A)		Limit(s)	Weather (inversion oC/100m, wind m/s & °)	Observations	(Potential) Non-compliance /breach
				LA1, 1 Minute	LAeq, 15 Minute				
								(25)	
R12	13 <sup>th</sup> August 2012	5:00 pm	60 minutes	n/a	48	Day 38	n/a,1.0,209	Birds (44), traffic (41), WCC (30)	No
	13 <sup>th</sup> August 2012	10:43 pm	60 minutes	42	43	Night 38	+10.9,calm	Traffic (42), WCC (34)	No
R7	13 <sup>th</sup> August 2012	5:07 pm	60 minutes	n/a	38	Day 37	n/a,1.0,209	Birds & insects (37), traffic (29), WCC (24)	No
	13 <sup>th</sup> August 2012	11:08 pm	60 minutes	38	35	Night 37	+11.2,calm	WCC (33), traffic (30), insects (27)	No
R9	13 <sup>th</sup> August 2012	2:54 pm	60 minutes	n/a	37	Day 37	n/a,2.0,157	Birds (48), traffic (35), WCC (<20)	No
	13 <sup>th</sup> August 2012	8:35 pm	60 minutes	42	36	Night 37	+9.1,1.0,129	Traffic (34), WCC (34), frogs & insects (33)	No
R24	13 <sup>th</sup> August 2012	3:57 pm	60 minutes	n/a	35	Day 37	n/a,1.4,163	Traffic (46), birds (38), WCC (34)	No
	13 <sup>th</sup> August 2012	9:38 pm	60 minutes	39	43	Night 37	+11.6,0.4,124	Traffic (43), WCC (32), insects (23)	No
R22	13 <sup>th</sup> August 2012	2:54 pm	60 minutes	n/a	37	Day 36	n/a,2.0,157	Birds (48), traffic (35), WCC (<20)	No
	13 <sup>th</sup> August 2012	8:35 pm	60 minutes	42	36	Night 36	+9.1,1.0,129	Traffic (34), WCC (34), frogs & insects (33)	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
R20	Blast Noise	dB (Lin Peak)	Every Blast	7	101.6	112.9	120.0	No
	Blast Vibration	mm/s	Every Blast	7	0.54	0.57	10.00	No
R96	Blast Noise	dB (Lin Peak)	Every Blast	7	<112.0	<112.0	120.0	No
	Blast Vibration	mm/s	Every Blast	7	<0.30	<0.30	10.00	No
R11	Blast Noise	dB (Lin Peak)	Every Blast	7	<112.0	<112.0	120.0	No
	Blast Vibration	mm/s	Every Blast	7	<0.30	<0.30	10.00	No
R62	Blast Noise	dB (Lin Peak)	Every Blast	7	<112.0	<112.0	120.0	No
	Blast Vibration	mm/s	Every Blast	7	<0.30	<0.30	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.environment.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 2012

**Publication Date:** 10<sup>th</sup> October 2012 (re-published 20<sup>th</sup> November 2012)

**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
1	PM10	µg/m <sup>3</sup>	Every 6 days	5	28/09/12	05/10/12	10.8	20.5	21.9	29.2
	Solid Particles	g/m <sup>2</sup> /month	Continuous	1	18/09/12	25/09/12	1.2	1.2	1.2	1.2
28	PM10	µg/m <sup>3</sup>	Every 6 days	5	28/09/12	05/10/12	10.8	18.0	19.1	23.1
	Solid Particles	g/m <sup>2</sup> /month	Continuous	1	18/09/12	25/09/12	0.4	0.4	0.4	0.4
29	PM10	µg/m <sup>3</sup>	Every 6 days	5	28/09/12	05/10/12	9.1	20.5	19.2	29.2
	Solid Particles	g/m <sup>2</sup> /month	Continuous	1	18/09/12	25/09/12	4.5	4.5	4.5	4.5
30	PM10	µg/m <sup>3</sup>	Every 6 days	Continuous	31/09/12	1/10/12	7.3	15.3	14.6	26.5
	Solid Particles	g/m <sup>2</sup> /month	Continuous	1	18/09/12	25/09/12	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	26/09/12	03/10/12	353	353	353	353
	Nitrate	mg/L	Special Frequency 1	1	26/09/12	03/10/12	1.26	1.26	1.26	1.26
	Nitrogen (Total)	mg/L	Special Frequency 1	1	26/09/12	03/10/12	2.9	2.9	2.9	2.9
	Phosphorus (Total)	mg/L	Special Frequency 1	1	26/09/12	03/10/12	0.05	0.05	0.05	0.05
	Reactive Phosphorus	mg/L	Special Frequency 1	1	26/09/12	03/10/12	<0.01	<0.01	<0.01	<0.01
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	26/09/12	03/10/12	486	486	486	486
	Nitrate	mg/L	Special Frequency 2	1	26/09/12	03/10/12	0.03	0.03	0.03	0.03
	Nitrogen (Total)	mg/L	Special Frequency 2	1	26/09/12	03/10/12	0.4	0.4	0.4	0.4
	Oil and Grease	mg/L	Special Frequency 2	1	26/09/12	03/10/12	<5	<5	<5	<5
	pH	pH	Special Frequency 2	1	26/09/12	03/10/12	7.87	7.87	7.87	7.87
26	Phosphorus (Total)	mg/L	Special Frequency 2	1	26/09/12	03/10/12	0.10	0.10	0.10	0.10
	Reactive Phosphorus	mg/L	Special Frequency 2	1	26/09/12	03/10/12	0.01	0.01	0.01	0.01
	Total Suspended Solids	mg/L	Special Frequency 2	1	26/09/12	03/10/12	22	22	22	22
	Conductivity	µS/cm	Special Frequency 2	1	26/09/12	03/10/12	884	884	884	884
26	Nitrate	mg/L	Special Frequency 2	1	26/09/12	03/10/12	0.02	0.02	0.02	0.02
	Nitrogen (Total)	mg/L	Special Frequency 2	1	26/09/12	03/10/12	0.2	0.2	0.2	0.2
	Oil and Grease	mg/L	Special Frequency 2	1	26/09/12	03/10/12	<5	<5	<5	<5

**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
	pH	pH	Special Frequency 2	1	26/09/12	03/10/12	8.13	8.13	8.13	8.13
	Phosphorus (Total)	mg/L	Special Frequency 2	1	26/09/12	03/10/12	0.10	0.10	0.10	0.10
	Reactive Phosphorus	mg/L	Special Frequency 2	1	26/09/12	03/10/12	0.06	0.06	0.06	0.06
	Total Suspended Solids	mg/L	Special Frequency 2	1	26/09/12	03/10/12	13	13	13	13

**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	26/09/12	03/10/12	<5	<5	50	No
	Oil and Grease	mg/L	Special Frequency 1	1	26/09/12	03/10/12	<5	<5	10	No
	pH	pH	Special Frequency 1	1	26/09/12	03/10/12	8.49	8.49	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

**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	-	-	-	-	-	-

**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 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	06/09/12	14/09/12	1270	1270	1270	1270
	Nitrate	mg/L	Every 6 Months	1	06/09/12	14/09/12	4.59	4.59	4.59	4.59
	Nitrogen (Total)	mg/L	Every 6 Months	1	06/09/12	14/09/12	5.6	5.6	5.6	5.6
	pH	pH	Every 6 Months	1	06/09/12	14/09/12	7.49	7.49	7.49	7.49
	Phosphorus (Total)	mg/L	Every 6 Months	1	06/09/12	14/09/12	0.11	0.11	0.11	0.11
	Reactive Phosphorus	mg/L	Every 6 Months	1	06/09/12	14/09/12	0.10	0.10	0.10	0.10
	Standing Water Level	Metres	Every 6 Months	1	06/09/12	14/09/12	52.7	52.7	52.7	52.7
18	Conductivity	µS/cm	Every 6 Months	1	06/09/12	14/09/12	878	878	878	878
	Nitrate	mg/L	Every 6 Months	1	06/09/12	14/09/12	0.08	0.08	0.08	0.08
	Nitrogen (Total)	mg/L	Every 6 Months	1	06/09/12	14/09/12	<0.1	<0.1	<0.1	<0.1
	pH	pH	Every 6 Months	1	06/09/12	14/09/12	7.92	7.92	7.92	7.92
	Phosphorus (Total)	mg/L	Every 6 Months	1	06/09/12	14/09/12	0.06	0.06	0.06	0.06
	Reactive Phosphorus	mg/L	Every 6 Months	1	06/09/12	14/09/12	0.06	0.06	0.06	0.06
	Standing Water Level	Metres	Every 6 Months	1	06/09/12	14/09/12	25.1	25.1	25.1	25.1
19	Conductivity	µS/cm	Every 6 Months	1	26/09/12	04/10/12	3380	3380	3380	3380
	Nitrate	mg/L	Every 6 Months	1	26/09/12	04/10/12	18.4	18.4	18.4	18.4
	Nitrogen (Total)	mg/L	Every 6 Months	1	26/09/12	04/10/12	20.4	20.4	20.4	20.4
	pH	pH	Every 6 Months	1	26/09/12	04/10/12	7.40	7.40	7.40	7.40
	Phosphorus (Total)	mg/L	Every 6 Months	1	26/09/12	04/10/12	0.03	0.03	0.03	0.03
	Reactive Phosphorus	mg/L	Every 6 Months	1	26/09/12	04/10/12	0.01	0.01	0.01	0.01
	Standing Water Level	Metres	Every 6 Months	1	26/09/12	04/10/12	15.4	15.4	15.4	15.4

**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
20	Conductivity	µS/cm	Every 6 Months	1	14/09/12	21/09/12	1020	1020	1020	1020
	Nitrate	mg/L	Every 6 Months	1	14/09/12	21/09/12	1.34	1.34	1.34	1.34
	Nitrogen (Total)	mg/L	Every 6 Months	1	14/09/12	21/09/12	1.7	1.7	1.7	1.7
	pH	pH	Every 6 Months	1	14/09/12	21/09/12	7.92	7.92	7.92	7.92
	Phosphorus (Total)	mg/L	Every 6 Months	1	14/09/12	21/09/12	0.04	0.04	0.04	0.04
	Reactive Phosphorus	mg/L	Every 6 Months	1	14/09/12	21/09/12	0.02	0.02	0.02	0.02
	Standing Water Level	Metres	Every 6 Months	1	14/09/12	21/09/12	10.6	10.6	10.6	10.6
21	Conductivity	µS/cm	Every 6 Months	1	14/09/12	21/09/12	2370	2370	2370	2370
	Nitrate	mg/L	Every 6 Months	1	14/09/12	21/09/12	0.55	0.55	0.55	0.55
	Nitrogen (Total)	mg/L	Every 6 Months	1	14/09/12	21/09/12	17.0	17.0	17.0	17.0
	pH	pH	Every 6 Months	1	14/09/12	21/09/12	7.68	7.68	7.68	7.68
	Phosphorus (Total)	mg/L	Every 6 Months	1	14/09/12	21/09/12	1.95	1.95	1.95	1.95
	Reactive Phosphorus	mg/L	Every 6 Months	1	14/09/12	21/09/12	1.46	1.46	1.46	1.46
	Standing Water Level	Metres	Every 6 Months	1	14/09/12	21/09/12	8.41	8.41	8.41	8.41
22	Conductivity	µS/cm	Every 6 Months	1	06/09/12	14/09/12	1920	1920	1920	1920
	Nitrate	mg/L	Every 6 Months	1	06/09/12	14/09/12	3.89	3.89	3.89	3.89
	Nitrogen (Total)	mg/L	Every 6 Months	1	06/09/12	14/09/12	5.0	5.0	5.0	5.0
	pH	pH	Every 6 Months	1	06/09/12	14/09/12	7.72	7.72	7.72	7.72
	Phosphorus (Total)	mg/L	Every 6 Months	1	06/09/12	14/09/12	0.22	0.22	0.22	0.22
	Reactive Phosphorus	mg/L	Every 6 Months	1	06/09/12	14/09/12	0.03	0.03	0.03	0.03
	Standing Water Level	Metres	Every 6 Months	1	06/09/12	14/09/12	12.1	12.1	12.1	12.1

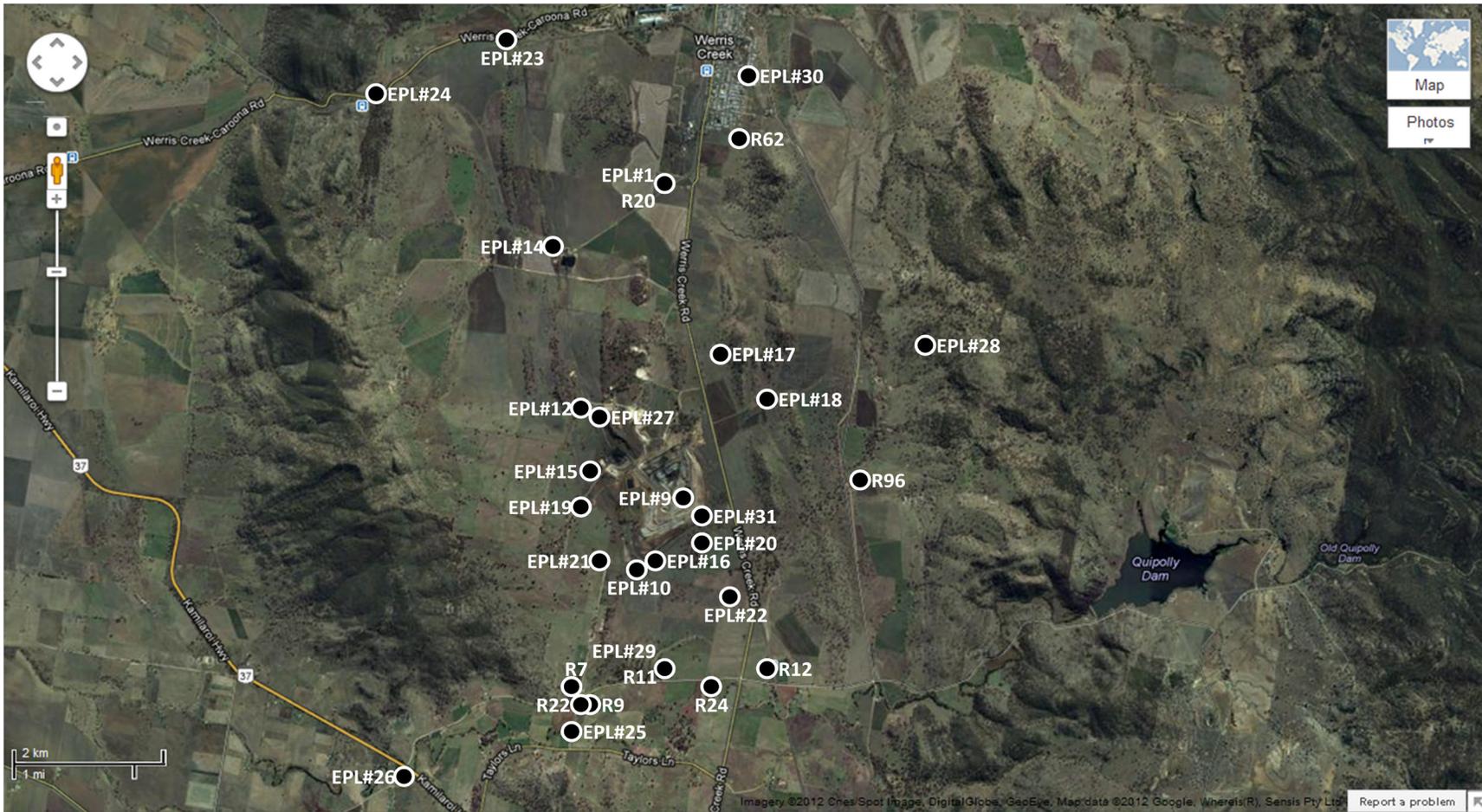
**WERRIS CREEK COAL EPL – MONTHLY SUMMARY**
**Table 4 – Monitoring (Noise – Limits Apply)**

Location	Date	Start Time	Measurement Period	Measured levels – dB(A)		Limit(s)	Weather (inversion oC/100m, wind m/s & °)	Observations	(Potential) Non-compliance /breach
				LA1, 1 Minute	LAeq, 15 Minute				
R96	11 <sup>th</sup> September 2012	4:54 pm	60 minutes	n/a	34	Day 38	n/a,1.8,288	Birds (33), traffic (28), WCC (22)	No
	11 <sup>th</sup> September 2012	11:00 pm	60 minutes	n/a	27	Night 37	+10.0,2.0,262	Frogs & insects (27), WCC inaudible	No
R12	11 <sup>th</sup> September 2012	4:34 pm	60 minutes	n/a	46	Day 38	n/a,1.8,254	Traffic (46), birds & insects (33), WCC (<25)	No
	11 <sup>th</sup> September 2012	10:40 pm	60 minutes	35	38	Night 38	+9.8,2.3,280	Traffic (37), WCC (32)	No
R7	11 <sup>th</sup> September 2012	1:10 pm	60 minutes	n/a	48	Day 37	n/a,3.1,247	Birds (48), traffic (35), WCC (<25)	No
	11 <sup>th</sup> September 2012	9:50 pm	60 minutes	41	37	Night 37	+9.6,1.0,262	WCC (34), irrigator (32), insects (28)	No
R9	11 <sup>th</sup> September 2012	2:12 pm	60 minutes	n/a	43	Day 37	n/a,3.6,248	Birds (42), traffic & planes (34), WCC (30)	No
	11 <sup>th</sup> September 2012	8:30 pm	60 minutes	41	38	Night 37	+9.4,1.4,275	Water pump (35), WCC (33), frogs & insects (28)	No
R24	11 <sup>th</sup> September 2012	3:32 pm	60 minutes	n/a	41	Day 37	n/a,2.5,254	Birds & insects (40), traffic (32), WCC (30)	No
	11 <sup>th</sup> September 2012	9:35 pm	60 minutes	38	38	Night 37	+9.3,1.3,271	Traffic (37), WCC (32)	No
R22	11 <sup>th</sup> September 2012	2:12 pm	60 minutes	n/a	43	Day 36	n/a,3.6,248	Birds (42), traffic & planes (34), WCC (30)	No
	11 <sup>th</sup> September 2012	8:30 pm	60 minutes	41	38	Night 36	+9.4,1.4,275	Water pump (35), WCC (33), frogs & insects (28)	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
R20	Blast Noise	dB (Lin Peak)	Every Blast	10	103.1	108.6	120.0	No
	Blast Vibration	mm/s	Every Blast	10	1.02	1.40	10.00	No
R96	Blast Noise	dB (Lin Peak)	Every Blast	10	104.3	109.0	120.0	No
	Blast Vibration	mm/s	Every Blast	10	0.24	0.30	10.00	No
R11	Blast Noise	dB (Lin Peak)	Every Blast	10	109.0	111.0	120.0	No
	Blast Vibration	mm/s	Every Blast	10	0.25	0.35	10.00	No
R62	Blast Noise	dB (Lin Peak)	Every Blast	10	100.6	107.5	120.0	No
	Blast Vibration	mm/s	Every Blast	10	0.37	0.47	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.environment.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 2012

**Publication Date:** 20<sup>th</sup> November 2012

**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
1	PM10	µg/m <sup>3</sup>	Every 6 days	5	30/10/12	01/11/12	7.3	14.6	14.4	22.0
	Solid Particles	g/m <sup>2</sup> /month	Continuous	1	18/10/12	25/10/12	1.0	1.0	1.0	1.0
28	PM10	µg/m <sup>3</sup>	Every 6 days	5	30/10/12	01/11/12	5.6	11.6	9.1	22.6
	Solid Particles	g/m <sup>2</sup> /month	Continuous	1	18/10/12	25/10/12	1.1	1.1	1.1	1.1
29	PM10	µg/m <sup>3</sup>	Every 6 days	5	30/10/12	01/11/12	9.7	15.8	13.2	24.9
	Solid Particles	g/m <sup>2</sup> /month	Continuous	1	18/10/12	25/10/12	1.2	1.2	1.2	1.2
30	PM10	µg/m <sup>3</sup>	Every 6 days	Continuous	31/10/12	1/11/12	4.6	18.1	17.7	41.4
	Solid Particles	g/m <sup>2</sup> /month	Continuous	1	18/10/12	25/10/12	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	-	-	-	-	-	-
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	-	-	-	-	-	-
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	-	-	-	-	-	-
23	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	-	-	-	-	-	-
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	-	-	-	-	-	-



**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
	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	-	-	-	-	-	-

**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

**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
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

**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	-	-	-	-	-	-
	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	-	-	-	-	-	-
17	Reactive Phosphorus	mg/L	Every 3 Months	0	-	-	-	-	-	-
	Total Suspended Solids	mg/L	Every 3 Months	0	-	-	-	-	-	-
	Conductivity	µS/cm	Every 6 Months	0	-	-	-	-	-	-
	Nitrate	mg/L	Every 6 Months	0	-	-	-	-	-	-
	Nitrogen (Total)	mg/L	Every 6 Months	0	-	-	-	-	-	-
17	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	-	-	-	-	-	-
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	-	-	-	-	-	-
	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	-	-	-	-	-	-

**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
	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	Start Time	Measurement Period	Measured levels – dB(A)		Limit(s)	Weather (inversion oC/100m, wind m/s & °)	Observations	(Potential) Non-compliance /breach
				LA1, 1 Minute	LAeq, 15 Minute				
R96	30 <sup>th</sup> October 2012	2:26 pm	60 minutes	n/a	35	Day 38	n/a,1.9,291	Birds & insects (32), WCC (32)	No
	30 <sup>th</sup> October 2012	7:15 pm	60 minutes	n/a	36	Night 37	lapse,2.0,50	Birds & insects (36), traffic (25), WCC inaudible	No
R12	30 <sup>th</sup> October 2012	4:35 pm	60 minutes	n/a	43	Day 38	n/a,2.4,244	Traffic (43), WCC barely audible	No
	30 <sup>th</sup> October 2012	11:00 pm	60 minutes	42	38	Night 38	+4.7,0.8,251	Traffic (37), WCC (30), insects (28)	No
R7	30 <sup>th</sup> October 2012	12:55 pm	60 minutes	n/a	49	Day 37	n/a,4.4,277	Birds & insects (49), rooster (40), WCC barely audible	No
	30 <sup>th</sup> October 2012	10:36 pm	60 minutes	43	43	Night 37	+3.8,1.3,256	Insects (40), irrigator (38), WCC (37)	No
R9	30 <sup>th</sup> October 2012	1:00 pm	60 minutes	n/a	55	Day 37	n/a,4.4,277	Birds (55), WCC (25)	No
	30 <sup>th</sup> October 2012	7:20 pm	60 minutes	n/a	38	Night 37	lapse,3.3,84	Insects (39), irrigator (30), WCC inaudible	No
R24	30 <sup>th</sup> October 2012	2:30 pm	60 minutes	n/a	37	Day 37	n/a,1.6,324	Traffic (36), birds & insects (30), WCC (25)	No
	30 <sup>th</sup> October 2012	9:05 pm	60 minutes	25	39	Night 37	+2.8,1.0,309	Traffic (38), birds & insects (33), WCC (<20)	No
R22	30 <sup>th</sup> October 2012	1:00 pm	60 minutes	n/a	55	Day 36	n/a,4.4,277	Birds (55), WCC (25)	No
	30 <sup>th</sup> October 2012	7:20 pm	60 minutes	n/a	38	Night 36	lapse,3.3,84	Insects (39), irrigator (30), WCC	No



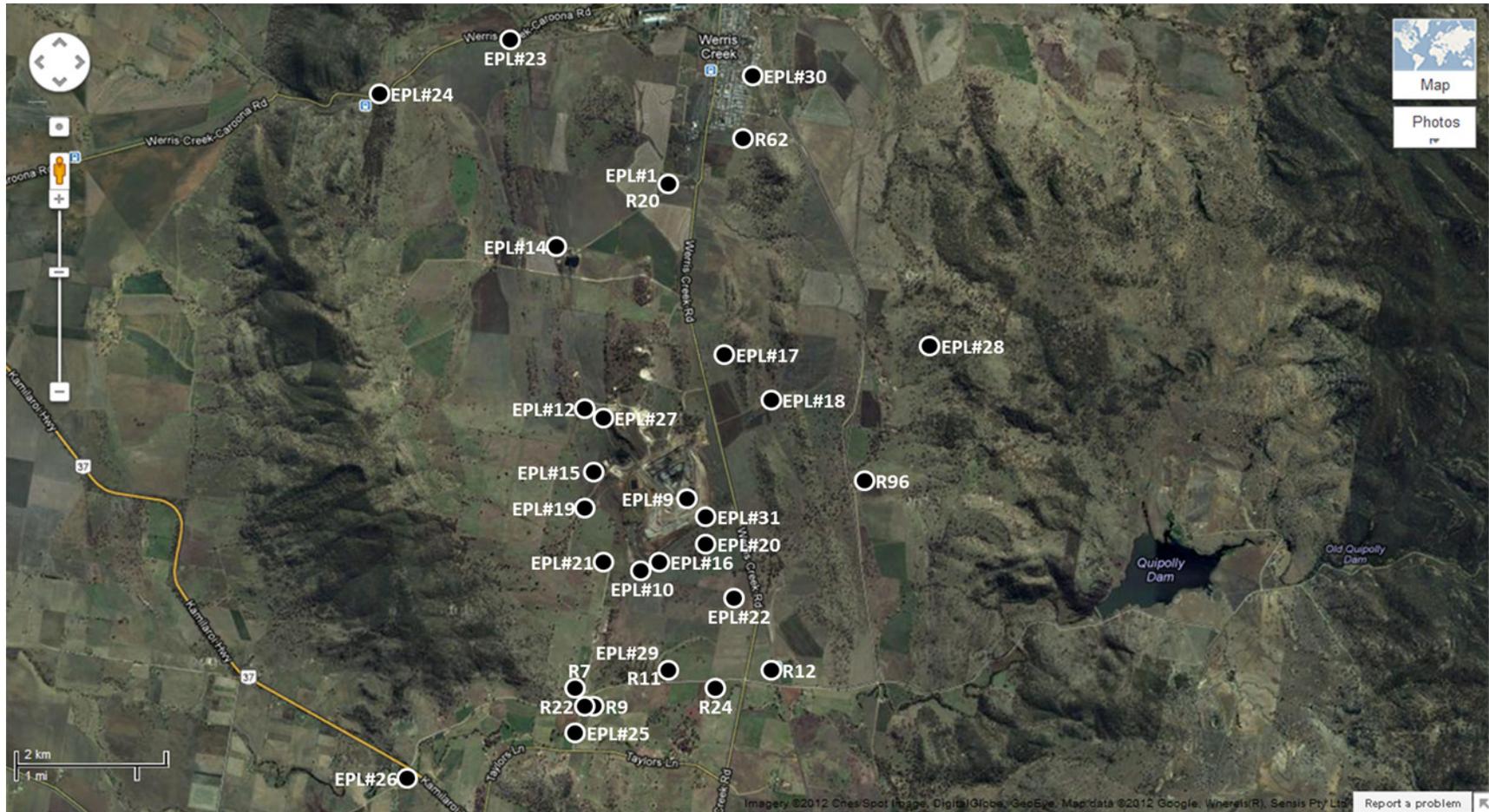
**WERRIS CREEK COAL EPL – MONTHLY SUMMARY**

Location	Date	Start Time	Measurement Period	Measured levels – dB(A)		Limit(s)	Weather (inversion oC/100m, wind m/s & °)	Observations	(Potential) Non-compliance /breach
				LA1, 1 Minute	LAeq, 15 Minute				
								inaudible	

**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
R20	Blast Noise	dB (Lin Peak)	Every Blast	7	101.5	106.0	120.0	No
	Blast Vibration	mm/s	Every Blast	7	1.37	2.14	10.00	No
R96	Blast Noise	dB (Lin Peak)	Every Blast	7	103.6	111.0	120.0	No
	Blast Vibration	mm/s	Every Blast	7	0.26	0.41	10.00	No
R11	Blast Noise	dB (Lin Peak)	Every Blast	7	101.7	106.0	120.0	No
	Blast Vibration	mm/s	Every Blast	7	0.17	0.25	10.00	No
R62	Blast Noise	dB (Lin Peak)	Every Blast	7	99.0	102.6	120.0	No
	Blast Vibration	mm/s	Every Blast	7	0.39	0.56	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.environment.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 2012

**Publication Date:** 18<sup>th</sup> December 2012

**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
1	PM10	µg/m <sup>3</sup>	Every 6 days	5	27/11/12	29/11/12	8.9	24.1	25.1	36.0
	Solid Particles	g/m <sup>2</sup> /month	Continuous	1	20/11/12	27/11/12	1.0	1.0	1.0	1.0
28	PM10	µg/m <sup>3</sup>	Every 6 days	5	27/11/12	29/11/12	5.7	15.3	18.6	20.5
	Solid Particles	g/m <sup>2</sup> /month	Continuous	1	20/11/12	27/11/12	0.7	0.7	0.7	0.7
29	PM10	µg/m <sup>3</sup>	Every 6 days	5	27/11/12	29/11/12	7.7	18.5	20.3	25.6
	Solid Particles	g/m <sup>2</sup> /month	Continuous	1	20/11/12	27/11/12	0.7	0.7	0.7	0.7
30	PM10	µg/m <sup>3</sup>	Every 6 days	Continuous	30/11/12	1/12/12	2.7	14.3	14.2	33.8
	Solid Particles	g/m <sup>2</sup> /month	Continuous	1	20/11/12	27/11/12	2.5	2.5	2.5	2.5
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	-	-	-	-	-	-
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	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	-	-	-	-	-	-
26	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	-	-	-	-	-	-
	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	-	-	-	-	-	-



**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
	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

**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	-	-	-	-	-	-

**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 3 Months	0	-	-	-	-	-	-
	Total Suspended Solids	mg/L	Every 3 Months	0	-	-	-	-	-	-
27	Conductivity	µS/cm	Every 3 Months	1	30/11/12	06/12/12	1120	1120	1120	1120
	Nitrate	mg/L	Every 3 Months	1	30/11/12	06/12/12	8.55	8.55	8.55	8.55
	Nitrogen (Total)	mg/L	Every 3 Months	1	30/11/12	06/12/12	11.0	11.0	11.0	11.0
	Oil and Grease	mg/L	Every 3 Months	1	30/11/12	06/12/12	<5	<5	<5	<5
	pH	pH	Every 3 Months	1	30/11/12	06/12/12	8.05	8.05	8.05	8.05
	Phosphorus (Total)	mg/L	Every 3 Months	1	30/11/12	06/12/12	<0.05	<0.05	<0.05	<0.05
	Reactive Phosphorus	mg/L	Every 3 Months	1	30/11/12	06/12/12	<0.01	<0.01	<0.01	<0.01
	Total Suspended Solids	mg/L	Every 3 Months	1	30/11/12	06/12/12	6	6	6	6
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	-	-	-	-	-	-

**Table 4 – Monitoring (Noise – Limits Apply)**

Location	Date	Start Time	Measurement Period	Measured levels – dB(A)		Limit(s)	Weather (inversion oC/100m, wind m/s & °)	Observations	(Potential) Non-compliance /breach
				LA1, 1 Minute	L <sub>Aeq</sub> , 15 Minute				
R96	29 <sup>th</sup> November 2012	2:39 pm	60 minutes	n/a	41	Day 38	n/a,2.8,153	Birds & insects (39), traffic (37), WCC (<25)	No
	29 <sup>th</sup> November 2012	7:10 pm	60 minutes	n/a	37	Night 37	+3.3,0.7,50	Insects (37), WCC inaudible	No

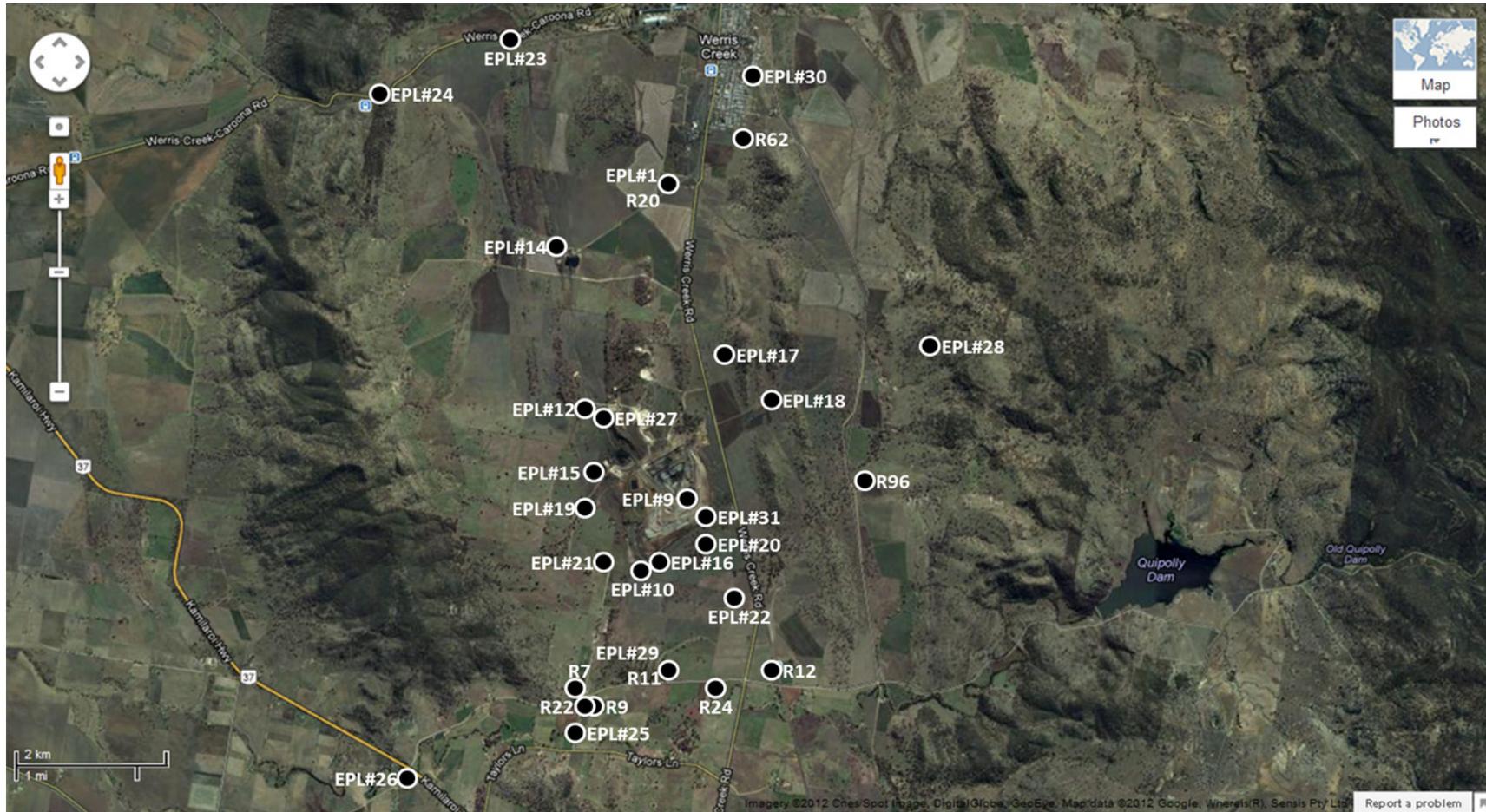
**WERRIS CREEK COAL EPL – MONTHLY SUMMARY**

Location	Date	Start Time	Measurement Period	Measured levels – dB(A)		Limit(s)	Weather (inversion oC/100m, wind m/s & °)	Observations	(Potential) Non-compliance /breach
				LA1, 1 Minute	LAeq, 15 Minute				
R12	29 <sup>th</sup> November 2012	4:52 pm	60 minutes	n/a	44	Day 38	n/a,1.9,109	Traffic (43), birds & insects (38), WCC inaudible	No
	29 <sup>th</sup> November 2012	10:27 pm	60 minutes	39	40	Night 38	+0.6,5.2,350	Insects (38), traffic (34), WCC (30)	No
R7	29 <sup>th</sup> November 2012	12:50 pm	60 minutes	n/a	40	Day 37	n/a,2.0,229	Birds & insects (39), traffic (32), WCC barely audible	No
	29 <sup>th</sup> November 2012	10:50 pm	60 minutes	45	47	Night 37	+0.5,2.5,15	Birds & insects (46), WCC (37), traffic (34)	No
R9	29 <sup>th</sup> November 2012	1:20 pm	60 minutes	n/a	49	Day 37	n/a,2.5,181	Birds & insects (49), WCC (25)	No
	29 <sup>th</sup> November 2012	7:10 pm	60 minutes	n/a	52	Night 37	+3.3,0.7,50	Birds (52), traffic (35), WCC inaudible	No
R24	29 <sup>th</sup> November 2012	3:07 pm	60 minutes	n/a	37	Day 37	n/a,2.9,176	Traffic (39), birds & insects (30), WCC (30)	No
	29 <sup>th</sup> November 2012	8:38 pm	60 minutes	40	51	Night 37	+5.0,1.2,294	Birds & insects (51), traffic (35), WCC (28)	No
R22	29 <sup>th</sup> November 2012	1:20 pm	60 minutes	n/a	49	Day 36	n/a,2.5,181	Birds & insects (49), WCC (25)	No
	29 <sup>th</sup> November 2012	7:10 pm	60 minutes	n/a	52	Night 36	+3.3,0.7,50	Birds (52), traffic (35), WCC inaudible	No

**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
R20	Blast Noise	dB (Lin Peak)	Every Blast	9	105.3	115.0	120.0	No
	Blast Vibration	mm/s	Every Blast	9	0.64	0.93	10.00	No
R96	Blast Noise	dB (Lin Peak)	Every Blast	9	103.9	107.0	120.0	No
	Blast Vibration	mm/s	Every Blast	9	0.23	0.43	10.00	No
R11	Blast Noise	dB (Lin Peak)	Every Blast	9	103.0	106.0	120.0	No
	Blast Vibration	mm/s	Every Blast	9	0.14	0.22	10.00	No
R62	Blast Noise	dB (Lin Peak)	Every Blast	9	101.8	111.0	120.0	No
	Blast Vibration	mm/s	Every Blast	9	0.32	0.62	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.environment.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 2012

**Publication Date:** 17<sup>th</sup> January 2013

**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
1	PM10	µg/m <sup>3</sup>	Every 6 days	5	8/01/13	10/01/13	4.7	9.2	9.2	14.9
	Solid Particles	g/m <sup>2</sup> /month	Continuous	1	19/12/12	02/01/13	1.2	1.2	1.2	1.2
28	PM10	µg/m <sup>3</sup>	Every 6 days	5	8/01/13	10/01/13	3.1	7.4	6.9	12.6
	Solid Particles	g/m <sup>2</sup> /month	Continuous	1	19/12/12	02/01/13	1.0	1.0	1.0	1.0
29	PM10	µg/m <sup>3</sup>	Every 6 days	5	8/01/13	10/01/13	3.2	13.8	9.9	26.3
	Solid Particles	g/m <sup>2</sup> /month	Continuous	1	19/12/12	02/01/13	3.7	3.7	3.7	3.7
30	PM10	µg/m <sup>3</sup>	Every 6 days	Continuous	31/12/13	01/01/13	2.3	13.1	13.5	28.3
	Solid Particles	g/m <sup>2</sup> /month	Continuous	1	19/12/12	02/01/13	1.1	1.1	1.1	1.1
10	Conductivity	µS/cm	Special Frequency 1	1	28/12/12	07/01/13	368	368	368	368
	Nitrate	mg/L	Special Frequency 1	1	28/12/12	07/01/13	5.03	5.03	5.03	5.03
	Nitrogen (Total)	mg/L	Special Frequency 1	1	28/12/12	07/01/13	10.4	10.4	10.4	10.4
	Phosphorus (Total)	mg/L	Special Frequency 1	1	28/12/12	07/01/13	0.35	0.35	0.35	0.35
	Reactive Phosphorus	mg/L	Special Frequency 1	1	28/12/12	07/01/13	0.21	0.21	0.21	0.21
12	Conductivity	µS/cm	Special Frequency 1	1	28/12/12	07/01/13	166	166	166	166
	Nitrate	mg/L	Special Frequency 1	1	28/12/12	07/01/13	0.61	0.61	0.61	0.61
	Nitrogen (Total)	mg/L	Special Frequency 1	1	28/12/12	07/01/13	2.1	2.1	2.1	2.1
	Phosphorus (Total)	mg/L	Special Frequency 1	1	28/12/12	07/01/13	0.30	0.30	0.30	0.30
	Reactive Phosphorus	mg/L	Special Frequency 1	1	28/12/12	07/01/13	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	-	-	-	-	-	-



**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
	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	1	28/12/12	07/01/13	507	507	507	507
	Nitrate	mg/L	Special Frequency 2	1	28/12/12	07/01/13	<0.01	<0.01	<0.01	<0.01
	Nitrogen (Total)	mg/L	Special Frequency 2	1	28/12/12	07/01/13	2.2	2.2	2.2	2.2
	Oil and Grease	mg/L	Special Frequency 2	1	28/12/12	07/01/13	<5	<5	<5	<5
	pH	pH	Special Frequency 2	1	28/12/12	07/01/13	8.36	8.36	8.36	8.36
	Phosphorus (Total)	mg/L	Special Frequency 2	1	28/12/12	07/01/13	0.34	0.34	0.34	0.34
	Reactive Phosphorus	mg/L	Special Frequency 2	1	28/12/12	07/01/13	<0.01	<0.01	<0.01	<0.01
	Total Suspended Solids	mg/L	Special Frequency 2	1	28/12/12	07/01/13	102	102	102	102
26	Conductivity	µS/cm	Special Frequency 2	1	28/12/12	07/01/13	926	926	926	926
	Nitrate	mg/L	Special Frequency 2	1	28/12/12	07/01/13	0.02	0.02	0.02	0.02
	Nitrogen (Total)	mg/L	Special Frequency 2	1	28/12/12	07/01/13	0.5	0.5	0.5	0.5
	Oil and Grease	mg/L	Special Frequency 2	1	28/12/12	07/01/13	<5	<5	<5	<5
	pH	pH	Special Frequency 2	1	28/12/12	07/01/13	8.55	8.55	8.55	8.55



**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
	Phosphorus (Total)	mg/L	Special Frequency 2	1	28/12/12	07/01/13	0.14	0.14	0.14	0.14
	Reactive Phosphorus	mg/L	Special Frequency 2	1	28/12/12	07/01/13	0.14	0.14	0.14	0.14
	Total Suspended Solids	mg/L	Special Frequency 2	1	28/12/12	07/01/13	<5	<5	<5	<5

**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	1	28/12/12	07/01/13	110	-	50*	No
	Oil and Grease	mg/L	Special Frequency 1	1	28/12/12	07/01/13	<5	-	10	No
	pH	pH	Special Frequency 1	1	28/12/12	07/01/13	7.99	-	6.5-8.5	No
12	Total Suspended Solids	mg/L	Special Frequency 1	1	28/12/12	07/01/13	1530	-	50*	No
	Oil and Grease	mg/L	Special Frequency 1	1	28/12/12	07/01/13	<5	-	10	No
	pH	pH	Special Frequency 1	1	28/12/12	07/01/13	7.2	-	6.5-8.5	No
14	Total Suspended Solids	mg/L	Special Frequency 1	1	28/12/12	07/01/13	-	-	50*	No
	Oil and Grease	mg/L	Special Frequency 1	1	28/12/12	07/01/13	-	-	10	No
	pH	pH	Special Frequency 1	1	28/12/12	07/01/13	-	-	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	-	-	-	-	-	-

**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	Total Suspended Solids	mg/L	Every 3 Months	0	-	-	-	-	-	-
	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	-	-	-	-	-	-
17	Total Suspended Solids	mg/L	Every 3 Months	0	-	-	-	-	-	-
	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	-	-	-	-	-	-
18	Standing Water Level	Metres	Every 6 Months	0	-	-	-	-	-	-
	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	-	-	-	-	-	-
19	Standing Water Level	Metres	Every 6 Months	0	-	-	-	-	-	-
	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	-	-	-	-	-	-
20	Standing Water Level	Metres	Every 6 Months	0	-	-	-	-	-	-
	Conductivity	µS/cm	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
	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	-	-	-	-	-	-
22	Standing Water Level	Metres	Every 6 Months	0	-	-	-	-	-	-
	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	Start Time	Measurement Period	Measured levels – dB(A)		Limit(s)	Weather (inversion oC/100m, wind m/s & °)	Observations	(Potential) Non-compliance /breach
				LA1, 1 Minute	LAeq, 15 Minute				
R96	17 <sup>th</sup> December 2012	12:02 pm	60 minutes	n/a	42	Day 38	n/a,4.7,148	Wind (39), insects (35), traffic (33), WCC (<20)	No
	17 <sup>th</sup> December 2012	7:38 pm	60 minutes	<35	41	Night 37	-0.1,4.3,134	Traffic (40), train (33), WCC(<30)	No
R12	17 <sup>th</sup> December 2012	4:05 pm	60 minutes	n/a	44	Day 38	n/a,3.0,167	Traffic (43), birds & insects (38), WCC inaudible	No

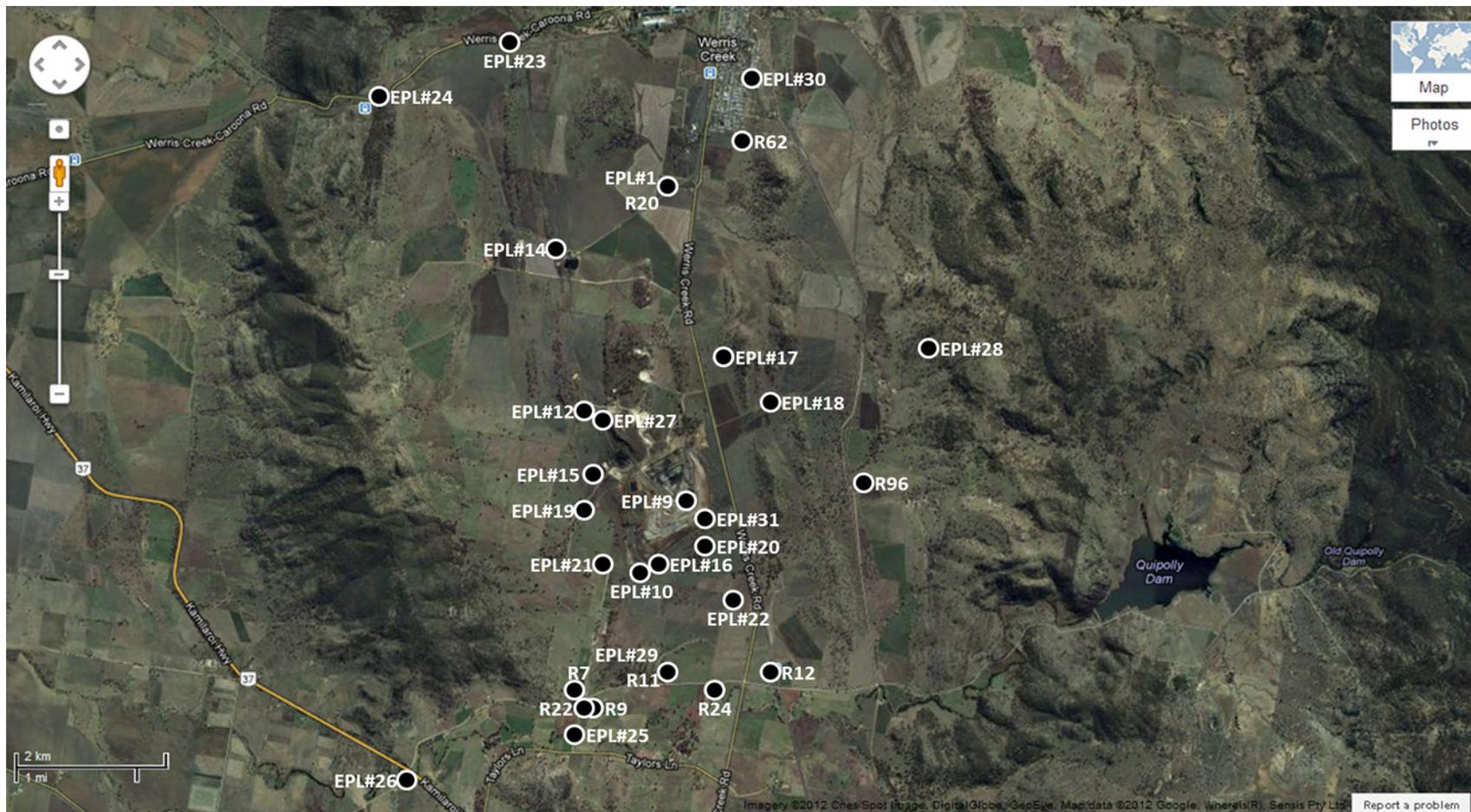
**WERRIS CREEK COAL EPL – MONTHLY SUMMARY**

Location	Date	Start Time	Measurement Period	Measured levels – dB(A)		Limit(s)	Weather (inversion oC/100m, wind m/s & °)	Observations	(Potential) Non-compliance /breach
				LA1, 1 Minute	LAeq, 15 Minute				
	17 <sup>th</sup> December 2012	10:56 pm	60 minutes	<30	40	Night 38	+0.9,3.7,124	Train (57), traffic (36), WCC (<25)	No
R7	17 <sup>th</sup> December 2012	3:29 pm	60 minutes	n/a	41	Day 37	n/a,4.2,150	Birds & wind (40), tractor (33), WCC inaudible	No
	17 <sup>th</sup> December 2012	8:59 pm	60 minutes	n/a	38	Night 37	+0.1,5.0,108	Birds & insects (38), traffic (26), WCC (<25)	No
R9	17 <sup>th</sup> December 2012	2:23 pm	60 minutes	n/a	42	Day 37	n/a,2.0,155	Birds & wind (42), WCC inaudible	No
	17 <sup>th</sup> December 2012	11:16 pm	60 minutes	n/a	32	Night 37	+0.5,3.7,128	Insects (32), WCC inaudible	No
R24	17 <sup>th</sup> December 2012	1:18 pm	60 minutes	n/a	38	Day 37	n/a,3.0,154	Traffic (37), birds & insects (31), WCC inaudible	No
	18 <sup>th</sup> December 2012	12:21 pm	60 minutes	31	51	Night 37	+1.0,3.7,129	Insects (30), traffic (23), WCC inaudible	No
R22	17 <sup>th</sup> December 2012	2:23 pm	60 minutes	n/a	42	Day 36	n/a,2.0,155	Birds & wind (42), WCC inaudible	No
	17 <sup>th</sup> December 2012	11:16 pm	60 minutes	n/a	32	Night 36	+0.5,3.7,128	Insects (32), WCC inaudible	No

**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
R20	Blast Noise	dB (Lin Peak)	Every Blast	6	100.5	103.0	120.0	No
	Blast Vibration	mm/s	Every Blast	6	0.66	0.87	10.00	No
R96	Blast Noise	dB (Lin Peak)	Every Blast	6	102.4	106.3	120.0	No
	Blast Vibration	mm/s	Every Blast	6	0.53	0.66	10.00	No
R11	Blast Noise	dB (Lin Peak)	Every Blast	6	103.0	104.0	120.0	No
	Blast Vibration	mm/s	Every Blast	6	0.21	0.33	10.00	No
R62	Blast Noise	dB (Lin Peak)	Every Blast	6	87.8	97.5	120.0	No
	Blast Vibration	mm/s	Every Blast	6	0.44	0.61	10.00	No

**WERRIS CREEK COAL EPL – MONTHLY SUMMARY**



**WCC EPL12290 Monitoring Location Plan**



**WERRIS CREEK COAL EPL – MONTHLY MONITORING SUMMARY  
CORRECTION LOG**

**Site Information**

**EPL No.:** 12290

**EPA Website Link:** <http://www.environment.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

Sample Point/s	Sample Date	Original Data	Corrected Data	Date Corrected	Date Originally Published	Reason
10 & 12	July 2012	Data not reported	Data now reported	20/11/12	16/8/12	The EPL requires monitoring of eight pollutants but limits only apply to three of those pollutants. The other five pollutants were unintentionally excluded from reporting and have now been included.
12	August 2012	Data not reported	Data now reported	20/11/12	12/9/12	
12	September 2012	Data not reported	Data now reported	20/11/12	11/10/12	
12	June 2013	Data not reported	Data now reported	9/08/13	15/07/13	Data unintentionally excluded from reporting and have now been included.



## WERRIS CREEK COAL EPL – MONTHLY MONITORING SUMMARY

### CORRECTION LOG

#### WCC EPL 12290 Monitoring Location Plan

